

# Prof. Dr. Ursula Keller

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## Journal Publications, 16. Aug. 2023

2023

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- [xx] E. W. de Vos, S. Neb, A. Niedermayr, F. Burri, M. Hollm, L. Gallmann, U. Keller  
“Ultrafast transition from state-blocking dynamics to electron localization in transition metal  $\beta$ -tungsten”  
*Phys. Rev. Lett.*, vol. X, submitted 9. March 2023, revised paper sent 3. June
- [xx] B. Willenberg, C. R. Phillips, J. Pupeikis, S. L. Camenzind, L. Liebermeister, R. B. Kohlhas, B. Globisch, U. Keller  
“Gigahertz single-cavity dual-comb laser for rapid time-domain spectroscopy: at few terahertz and optical frequencies”  
*Light Science and Applications*, submitted 19. Feb. 2023, decision appealed 25. May 2023 – appeal accepted – revised paper submitted 10Jul23
- [21Feb23] <https://arxiv.org/abs/2302.10526>, submitted 21. Feb. 2023
- [511] N. Jornod, M. Jankowski, L. M. Krüger, V. J. Wittwer, N. Modsching, C. Langrock, C. R. Phillips, U. Keller, T. Südmeyer, M. M. Fejer  
“Monolithically integrated femtosecond optical parametric oscillators”  
*Optica*, vol. 10, No. 7, pp. 826-831, 2023
- [510] T. Flöry, V. Stummer, J. Pupeikis, B. Willenberg, A. Nussbaum-Lapping, E. Kaksis, F. V. A. Camarago, M. Barkauskas, C. R. Phillips, U. Keller, G. Cerullo, A. Pugzlys, A. Baltuska  
“Rapid-scan nonlinear time-resolved spectroscopy over arbitrary delay intervals”  
*Ultrafast Science*, vol. 3, Article 0027, 2023  
<https://spj.science.org/doi/10.34133/ultrafastscience.0027>
- [22Nov22] <https://arxiv.org/abs/2211.12211>, submitted 22. Nov. 2022
- [509] M. Volkov, S. A. Sato, A. Niedermayr, A. Rubio, L. Gallmann, U. Keller  
“Floquet-Bloch resonances in near-petahertz electro-absorption spectroscopy of SiO<sub>2</sub>”  
*Phys. Rev. B*, vol. 107, 184304, 2023

- [508] Z. Schumacher, S. A. Sato, S. Neb, A. Niedermayr, L. Gallmann, A. Rubio, U. Keller  
 “Ultrafast electron localization and screening in a transition metal dichalcogenide”  
*PNAS*, vol. 120, No. 15, e2221725120, 2023
- [11Oct22] <https://arxiv.org/abs/2210.05465>, submitted 11. Oct. 2022
- [507] N. Huwlyer, M. Gaulke, J. Heidrich, M. Golling, A. Barh, U. Keller  
 “3-W output power from a 2- $\mu\text{m}$  InGaSb VECSEL using a hybrid metal-semiconductor  
 Bragg reflector”  
*Optical Materials Express*, vol. 13, No. 3, pp. 833-842, 2023
- [506] C. R. Phillips, B. Willenberg, A. Nussbaum-Lapping, F. Callegari, S. L. Camenzind, J.  
 Pupeikis, U. Keller  
 “Coherently averaged dual-comb spectroscopy with a low-noise and high-power free-  
 running gigahertz dual-comb laser”  
*Optics Express*, vol. 31, No. 5, pp. 7103-7119, 2023
- [27Oct22] <https://arxiv.org/abs/2211.01368>, submitted 27. Oct. 2022
- [505] A. Barh, A. Nussbaum-Lapping, J. Heidrich, M. Gaulke, M. Golling, C. R. Phillips, U.  
 Keller  
 “Single-cavity dual-modelocked 2.36- $\mu\text{m}$  laser”  
*Optics Express*, vol. 31, No. 4, pp. 6475-6482, 2023
- [504] S. L. Camenzind, T. Sevim, B. Willenberg, J. Pupeikis, A. Nussbaum-Lapping, C. R.  
 Phillips, U. Keller  
 “Free-running Yb:KYW dual-comb oscillator in a MOPA architecture”  
*Optics Express*, vol. 31, No. 4, pp. 6633-6648, 2023
- [503] J. Heidrich, A. Barh, S. L. Camenzind, B. Willenberg, M. Gaulke, M. Golling, C. R.  
 Phillips, U. Keller  
 “Low-noise femtosecond SESAM modelocked diode-pumped Cr:ZnS oscillator”  
*IEEE Journal of Quantum Electronics*, vol. 59, No. 1, 1300107, 2023  
 (published online Jan. 13, 2023, [Link](#))  
 doi: 10.1109/JQE.2023.3236399
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 “Efficient pump-probe with a single-cavity dual-comb laser”, **Invited Paper**  
*Photoacoustics*, vol. 29, 100439, 2023  
 Special issue on “Ultrafast Photoacoustics”

## 2022

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- [501] P. A. Chevreuil, F. Brunner, Uwe Thumm, U. Keller, L. Gallmann  
 “Breakdown of single-collision condition for soft X-ray high harmonic generation”  
*Optica*, vol. 9, No. 12, pp. 1448-1457, 2022
- [500] M. Seidel, L. Lung, C. R. Phillips, U. Keller  
 “Influence of disk aberrations on high-power thin-disk laser cavities”

*Optics Express*, vol. 30, No. 22, pp. 39691-39705, 2022

[499] S. L. Camenzind, J. F. Fricke, J. Kellner, B. Willenberg, J. Pupeikis, C. R. Phillips, U. Keller

“Dynamic and precise long-distance ranging using a free-running dual-comb laser”  
*Optics Express*, vol. 30, No. 21, pp. 37245-37260, 2022

[498] S. Täuber, J. Hering, U. Keller, M. Mahmoudi

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*eClinicalMedicine*, vol. 52, 101588, 2022

<https://www.sciencedirect.com/science/article/pii/S2589537022003182>

++++++ updated in Orcid 17. Oct. 2022 (not yet online 494, 495)

[497] S. Tomilov, Y. Wang, M. Hoffmann, J. Heidrich, M. Golling, U. Keller, C. J. Saraceno

“50-W average power Ho:YAG SESAM-modelocked thin-disk oscillator at 2.1  $\mu\text{m}$ ”  
*Optics Express*, vol. 30, No. 15, pp. 27662-27673, 2022

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“Spatially multiplexed single-cavity dual-comb laser”  
*Optica*, vol. 9, No. 7, pp. 713-716, 2022

[16Mar22] <https://arxiv.org/abs/2203.08536> submitted 16. March 2022

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“Bandgap engineering, monolithic growth, and operation parameters of GaSb-based SESAMs in the 2–2.4  $\mu\text{m}$  range”  
*Optical Materials Express*, vol. 12, No. 6, pp. 2382-2394, 2022

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“Few-femtosecond dynamics of free-free opacity in optically heated metals,”  
*Phys. Rev. X*, vol. 12, 021045, 2022

[493] C. P. Bauer, S. L. Camenzind, J. Pupeikis, B. Willenberg, C. R. Phillips, U. Keller

“Dual-comb optical parametric oscillator in the mid-infrared based on a single free-running cavity”  
*Optics Express*, vol. 30, No. 11, pp. 19904-19921, 2022

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“324-fs Pulses from a SESAM Modelocked Backside-Cooled 2- $\mu\text{m}$  VECSEL”  
*IEEE Photonics Tech. Lett.*, vol. 34, Issue 6, pp. 337-340, 2022

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“Isolating attosecond electron dynamics in molecules where nuclei move fast”  
*Phys. Rev. Lett.*, vol. 128, 063001, 2022

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 “Timing jitter characterization of free-running dual-comb laser with sub-attosecond  
 resolution using optical heterodyne detection”  
*Optics Express*, vol. 30, No. 4, pp. 5075-5094, 2022
- [11Nov20] <https://arxiv.org/abs/2111.06085>, v1 11. Nov. 2021 and v2 7. Feb. 2022
- [489] A. Barh, B. O. Alaydin, J. Heidrich, M. Gaulke, M. Golling, C. R. Phillips, U. Keller  
 “High-power low-noise 2-GHz femtosecond laser oscillator at 2.4  $\mu\text{m}$ ”  
*Optics Express*, vol. 30, No. 4, pp. 5019-5025, 2022
- [488] A. Nussbaum-Lapping, C. R. Phillips, B. Willenberg, J. Pupeikis, U. Keller – **Invited  
 Paper**  
 “Absolute SESAM characterization via polarization-resolved non-collinear equivalent  
 time sampling”  
*Appl. Phys. B*, vol. 128, 24, 2022  
 Published online 19. Jan. 2022: <https://link.springer.com/article/10.1007/s00340-022-07751-9>.

## 2021

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 “High average output power from a backside-cooled 2- $\mu\text{m}$  InGaSb VECSEL with full  
 gain characterization”  
*Optics Express*, vol. 29, No. 24, pp. 40360-40372, 2021
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 “Carrier-envelope offset frequency dynamics of a 10-GHz modelocked laser based on  
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*Optics Express*, vol. 29, No. 22, pp. 36915-36925, 2021
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 “51-W average power, 169-fs pulses from an ultrafast non-collinear optical parametric  
 oscillator”  
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 “Water-window high harmonic generation with 0.8- $\mu\text{m}$  and 2.2- $\mu\text{m}$  OPCPAs at 100  
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*Optics Express*, vol. 29, No. 21, pp. 32996-33008, 2021
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*Optics Express*, vol. 29, No. 12, pp. 18059-18069, 2021
- [480] J. Maurer, U. Keller, **Invited Topical Review**  
“Ionization in intense laser fields beyond the electric dipole approximation: concepts, methods, achievements and future directions”  
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“High-speed interband cascade infrared photodetectors: photo-response saturation by a femtosecond oscillator”  
*Optics Express*, vol. 29, No. 9, pp. 14087-14100, 2021
- [478] J. Fuchs, N. Douguet, S. Donsa, F. Martin, J. Burgdörfer, L. Argenti, L. Cattaneo, U. Keller  
“Towards the complete phase profiling of attosecond wave packets”  
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- [476] A. Barh, J. Heidrich, B. O. Alaydin, M. Gaulke, M. Golling, C. R. Phillips, U. Keller  
“Watt-level and sub-100-fs self-starting modelocking Cr:ZnS oscillator enabled by GaSb-SESAMs”  
*Optics Express*, vol. 29, No. 4, pp. 5934-5946, 2021
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“High-speed quantum cascade detector characterized with a mid-infrared femtosecond oscillator”  
*Optics Express*, vol. 29, No. 4, pp. 5774-5781, 2021

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## Textbook

U. Keller

“Ultrafast Lasers: a comprehensive introduction to fundamental principles with practical applications”

Graduate Text in Physics, Springer Verlag, 800 pages, published March 2022

ISBN Hardcover book **978-3-030-82531-7**, Ebook: **978-3-030-82532-4**

<https://link.springer.com/book/10.1007/978-3-030-82532-4>

## Book Chapters

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Chapter 4 in *Nonlinear Optics in Semiconductors II*, Alan Kost and Elsa Garmire, eds.,  
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ISBN 0-12-752168-2

## International Conference Publications (\*Invited)

2023

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- \* U. Keller, **Plenary Talk**  
“Single-cavity dual-comb lasers and applications”  
*Optics, Photonics, and Lasers (OPL-2023)*, Hiroshima, Japan, Dec. 4-6, 2023
  
- \* M. Gaulke, J. Heidrich, N. Huwlyer, M. Schuchter, M. Golling, B. Willenberg, A. Barh, U. Keller  
“Dual-comb optically pumped semiconductor thin disk lasers at a center wavelength of 2  $\mu\text{m}$ ”  
*Advanced Solid State Lasers (ASSL 2023)*, Tacoma, Washington, USA, Oct. 8-12, 2023  
  
M. Seidel, J. Pilat, L. Lang, C. R. Phillips, U. Keller  
“Modelocked solid-state Yb:YAG laser oscillator with gigahertz repetition rate at 2-W average output power” – Talk  
*Advanced Solid State Lasers (ASSL 2023)*, Tacoma, Washington, USA, Oct. 8-12, 2023  
  
M. Seidel, L. Lang, C. R. Phillips, U. Keller  
“Modelocked thin-disk laser oscillator providing more than 400 W average output power with a replicating cavity design”  
*Advanced Solid State Lasers (ASSL 2023)*, Tacoma, Washington, USA, Oct. 8-12, 2023  
  
A. Nussbaum-Lapping, J. G. Torres, C. R. Phillips, U. Keller  
“Characterizing Carrier Envelope Frequency Correlation from a Polarization Multiplexed Free Running Single-Cavity Dual-Comb Laser”  
*Advanced Solid State Lasers (ASSL 2023)*, Tacoma, Washington, USA, Oct. 8-12, 2023  
  
C. P. Bauer, M. K. Bollier, J. Pupeikis, B. Willenberg, C. R. Phillips, U. Keller  
“High-Contrast Dual-Comb Optical Parametric Oscillator at 250-MHz”  
*Advanced Solid State Lasers (ASSL 2023)*, Tacoma, Washington, USA, Oct. 8-12, 2023  
  
S. L. Camenzind, L. Lang, B. Willenberg, R. Presl, C. R. Phillips, U. Keller  
“Long-distance dual-comb ranging in real-time with an update rate of 7.7 kHz using a free-running laser” – Talk  
*European Lidar Conference (ELC 2023)*, Cluj-Napoca, Romania, Sep. 13-15, 2023  
  
J. Pupeikis, B. Willenberg, C. R. Phillips, S. L. Camenzind, L. Liebermeister, R. B. Kohlhaas, B. Globisch, U. Keller  
“THz-TDS with GHz single-cavity dual-comb laser” – Talk  
*International Conference on Infrared, Millimeter and Terahertz Waves (IRMMW – THz 2023)*, Montreal, Canada, Sept. 17-22, 2023
  
- \* U. Keller, **Plenary Talk**  
“Ultrafast dual-comb lasers”  
*European Optical Society Annual Meeting (EOSAM 2023)*, Dijon, Burgundy Franche-Comté, France, Sep. 12-15, 2023

- \* U. Keller  
 “Attosecond applications and outlook”  
*Nobel symposium in Attosecond science and technology 2023*, Aug. 20-24, 2023
  
- \* U. Keller  
 “SESAM modelocking of diode-pumped solid-state and semiconductor lasers”  
*Markus Pessa international summer school 2023*, Tampere, Finland, Aug. 7-11, 2023
  
- C. P. Bauer, B. Willenberg, J. Pupeikis, M. K. Bollier, C. R. Phillips, U. Keller  
 “Mid-IR dual-comb spectroscopy of acetylene using a 250-MHz optical parametric oscillator” – Talk FTh2A.6  
*Optica Sensing Congress 2023*, Munich, Germany, July 30 – Aug. 3, 2023
  
- \* L. Lang, S. L. Camenzind, B. Willenberg, R. Presl, C. R. Phillips, U. Keller  
 “Free-running dual-comb LiDAR at long distances with real-time processing at a 7.7-kHz update rate” – Talk ETh2E.4, upgraded to an invited talk  
*Optica Sensing Congress 2023*, Munich, Germany, July 30 – Aug. 3, 2023
  
- \* U. Keller, **Plenary Talk**  
 “Ionization in intense laser fields beyond the electric dipole approximation”  
*XXXIII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC 2023)*, Ottawa, Canada, July 25 to August 1, 2023
  
- M. Volkov, S. Sato, A. Niedermayr, A. Rubio, L. Gallmann, U. Keller  
 “Floquet-Bloch resonances in the dynamical Franz-Keldysh effect in SiO<sub>2</sub>” – Poster  
*ATTO IX Conference 2023*, Jeju, South Korea, July 9-14, 2023
  
- S. Neb, D. Shin, Z. Schumacher, A. Niedermayr, D. A. Kuznetsov, C. R. Müller, A. Fedorov, S. A. Sato, A. Rubio, L. Gallmann, U. Keller  
 “The role of interlayer charge transfer on ultrafast carrier cooling in Ti<sub>3</sub>C<sub>2</sub>T<sub>x</sub> (MXene)”  
 – Talk  
*ATTO IX Conference 2023*, Jeju, South Korea, July 9-14, 2023
  
- E. W. de Vos, S. Neb, A. Niedermayr, F. Burri, M. Hollm, L. Gallmann, U. Keller  
 “Ultrafast transition from state-blocking dynamics to electron localization in transition metal  $\beta$ -Tungsten” – Talk  
*ATTO IX Conference 2023*, Jeju, South Korea, July 9-14, 2023
  
- \* U. Keller, **Plenary Talk**  
 “Single-cavity dual-comb modelocking and applications”  
*Photonics North 2023*, Montreal, Canada, June 12-13, 2023
  
- E. W. de Vos, S. Neb, A. Niedermayr, F. Burri, M. Hollm, L. Gallmann, U. Keller  
 “Ultrafast transition from state-blocking dynamics to electron localization in transition metal  $\beta$ -Tungsten” – Talk CG-2.3  
*European Conference on Lasers and Electro-Optics and European Quantum Electronics Conference (CLEO/Europe-EQEC 2023)*, June 26-30, Munich, Germany, 2023

P. A. Chevreuil, F. Brunner, U. Thumm, U. Keller, L. Gallmann  
“Breakdown of the single-collision condition in gas-phase high harmonic generation” –  
Talk CG6.1

*European Conference on Lasers and Electro-Optics and European Quantum  
Electronics Conference (CLEO/Europe-EQEC 2023)*, June 26-30, Munich, Germany,  
2023

M. Gaulke, J. Heidrich, N. Huwyler, M. Schuchter, M. Golling, A. Barh, U. Keller  
“2.04- $\mu\text{m}$  single and dual-comb modelocked InGaSb-MIXSEL” – Talk CB-2.1  
*European Conference on Lasers and Electro-Optics and European Quantum  
Electronics Conference (CLEO/Europe-EQEC 2023)*, June 26-30, Munich, Germany,  
2023

C. R. Phillips, C. P. Bauer, J. Pupeikis, B. Willenberg, U. Keller  
“High-sensitivity coherent dual-comb spectroscopy with single-cavity dual-comb OPO  
operating at 250 MHz” – Talk CF-9.1  
*European Conference on Lasers and Electro-Optics and European Quantum  
Electronics Conference (CLEO/Europe-EQEC 2023)*, June 26-30, Munich, Germany,  
2023

B. Willenberg, C. R. Phillips, J. Pupeikis, S. L. Camenzind, L. Liebermeister, R. B.  
Kohlhaas, B. Globisch, U. Keller  
“THz time-domain spectroscopy with GHz single-cavity dual-comb laser” – Talk CC-  
2.2  
*European Conference on Lasers and Electro-Optics and European Quantum  
Electronics Conference (CLEO/Europe-EQEC 2023)*, June 26-30, Munich, Germany,  
2023

J. Pupeikis, B. Willenberg, C. P. Bauer, S. L. Camenzind, A. Nussbaum-Lapping, C. R.  
Phillips and U. Keller  
“Single-cavity dual-comb Yb:YAG laser operating at 250 MHz with ultra-low noise” –  
Talk CF-7.1  
*European Conference on Lasers and Electro-Optics and European Quantum  
Electronics Conference (CLEO/Europe-EQEC 2023)*, June 26-30, Munich, Germany,  
2023

A. Barh, A. Nussbaum-Lapping, M. Gaulke, M. Golling, C. R. Phillips, U. Keller  
“Single-cavity dual-comb 2.36- $\mu\text{m}$  Cr:ZnS laser” – Talk CA-2.5  
*European Conference on Lasers and Electro-Optics and European Quantum  
Electronics Conference (CLEO/Europe-EQEC 2023)*, June 26-30, Munich, Germany,  
2023

\* C. R. Phillips, B. Willenberg, J. Pupeikis, U. Keller  
“Single-cavity dual-comb modelocking and applications” – Invited Talk AW3E.4  
Topical Review at CLEO’23 entitled "Frequency comb spectroscopy: from VUV to  
THz". This is a mini-symposium  
*CLEO conference on laser science to photonic applications (US-CLEO 2023)*, San Jose,  
California, USA, May 7-12, 2023

A. Nussbaum-Lapping, A. Barh, J. Heidrich, M. Gaulke, M. Golling, C. R. Phillips, U. Keller

“Dual-comb Cr:ZnS single-cavity laser operating at 2.36  $\mu\text{m}$ ” – Talk STh3P.1  
*CLEO conference on laser science to photonic applications (US-CLEO 2023)*, San Jose, California, USA, May 7-12, 2023

C. R. Phillips, B. Willenberg, A. Nussbaum-Lapping, F. Callegari, S. L. Camenzind, J. Pupeikis, U. Keller

“Gigahertz dual-comb modelocked laser: high power and high coherence in free-running operation” – Talk STh3P.4  
*CLEO conference on laser science to photonic applications (US-CLEO 2023)*, San Jose, California, USA, May 7-12, 2023

M. Gaulke, J. Heidrich, N. Huwyler, M. Schuchter, M. Golling, A. Barh, U. Keller

“Modelocked InGaSb-MIXSEL at 2.04  $\mu\text{m}$ ” – Talk SF3L.2  
*CLEO conference on laser science to photonic applications (US-CLEO 2023)*, San Jose, California, USA, May 7-12, 2023

A. Tyazhev, M. Gaulke, P. Loiko, J. Heidrich, M. Golling, L. Guillemot, T. Godin, H. Dupont, F. Druon, P. Camy, U. Keller, A. Hideur

“GaSb-based SESAM mode-locked upconversion-pumped Thulium Laser at 2308 nm” – Talk SF2R.8  
*CLEO conference on laser science to photonic applications (US-CLEO 2023)*, San Jose, California, USA, May 7-12, 2023

T. Flöry, V. Stummer, J. Pupeikis, B. Willenberg, A. Nussbaum-Lapping, F. V. A. Camargo, M. Barkauskas, C. R. Phillips, U. Keller, G. Cerullo, A. Pugzlys, A. Baltuska  
“Nonlinear time-resolved spectroscopy with extremely high temporal dynamic range” – Talk SM2F.2

*CLEO conference on laser science to photonic applications (US-CLEO 2023)*, San Jose, California, USA, May 7-12, 2023

N. Jornod, M. Jankowski, L. M. Krüger, V. J. Wittwer, N. Modsching, C. Langrock, C. R. Phillips, U. Keller, T. Südmeyer, M. M. Fejer

“Monolithically-integrated 10-GHz synchronously-pumped optical parametric oscillators” – Talk STu3L.3  
*CLEO conference on laser science to photonic applications (US-CLEO 2023)*, San Jose, California, USA, May 7-12, 2023

\* U. Keller – Virtual Talk

“Dual-comb modelocking and applications”  
*Info-French Conference, Frontiers in Photonics and Metamaterials (IFCFPM 2023)*, Mahindra University Campus, India, April 21-22, 2023

M. Golling, M. Gaulke, J. Heidrich, N. Huwyler, M. Schuchter, A. Barh, U. Keller

“First demonstration of an InGaSb MIXSEL at 2.04  $\mu\text{m}$ ”  
*21<sup>st</sup> Euro MBE Workshop 2023*, Madrid, Spain, April 16-19, 2023

M. Seidel, L. Lang, C. R. Phillips, U. Keller

“Ultrafast thin-disk laser oscillator exceeding 400 W average output power using a replicating cavity scheme”

*Ultrafast Optics 2023*, Bariloche, Argentina, March 26-31, 2023

A. Barh, J. Heidrich, M. Gaulke, M. Golling, C. R. Phillips, U. Keller

“Low-noise high-repetition rate femtosecond Cr:ZnS oscillator”

*Ultrafast Optics 2023*, Bariloche, Argentina, March 26-31, 2023

A. Barh, M. Gaulke, J. Heidrich, M. Schuchter, N. Huwylar, M. Golling, U. Keller

“Femtosecond InGaSb VECSEL at 2  $\mu\text{m}$ ”

*Ultrafast Optics 2023*, Bariloche, Argentina, March 26-31, 2023

\* U. Keller, **Plenary Talk**

“Dual-comb modelocked diode-pumped solid-state and semiconductor lasers”

*Ultrafast Optics 2023*, Bariloche, Argentina, March 26-31, 2023

\* U. Keller – **Lecture**

“Ultrafast solid-state lasers”

*Summer School before Ultrafast Optics 2023*, Bariloche, Argentina, Sunday 26. March 2023

C. R. Phillips, S. L. Camenzind, J. F. Fricke, J. Kellner, B. Willenberg, J. Pupeikis, U. Keller

“High-resolution LiDAR and spectroscopy enabled by coherent sensing with single-cavity dual-comb laser” – Talk 12428-49

*SPIE Photonics West 2023*, SPIE LASE, Conference LA12428, San Francisco, USA, 28. Jan. – 2. Feb. 2023

J. Pupeikis, W. Hu, B. Willenberg, C. R. Phillips, U. Keller

“Efficient picosecond ultrasonics with a single-cavity dual-comb laser” – Talk 12419-48

*SPIE Photonics West 2023*, SPIE LASE, Conference LA12419, San Francisco, USA, 28. Jan. – 2. Feb. 2023

\* H. M. Knötig, A. Lardschneider, J. Heidrich, J. Hillbrand, L. M. Krüger, S. D. Cin, A. Andrews, R. Weih, J. Köth, U. Keller, B. Schwarz, G. Strasser

“Frequency performance of quantum cascade and interband cascade detectors” – Talk 12447-113

*SPIE Photonics West 2023*, SPIE LASE, Conference LA12447, San Francisco, USA, 28. Jan. – 2. Feb. 2023

J. Pupeikis, C. R. Phillips, B. Willenberg, A. Nussbaum-Lapping, C. P. Bauer, S. L. Camenzind, U. Keller

“Spatially-multiplexed dual-comb lasers: from 80 MHz to 1 GHz” – Talk 12399-5

*SPIE Photonics West 2023*, SPIE LASE, Conference LA12399, San Francisco, USA, 28. Jan. – 2. Feb. 2023

B. Willenberg, C. R. Phillips, J. Pupeikis, L. Liebermeister, R. Kohlhaas, B. Globisch, U. Keller

“Rapid THz-TDS enabled by single-cavity solid-state GHz dual-comb oscillator” – Talk 12420-14  
*SPIE Photonics West 2023*, SPIE LASE, Conference LA12420, San Francisco, USA, 28. Jan. – 2. Feb. 2023

- \* C. R. Phillips, C. P. Bauer, J. Pupeikis, B. Willenberg, S. L. Camenzind, U. Keller  
“Towards high sensitivity spectroscopy with single-cavity dual-comb lasers and OPOs”  
– upgraded to invited talk 12405-3  
*SPIE Photonics West 2023*, SPIE LASE, Conference LA12405, San Francisco, USA, 28. Jan. – 2. Feb. 2023

N. Huwlyer, M. Gaulke, J. Heidrich, M. Golling, A. Barh, U. Keller  
“2.4-W output power at 2  $\mu\text{m}$  from a flip-chip processed InGaSb VECSEL based on a hybrid metal-semiconductor Bragg reflector” – Talk 12404-6  
*SPIE Photonics West 2023*, SPIE LASE, Conference LA12404, Vertical External Surface Emitting Lasers XI (VECSELs XII), San Francisco, USA, 28. Jan. – 2. Feb. 2023

M. Gaulke, J. Heidrich, N. Huwlyer, M. Golling, A. Barh, U. Keller  
“Femtosecond pulses from a backside-cooled 2- $\mu\text{m}$ , GDD balanced InGaSb VECSEL”  
– Talk 12404-14  
*SPIE Photonics West 2023*, SPIE LASE, Conference LA12404, Vertical External Surface Emitting Lasers XI (VECSELs XII), San Francisco, USA, 28. Jan. – 2. Feb. 2023

## 2022

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J. Heidrich, A. Barh, S. L. Camenzind, B. Willenberg, M. Gaulke, M. Golling, C. R. Phillips, U. Keller  
“Low-noise diode-pumped SESAM-modelocked Cr:ZnS laser” – Talk AW5A.7  
*OSA Laser Congress 2022, Advanced Solid-State Lasers Conference (ASSL 2022)*, Barcelona, Catalunya Spain, Dec. 11-15, 2022

S. L. Camenzind, J. F. Fricke, J. Kellner, B. Willenberg, J. Pupeikis, C. R. Phillips, U. Keller  
“Long-distance dual-comb ranging with a free-running solid-state laser” – Talk LsM2C.1  
*OSA Laser Congress 2022, Advanced Solid-State Lasers Conference (ASSL 2022)*, Barcelona, Catalunya Spain, Dec. 11-15, 2022

C. P. Bauer, J. Pupeikis, B. Willenberg, C. R. Phillips, U. Keller  
“Dual-comb spectroscopy of  $\text{C}_2\text{H}_2$  in SWIR using a 250-MHz optical parametric oscillator” – Talk ATu3A.8  
*OSA Laser Congress 2022, Advanced Solid-State Lasers Conference (ASSL 2022)*, Barcelona, Catalunya Spain, Dec. 11-15, 2022

N. Huwlyer, M. Gaulke, J. Heidrich, M. Golling, A. Barh, U. Keller  
“3-W cw output power from an optically pumped 2- $\mu\text{m}$  InGaSb VECSEL using a hybrid metal-semiconductor Bragg reflector”

*European Semiconductor Laser Workshop (ESLW 2022)*, Neuchatel, Switzerland, 16-17 Sept. 2022

M. Schuchter, M. Gaulke, J. Heidrich, N. Huwylar, M. Golling, A. Barh, U. Keller  
“Towards 1:1 SESAM modelocking of InGaSb VECSEL”  
*European Semiconductor Laser Workshop (ESLW 2022)*, Neuchatel, Switzerland, 16-17 Sept. 2022

\* U. Keller – **Invited Keynote**

“Application demonstrations with single-cavity free-running dual-comb sources”  
*Field Laser Applications in Industry and Research Conference, FLAIR 2022*, Aix-les-Bains, France, 12-16 Sept. 2022.

\* U. Keller – **Invited Lecture**

“Optical frequency combs from modelocked lasers” – Talk SS-2.1  
*10<sup>th</sup> EPS-QEOD Europhoton Conference 2022*, Hannover, Germany, 28. Aug. – 2. Sept. 2022

B. Willenberg, C. R. Phillips, J. Pupeikis, L. Liebermeister, R. Kohlhaas, b. Globisch, U. Keller

“Rapid THz-TDS enabled by single-cavity dual-comb gigahertz laser” – Talk TUE-SSL-2.3

*10<sup>th</sup> EPS-QEOD Europhoton Conference 2022*, Hannover, Germany, 28. Aug. – 2. Sept. 2022

C. R. Phillips, J. Pupeikis, B. Willenberg, A. Nussbaum-Lapping, S. L. Camenzind, F. Callegari, A. Benayad, P. Camy, U. Keller

“Dual-comb modelocked laser oscillators with high power and low noise” – Talk WED-SSL-4.1

*10<sup>th</sup> EPS-QEOD Europhoton Conference 2022*, Hannover, Germany, 28. Aug. – 2. Sept. 2022

C. P. Bauer, J. Pupeikis, B. Willenberg, Z. A. Bejm, N. Pezzoli, C. R. Phillips, U. Keller

“Spatially-multiplexed tunable dual-comb optical parametric oscillator at 250 MHz” – Talk FRI-SSL-6.1

*10<sup>th</sup> EPS-QEOD Europhoton Conference 2022*, Hannover, Germany, 28. Aug. – 2. Sept. 2022

M. Seidel, L. Lang, C. R. Phillips, U. Keller

“Influence on disk aberrations on high-power thin-disk laser cavities” – Poster TUE-P-1.1

*10<sup>th</sup> EPS-QEOD Europhoton Conference 2022*, Hannover, Germany, 28. Aug. – 2. Sept. 2022

S. Tomilov, Y. Wang, M. Hoffmann, J. Heidrich, M. Golling, U. Keller, C. J. Saraceno

“50-W, >2- $\mu$ J SESAM-modelocked Ho:YAG thin-disk oscillator at 2.1  $\mu$ m” – Talk FRI-SSL-7.4

*10<sup>th</sup> EPS-QEOD Europhoton Conference 2022*, Hannover, Germany, 28. Aug. – 2. Sept. 2022

- \* U. Keller – **Plenary Talk**  
 “Single-cavity dual-comb modelocking and applications”  
*Latin Optics and Photonics Conference (LAOP 2022)*, Recife, Brazil, August 7-11, 2022
  
- Z. Schumacher, S. A. Sato, S. Neb, A. Niedermayr, A. Rubio, L. Gallmann, U. Keller  
 “Element specific ultrafast carrier localization in a 2D transition metal dichalcogenide”  
 – Talk  
*International Conference on Ultrafast Phenomena*, Montreal, Canada, July 18-22, 2022
  
- A. Niedermayr, M. Volkov, S. A. Sato, N. Hartmann, Z. Schumacher, S. Neb, A. Rubio, L. Gallmann, U. Keller  
 “Few-femtosecond dynamics of free-free opacity in optically heated metals” – Poster  
*International Conference on Ultrafast Phenomena*, Montreal, Canada, July 18-22, 2022
  
- S. Neb, D. Shin, Z. Schumacher, A. Niedermayr, D. A. Kuznetsov, C. R. Müller, A. Fedorov, S. A. Sato, A. Rubio, L. Gallmann, U. Keller  
 “Sub-cycle phonon dynamics induced by ultrafast electron-phonon relaxations in 2D carbide  $Ti_3C_2T_x$  (MXene)” – Talk  
*International Conference on Ultrafast Phenomena*, Montreal, Canada, July 18-22, 2022
  
- \* Z. Schumacher, S. A. Sato, S. Neb, A. Niedermayr, A. Rubio, L. Gallmann, U. Keller  
 “Element specific screening dynamics in  $MoSe_2$ ” – Invited Talk  
*ATTO VIII Conference*, Orlando, Florida, July 11-15, 2022
  
- A. Niedermayr, M. Volkov, S. A. Sato, N. Hartmann, Z. Schumacher, S. Neb, A. Rubio, L. Gallmann, U. Keller – Talk  
 “Few-femtosecond dynamics of free-free opacity in optically heated metals”  
*ATTO VIII Conference*, Orlando, Florida, July 11-15, 2022
  
- S. Neb, D. Shin, Z. Schumacher, A. Niedermayr, D. A. Kuznetsov, C. R. Müller, A. Fedorov, S. A. Sato, A. Rubio, L. Gallmann, U. Keller – Poster  
 “Ultrafast electron-phonon relaxations in 2D carbide  $Ti_3C_2T_x$  (MXene): A case study by attosecond transient absorption spectroscopy” – Poster  
*ATTO VIII Conference*, Orlando, Florida, July 11-15, 2022
  
- P. A. Chevreuil, F. Brunner, U. Keller, Lukas Gallmann  
 “Soft X-ray generation with ultrashort pulses: the krypton surprise” – Poster  
*ATTO VIII Conference*, Orlando, Florida, July 11-15, 2022
  
- Y. Wang, S. Tomilov, M. Hoffmann, J. Heidrich, B. O. Alaydin, M. Golling, U. Keller, C. J. Saraceno  
 “Towards 2- $\mu$ m high-power ultrafast thin-disk laser”  
*The XXIII International Symposium on High-Power Laser Systems and Applications (XXIII HPLS&A 2022)*, Parg, Czech Republic, June 13-17, 2022
  
- \* U. Keller  
 “Ultrafast d-orbital electron localization and screening around transition metal elements following the femtosecond pulse envelope in different bulk and 2D materials”

*Multiphoton Processes, Gordon Research Conference (GRC 2022)*, Bryant University, USA, June 12-17, 2022

Z. Schumacher, S. A. Sato, S. Neb, A. Niedermayr, L. Gallmann, A. Rubio, U. Keller  
“Element-specific electron localization and screening dynamics in few-layer MoSe<sub>2</sub>” –  
Talk  
*MUST 2022*, Grindelwald, Switzerland, 7-10 June 2022

S. Neb, D. Shin, Z. Schumacher, A. Niedermayr, D. A. Kuznetsov, C. R. Müller, A. Fedorov, S. A. Sato, A. Rubio, L. Gallmann, U. Keller  
“Element, site, and carrier specific sub-cycle phonon dynamics induced by ultrafast electron-phonon relaxations in Ti<sub>3</sub>C<sub>2</sub>T<sub>x</sub>” – submitted as a Poster  
*MUST 2022*, Grindelwald, Switzerland, 7-10 June 2022

A. Niedermayr, M. Volkov, S. A. Sato, N. Hartmann, Z. Schumacher, S. Neb, A. Rubio, L. Gallmann, U. Keller  
“Attosecond electron dynamics in optically excited metals” – submitted as a Poster  
*MUST 2022*, Grindelwald, Switzerland, 7-10 June 2022

T. Flöry, V. Stummer, J. Pupeikis, B. Willenberg, M. Barkauskas, C. R. Phillips, U. Keller, A. Pugzlys, A. Baltuska  
“Rapid motion-free generation of interpulse delays for time-domain pump-probe spectroscopies with amplified fs pulses” – Talk SM3F.2  
*CLEO conference on laser science to photonic applications (US-CLEO 2022)*, San Jose, California, May 15-20, 2022

J. Heidrich, M. Gaulke, M. Golling, A. Barh, U. Keller  
“324-fs Pulses from a SESAM Modelocked 2- $\mu$ m GaSb-VECSEL without an Intracavity Heat Spreader” – Talk STh5H.5  
*CLEO conference on laser science to photonic applications (US-CLEO 2022)*, San Jose, California, May 15-20, 2022

B. Willenberg, J. Pupeikis, S. L. Camenzind, A. Benayad, P. Camy, C. R. Phillips, U. Keller  
“Novel dual-comb multiplexing technique for low-noise solid-state lasers” – Talk STh5E.5  
*CLEO conference on laser science to photonic applications (US-CLEO 2022)*, San Jose, California, May 15-20, 2022

C. P. Bauer, J. Pupeikis, B. Willenberg, S. L. Camenzind, C. R. Phillips, U. Keller  
“Towards high-sensitivity mid-IR dual-comb spectroscopy via solid-state laser driven optical parametric oscillators” – Talk STh5E.4  
*CLEO conference on laser science to photonic applications (US-CLEO 2022)*, San Jose, California, May 15-20, 2022

S. L. Camenzind, T. Sevim, B. Willenberg, J. Pupeikis, C. R. Phillips, U. Keller  
“Single-mode laser diode pumped single-cavity Yb:KYW dual-comb laser in a MOPA architecture” – Talk STh5E.3  
*CLEO conference on laser science to photonic applications (US-CLEO 2022)*, San Jose, California, May 15-20, 2022

S. L. Camenzind, J. F. Fricke, J. Kellner, B. Willenberg, J. Pupeikis, C. R. Phillips, U. Keller

“Long-distance ranging with fiber-frontend-based LiDAR using a free-running dual-comb laser” – Talk SF2F.6

*CLEO conference on laser science to photonic applications (US-CLEO 2022)*, San Jose, California, May 15-20, 2022

\* U. Keller – cancelled because of Covid illness

“New frontier in physics: time in quantum mechanics”

*Einstein Symposium*, Bern, Switzerland, 9. April 2021

\* U. Keller – **Keynote**

“Dual-comb modelocking and applications with diode-pumped Yb-doped solid-state and semiconductor lasers”

*Micro- and Nanophotonics Days (MND-2022)*, Paris-Saclay, March 30-31, 2022

\* J. Heidrich, M. Gaulke, B. Ozgur Alaydin, M. Golling, A. Barh, U. Keller

“SESAMs for High-Power Ho-Doped Lasers at 2.1  $\mu\text{m}$ ”

*Mid-Infrared Coherent Sources 2022 (MICS 2022)*, *Topical Meeting, part of the Optica 2022 High-Brightness Sources and Light-Driven Interaction Congress*, Budapest, Hungary, March 23-25, 2022

N. Huwyler, M. Gaulke, J. Heidrich, M. Golling, A. Barh, B. O. Alaydin, U. Keller

“Thermal management in 2- $\mu\text{m}$  InGaSb VECSEL using a hybrid-metal Bragg mirror” – Paper 11984-14

*SPIE Photonics West 2022*, SPIE LASE, Conference LA106, Vertical External Surface Emitting Lasers XI (VECSELs XI), San Francisco, California, USA, Jan. 22-27, 2022

\* M. Gaulke, J. Heidrich, B. O. Alaydin, M. Golling, A. Barh, U. Keller

“High average output power from a backside-cooled 2- $\mu\text{m}$  InGaSb VECSEL with full gain characterization” – Paper 11984-13

*SPIE Photonics West 2022*, SPIE LASE, Conference LA106, Vertical External Surface Emitting Lasers XI (VECSELs XI), San Francisco, California, USA, Jan. 22-27, 2022

J. Heidrich, M. Gaulke, B. O. Alaydin, M. Golling, A. Barh, U. Keller

“Recent advances of InGaSb SESAMs in the 2 to 2.4- $\mu\text{m}$  wavelength regime” – Paper 11984-10

*SPIE Photonics West 2022*, SPIE LASE, Conference LA106, Vertical External Surface Emitting Lasers XI (VECSELs XI), San Francisco, California, USA, Jan. 22-27, 2022

J. Heidrich, M. Gaulke, A. Barh, M. Golling, B. O. Alaydin, U. Keller

“First SESAM-modelocked VECSEL without intracavity heatspreaders at a center wavelength of around 2  $\mu\text{m}$ ” – Paper 11984-9

*SPIE Photonics West 2022*, SPIE LASE, Conference LA106, Vertical External Surface Emitting Lasers XI (VECSELs XI), San Francisco, California, USA, Jan. 22-27, 2022

S. Tomilov, M. Saraceno, J. Heidrich, B. O. Alaydin, M. Golling, Y. Wang, U. Keller, C. J. Saraceno

“Power scaling of ultrafast 2- $\mu\text{m}$  thin-disk laser oscillators” – Paper 11980-10

*SPIE Photonics West 2022*, SPIE LASE, San Francisco, California, USA, Jan. 22-27, 2022

B. Willenberg, J. Pupeikis, C. R. Phillips, U. Keller

“SESAM-modelocked gigahertz solid-state dual-comb oscillator with flexible repetition rate difference” – Paper 11980-8

*SPIE Photonics West 2022*, SPIE LASE, Conference LA101, Solid State Lasers XXXI: Technology and Devices, San Francisco, California, USA, Jan. 22-27, 2022

C. R. Phillips, C. P. Bauer, J. Pupeikis, B. Willenberg, S. L. Camenzind, U. Keller

“Dual-comb optical parametric oscillator with low noise pumped by free-running dual-comb laser” – Paper 11985-24

*SPIE Photonics West 2022*, SPIE LASE, Conference LA201, Nonlinear Frequency Generation and Conversion: Materials and Devices XXI, San Francisco, California, USA, Jan. 22-27, 2022

A. Barh, J. Heidrich, B. O. Alaydin, M. Gaulke, M. Golling, C. R. Phillips, U. Keller

“InGaSb SESAM modelocked high-power femtosecond Cr:ZnS oscillator at 2.4  $\mu\text{m}$  with flexible repetition rates” – Paper 11980-5

*SPIE Photonics West 2022*, SPIE LASE, Conference LA101, Solid State Lasers XXXI: Technology and Devices, San Francisco, California, USA, Jan. 22-27, 2022

J. Pupeikis, B. Willenberg, S. Camenzind, A. Benayad, P. Camy, C. R. Phillips, U. Keller

“Novel low-noise 80-MHz dual-comb solid-state laser” – Paper 11980-2

*SPIE Photonics West 2022*, SPIE LASE, Conference LA101, Solid State Lasers XXXI: Technology and Devices, San Francisco, California, USA, Jan. 22-27, 2022

J. Pupeikis, B. Willenberg, F. Bruno, M. Hettich, A. Nussbaum-Lapping, M. Golling, C.

P. Bauer, S. L. Camenzind, A. Benayad, P. Camy, B. Audoin, C. R. Phillips, U. Keller

“Picosecond ultrasonics with a free-running dual-comb laser” – Paper 11991-9

*SPIE Photonics West 2022*, SPIE LASE, Conference LA304, Frontiers in Ultrafast Optics: Biomedical, Scientific, and Industrial Applications XXII, San Francisco, California, USA, Jan. 22-27, 2022

## 2021

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\* U. Keller – **Keynote Talk, with special request for both science results and gender issues**

“Do photons show gender bias?”

*European Semiconductor Laser Workshop (ESLW 2021)*, Paris, Sept. 17-18, 2021

Y. Wang, S. Yomilov, M. Hoffmann, J. Heidrich, B. O. Alaydin, M. Golling, U. Keller, C. J. Saraceno

“Towards 2- $\mu\text{m}$  high-power ultrafast thin-disk lasers” – Talk ID 421

*European Optical Society Annual Meeting 2021 (EOSAM 2021)*, *Ultrafast Optical Technologies and Applications*, 13-17 Sep. 2021, Rome, Italy

L. Lang, C. P. Bauer, C. R. Phillips, U. Keller

“53-W ultrafast non-collinear near-degenerate optical parametric oscillator” – Talk ID 232

*European Optical Society Annual Meeting 2021 (EOSAM 2021), Ultrafast Optical Technologies and Applications*, 13-17 Sep. 2021, Rome, Italy

C. P. Bauer, J. Pupeikis, B. Willenberg, C. R. Phillips, U. Keller

“Free-running single-cavity dual-comb optical parametric oscillator in the mid-infrared” – Talk ID 275

*European Optical Society Annual Meeting 2021 (EOSAM 2021), Ultrafast Optical Technologies and Applications*, 13-17 Sep. 2021, Rome, Italy

S. L. Camenzind, D. Koenen, B. Willenberg, J. Pupeikis, C. R. Phillips, U. Keller

“Noise characterization of a 160 MHz Yb:CaF<sub>2</sub> dual-comb laser” – Talk ID 273

*European Optical Society Annual Meeting 2021 (EOSAM 2021), Ultrafast Optical Technologies and Applications*, 13-17 Sep. 2021, Rome, Italy

L. M. Krüger, S. L. Camenzind, B. Willenberg, C. R. Phillips, U. Keller

“CEO-frequency dynamics of a 10-GHz straight-cavity laser modelocked via cascaded quadratic nonlinearities” Talk ID 270

*European Optical Society Annual Meeting 2021 (EOSAM 2021), Ultrafast Optical Technologies and Applications*, 13-17 Sep. 2021, Rome, Italy

A. Barh, B. O. Alaydin, J. Heidrich, M. Gaulke, M. Golling, C. R. Phillips, U. Keller

“2.4- $\mu$ m SESAM modelocked high-power repetition rate scalable femtosecond Cr:ZnS oscillator” – Talk ID 266

*European Optical Society Annual Meeting 2021 (EOSAM 2021), Ultrafast Optical Technologies and Applications*, 13-17 Sep. 2021, Rome, Italy

J. Heidrich, M. Gaulke, B. O. Alaydin, M. Golling, A. Barh, U. Keller

“Development and optical characterization of 2.1- $\mu$ m SESAMs optimized for high-power operation in Ho-doped lasers”

*European Optical Society Annual Meeting 2021 (EOSAM 2021), Ultrafast Optical Technologies and Applications*, 13-17 Sep. 2021, Rome, Italy

M. A. Eichenberger, J. Pupeikis, B. Willenberg, A. Benajad, P. Camy, C. R. Phillips, U. Keller

“Thermal stress-induced depolarization reduction using a near-c cut birefringent crystal geometry” – – Poster requested with submission ID 226

*European Optical Society Annual Meeting 2021 (EOSAM 2021), Ultrafast Optical Technologies and Applications*, 13-17 Sep. 2021, Rome, Italy

P. A. Chevreuil, S. Hrisafov, F. Brunner, J. Pupeikis, C. R. Phillips, L. Gallmann, U. Keller

“Sources of water-window radiation at 100 kHz” – Talk ID 223

*European Optical Society Annual Meeting 2021 (EOSAM 2021), Ultrafast Optical Technologies and Applications*, 13-17 Sep. 2021, Rome, Italy

L. Lang, F. Saltarelli, G. Lacaille, S. Rowan, J. Hough, I. J. Graumann, C. R. Phillips, U. Keller

“Tunable thermal lensing enabled by silicate bonding of sapphire to SESAMs: novel devices for high-power lasers” – Talk CF-4.2  
*CLEO Europe-EQEC 2021*, Munich, Germany 20-24 June 2021, all-virtual meeting

P. A. Chevreuil, S. Hrisafov, F. Brunner, J. Pukeikis, C. R. Phillips, L. Gallmann, U. Keller  
“Comparison of 100-kHz near-IR and mid-IR driven high-harmonic generation in the water window” – Talk CG-7.2  
*CLEO Europe-EQEC 2021*, Munich, Germany 20-24 June 2021, all-virtual meeting

M. Gaulke, J. Heidrich, B. O. Alaydin, M. Golling, A. Barh, U. Keller  
“Gain characterization of 2- $\mu\text{m}$  GaSb VECSELS” – Talk CB-5.4  
*CLEO Europe-EQEC 2021*, Munich, Germany 20-24 June 2021, all-virtual meeting

J. Heidrich, M. Gaulke, B. O. Alaydin, M. Golling, A. Barh, U. Keller  
“Precise mid-infrared characterization of InGaSb/GaSb SESAMs” – Talk CB-5.2  
*CLEO Europe-EQEC 2021*, Munich, Germany 20-24 June 2021, all-virtual meeting

B. O. Alaydin, J. Heidrich, M. Gaulke, M. Golling, A. Barh, U. Keller  
“Mid-infrared type-I InGaSb/GaSb quantum well SESAM” – Talk CE-2.1  
*CLEO Europe-EQEC 2021*, Munich, Germany 20-24 June 2021, all-virtual meeting

L. M. Krüger, J. Hillbrand, J. Heidrich, M. Beiser, R. Weih, J. Köth, C. R. Phillips, B. Schwarz, G. Strasser, U. Keller  
“Gigahertz mid-infrared interband cascade detectors: photo-response saturation by a femtosecond oscillator” – Talk CI-5.6  
*CLEO Europe-EQEC 2021*, Munich, Germany 20-24 June 2021, all-virtual meeting

A. Barh, B. O. Alaydin, J. Heidrich, M. Gaulke, M. Golling, C. R. Phillips, U. Keller  
“1-Watt SESAM-modelocked fs-Cr:ZnS oscillator at 2.4  $\mu\text{m}$ ” – Talk CA-5.1  
*CLEO Europe-EQEC 2021*, Munich, Germany 20-24 June 2021, all-virtual meeting

D. Koenen, B. Willenberg, J. Pukeikis, S. Camenzind, C. R. Phillips, U. Keller  
“Single-mode laser diode pumped Yb :CaF<sub>2</sub> dual-comb oscillator” – Talk CF-9.2  
*CLEO Europe-EQEC 2021*, Munich, Germany 20-24 June 2021, all-virtual meeting

J. Pukeikas, B. Willenberg, C. Bauer, C. R. Phillips, U. Keller  
“High-peak power single-cavity dual-comb solid-state laser with 100-fs pulse duration” – Talk CA-7.4  
*CLEO Europe-EQEC 2021*, Munich, Germany 20-24 June 2021, all-virtual meeting

J. Fuchs, N. Douguet, S. Donsa, F. Martin, J. Burgdörfer, L. Argenti, L. Cattaneo, U. Keller  
“Towards the complete phase profiling of attosecond wave packets”  
*DAMOP 2021*, all-virtual meeting, May 31 – June 4, 2021

A. Barh, B. O. Alaydin, J. Heidrich, M. Gaulke, M. Golling, C. R. Phillips, U. Keller  
“Two gigahertz femtosecond Cr:ZnS Oscillator at 2.4  $\mu\text{m}$  with 0.8-W average output power” – **Postdeadline Paper**  
*CLEO USA 2021*, San Jose, California, USA, May 9-14, 2021

- \* L. Cattaneo, L. Pedrelli, J. Vos, S. Heuser, C. Cirelli, U. Keller  
 “Attosecond photoionization dynamics in model diatomic molecules” – Talk FM1O.5  
*CLEO USA 2021*, San Jose, California, USA, May 9-14, 2021
- L. Lang, F. Saltarelli, G. Lacaille, S. Rowan, J. Hough, I. J. Graumann, C. R. Phillips, U. Keller  
 “Silicate bonding of sapphire to SESAMs: SESAMs with tunable thermal lensing for high-power lasers” – Talk SF2M.2  
*CLEO USA 2021*, San Jose, California, USA, May 9-14, 2021
- P. A. Chevreuril, S. Hrisafov, F. Brunner, J. Pupeikis, C. R. Phillips, L. Gallmann, U. Keller  
 “Comparison of 100-kHz near-IR and mid-IR driven high-harmonic generation in the water window” – Talk FTu2O.3  
*CLEO USA 2021*, San Jose, California, USA, May 9-14, 2021
- J. Heidrich, M. Gaulke, B. O. Alaydin, M. Golling, A. Barh, U. Keller  
 “Full mid-infrared characterization of InGaSb SESAMs” – Talk STu1H.7  
*CLEO USA 2021*, San Jose, California, USA, May 9-14, 2021
- B. O. Alaydin, J. Heidrich, M. Gaulke, M. Golling, A. Barh, U. Keller  
 “2.35- $\mu\text{m}$  InGaSb/GaSb SESAM” – Talk STh1E.6  
*CLEO USA 2021*, San Jose, California, USA, May 9-14, 2021
- \* A. Barh, B. O. Alaydin, J. Heidrich, M. Gaulke, M. Golling, C. R. Phillips, U. Keller  
 “SESAM modelocked high-power sub-100-fs Cr:ZnS oscillator at 2.37  $\mu\text{m}$ ” – **Invited Talk upgraded** – Talk SF2M.1  
*CLEO USA 2021*, San Jose, California, USA, May 9-14, 2021
- D. Koenen, B. Willenberg, J. Pupeikis, S. Camenzind, C. R. Phillips, U. Keller  
 “Single-cavity dual-comb Yb :CaF<sub>2</sub> laser pumped by a sing-mode laser diode” – Talk STu2E.4  
*CLEO USA 2021*, San Jose, California, USA, May 9-14, 2021
- J. Pupeikas, B. Willenberg, C. Bauer, C. R. Phillips, U. Keller  
 “High-peak power polarization-multiplexed Yb:CaF<sub>2</sub> dual-comb solid-state laser with 100-fs pulse duration” – Talk STh4N.5  
*CLEO USA 2021*, San Jose, California, USA, May 9-14, 2021
- A. Nussbaum-Lapping, J. Pupeikas, B. Willenberg, C. R. Phillips, U. Keller  
 “Complete SESAM characterization via equivalent time sampling using a free-running dual-comb laser” – Talk STu2E.5  
*CLEO USA 2021*, San Jose, California, USA, May 9-14, 2021
- J. Nürnberg, B. Willenberg, C. R. Phillips, U. Keller  
 “Absolute laser ranging with sub- $\mu\text{m}$  resolution from a free-running dual-comb Yb:CaF<sub>2</sub> laser” – Talk STh2E.2  
*CLEO USA 2021*, San Jose, California, USA, May 9-14, 2021

S. Yomilov, M. Hoffmann, J. Heidrich, B. O. Alaydin, M. Golling, Y. Wang, U. Keller, C. J. Saraceno – Talk SF2M.3  
“SESAM-modelocked Ho:YAG thin-disk laser with 40.5 W of average power”  
*CLEO USA 2021*, San Jose, California, USA, May 9-14, 2021

- \* U. Keller – **Plenary Talk**  
“Semiconductor disk lasers and SESAMs: material and design optimization”  
*Compound Semiconductor Week 2021 (CSW 2021)*, Stockholm, Sweden, May 9-13, 2021
- \* U. Keller – **Plenary Talk**  
“Dual comb modelocking with spectroscopy and lidar applications”  
*SPIE Photonics West 2020, OPTO Symposium*, San Francisco, California, USA, March 6-11, 2021

## 2020 – CANCELLED Coronavirus

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J. Fuchs, N. Douguet, S. Donsa, F. Martin. J. Burgdörfer, L. Argenti, L. Cattaneo, U. Keller  
“Time delays from one-photon transitions in the continuum” – Talk W3B.3  
*Ultrafast Phenomena Conference XXII (UP 2020)*, Shanghai, China, Nov. 16-19, 2020, Virtual Event

J. Fuchs, N. Douguet, S. Donsa, F. Martin. J. Burgdörfer, L. Argenti, L. Cattaneo, U. Keller  
“High-order phase measurements of attosecond wave packets” – Poster TU4A.9  
*Ultrafast Phenomena Conference XXII (UP 2020)*, Shanghai, China, Nov. 16-19, 2020, Virtual Event

J. Fuchs, C. Krüger, L. Cattaneo, U. Keller  
“Attosecond resolution from free running interferometric measurements” – Talk W1A.4  
*Ultrafast Phenomena Conference XXII (UP 2020)*, Shanghai, China, Nov. 16-19, 2020, Virtual Event

L. M. Krüger, A. S. Mayer, Y. Okawachi, X. Ji, A. Klenner, A. R. Johnson, C. Langrock, M. M. Fejer, M. Lipson, A. L. Gaeta, V. J. Wittwer, T. Südmeyer, C. R. Phillips, U. Keller  
“Self-referenced CEO frequency detection of a 10-GHz laser enabled by highly efficient nonlinear waveguides”  
*OSA Laser Congress 2020, Advanced Solid-State Lasers Conference (ASSL 2020)*, Oct. 13-16, 2020 (OSA virtual event)

B. Willenberg, J. Pupeikis, L. M. Krüger, F. Koch, C. R. Phillips, U. Keller  
“Femtosecond dual-comb Yb:CaF<sub>2</sub> laser from a single free-running polarization-multiplexed cavity for optical sampling applications,”  
*OSA Laser Congress 2020, Advanced Solid-State Lasers Conference (ASSL 2020)*, Oct. 13-16, 2020 (OSA virtual event)

S. Tomilov, M. Hoffmann, J. Heidrich, T. Vogel, B. O. Alaydin, M. Golling, Y. Wang, U. Keller, C. J. Saraceno, “High-power Ho:YAG thin-disk laser and first SESAM modelocking”

*OSA Laser Congress 2020*, Advanced Solid-State Lasers Conference (ASSL 2020), Oct. 13-16, 2020 (OSA virtual event)

\* U. Keller – **CANCELLED Coronavirus**

“... something on high power thin disk lasers ...”

*XXIII International Symposium on High Power Laser Systems and Applications (HPLS&A 2020)*, Prague, Czech Republic, Oct. 12-16, 2020

\* U. Keller – **Keynote (online presentation)**

“Optical frequency combs from ultrafast solid-state and semiconductor lasers”

*Photonics Days 2020 of Jena’s Max Planck School of Photonics (MPSP)*, Jena, Sept. 21-24, 2020

B. Willenberg, J. Pupeikis, L. M. Krüger, F. Koch, C. R. Phillips, U. Keller

“Femtosecond dual-comb Yb:CaF<sub>2</sub> laser from a free-running polarization-multiplexed cavity for rapid optical sampling,”

*9<sup>th</sup> EPS-QEOD Europhoton virtual conference*, 30. Aug. – 4. Sep. 2020

\* P.-A. Chevreuril, J. Pupeikis, N. Bigler, L. Gallmann, C. R. Phillips, U. Keller

“High-harmonic generation in the water window with a high-average power mid-infrared OPCPA at 100 kHz” – **upgraded to invited talk**

*9<sup>th</sup> EPS-QEOD Europhoton virtual conference*, 30. Aug. – 4. Sep. 2020

\* U. Keller – **CANCELLED Coronavirus**

“Gigahertz optical frequency combs from ultrafast solid-state and semiconductor lasers”

*XXXIII URSI General Assembly and Scientific Symposium*, Rome, Italy, Aug. 29-Sept. 5, 2020

\* U. Keller – **Plenary Talk (online presentation)**

“Optical frequency combs from ultrafast solid-state and semiconductor lasers”

*SPIE Optics + Photonics 2020*, San Diego, USA, Aug. 23-27, 2020

\* L. Cattaneo, L. Pedrelli, R. Y. Bello, A. Palacios, P. D. Keathley, F. Martin, U. Keller

“Comparing streaking and RABBITT measurements on a molecular target: H<sub>2</sub>”

*23<sup>rd</sup> European Conference on the dynamics of molecular systems (MOLEC 2020)*, Hamburg, Germany, 23-28 Aug. 2020 (online presentation)

\* U. Keller – **CANCELLED Coronavirus**

“Attosecond electric-field-driven dynamics in condensed matter”

*Gordon Research Conference on Multiphoton Processes 2020 (GRC 2020)*, Providence, USA June 14-19, 2020

L. Argenti, J. Fuchs, N. Douguet, S. Donsa, F. Martin, J. Burgdörfer, L. Cattaneo, U. Keller,

“Time delays from one-photon transitions in the continuum” – Talk online P05.00002

*American Physical Society's Division of Atomic, Molecular and Optical Physics (DAMOP 2020)*, USA, June 1-5, 2020

- \* U. Keller – **Plenary Talk – CANCELLED Coronavirus**  
 “Semiconductor disk lasers and SESAMs: material and design optimization”  
*Compound Semiconductor Week 2020 (CSW 2020)*, Stockholm, Sweden, May 17-21, 2020
- B. O. Alaydin, M. Gaulke, J. Heidrich, A. Barh, M. Golling, U. Keller – **CANCELLED Coronavirus**  
 “Design, Growth and Characterization of Mid-Infrared SESAMs” – Talk accepted  
*Compound Semiconductor Week 2020 (CSW 2020)*, Stockholm, Sweden, May 17-21, 2020
- T. Finke, V. Sichkovskiy, J. Nürnberg, L. Krüger, C. Alfieri, M. Golling, U. Keller, J. P. Reithmaier – **CANCELLED Coronavirus**  
 “GaAs based quantum dot structures for VECSEL and MIXSEL applications”  
*Compound Semiconductor Week 2020 (CSW 2020)*, Stockholm, Sweden, May 17-21, 2020
- \* B. Willenberg, J. Maurer, B. W. Mayer, U. Keller – **CANCELLED Coronavirus**  
 “Sub-cycle time resolution of multi-photon momentum transfer in strong-field ionization”  
*Memorial Symposium for Yaron Silberberg*, Weizmann Institute of Science, Israel, May 25-27, 2020
- P. A. Chevreuril, J. Pupeikis, N. Bigler, L. Gallmann, C. R. Phillips, U. Keller  
 “High-harmonic generation in the water window with a high-average power mid-infrared OPCPA at 100 kHz” – Talk Talk FW4D.5  
*CLEO USA 2020*, San Jose, California, USA, May 10-15, 2020
- L. M. Krüger, Y. Okawachi, X. Ji, A. Klenner, A. R. Johnson, C. Langrock, M.M. Fejer, M. Lipson, A. L. Gaeta, C. R. Phillips, U. Keller  
 “Self-referenced CEO frequency detection of 10-GHz laser enabled by highly efficient nonlinear waveguides” – Talk SF2G.7  
*CLEO USA 2020*, San Jose, California, USA, May 10-15, 2020
- J. Heidrich, M. Gaulke, A. Barh, M. Golling, B.O. Alaydin, U. Keller  
 “Precise Characterization of Mid-Infrared InGaSb SESAMs” – Talk STh1E.5  
*CLEO USA 2020*, San Jose, California, USA, May 10-15, 2020
- F. Saltarelli, I. J. Graumann, L. Lang, D. Bauer, C. R. Phillips, U. Keller  
 “Ultrafast Thin-Disk Laser Oscillator with 430-W Average Power and 78-MW Peak Power” – Talk SF3H.1  
*CLEO USA 2020*, San Jose, California, USA, May 10-15, 2020
- B. Willenberg, C. R. Phillips, F. Koch, L. M. Krüger, U. Keller  
 “Femtosecond dual-comb generation from a polarization-multiplexed Yb:CaF<sub>2</sub> laser cavity” – Talk SF1G.4  
*CLEO USA 2020*, San Jose, California, USA, May 10-15, 2020

L. Lang, I. J. Graumann, F. Saltarelli, V. J. Wittwer, T. Südmeyer, C. R. Phillips, U. Keller  
“Spectral Gain Optimization of Ultrafast Thin-Disk Laser Oscillators” – Talk SF3H.4  
*CLEO USA 2020*, San Jose, California, USA, May 10-15, 2020

J. Fuchs, N. Douguet, S. Donsa, F. Martin, J. Burgdörfer, L. Argenti, L. Cattaneo, U. Keller  
“Time delays from one-photon transitions in the continuum” – Talk FW3D.2  
*CLEO USA 2020*, San Jose, California, USA, May 10-15, 2020

B. Willenberg, J. Maurer, B. W. Mayer, U. Keller  
“Sub-Cycle Time Resolution of Multi-Photon Momentum Transfer in Strong-Field Ionization” – Talk FW3D.5  
*CLEO USA 2020*, San Jose, California, USA, May 10-15, 2020

- \* U. Keller – **Plenary Talk – CANCELLED Coronavirus**  
“Ultrafast solid-state lasers: a success story for the last 30 years with no end in sight”  
*SPIE Photonics Europe 2020*, Strasbourg, March 29 – April 2, 2020
- \* L. Cattaneo, U. Keller – **Plenary Talk – CANCELLED Coronavirus**  
“Angle-resolved photoionization dynamics in simple molecules: the case of H<sub>2</sub>, CO and N<sub>2</sub>O”  
*First Annual Workshop for the COST Action CA18222, AttoChem(2020)*, Romania, March 18-20,
- \* U. Keller – **Keynote Talk**  
“Attosecond Science: Opportunities and Challenges for Measurements at the Limit”  
*Heraeus Seminar 2020* im Physikhaus der DPG in Bad Honnef "Resolving the Full Picture...", Bad Honnef, Germany, 17-19 Feb. 2020
- \* U. Keller – **Tutorial**  
“Tutorial on short pulse generation with VECSELS and MIXSELS”  
*SPIE Photonics West 2020*, SPIE LASE, Vertical External Surface Emitting Lasers X (VECSELS X), Conference LA106, San Francisco, California, USA, Feb. 1-6, 2020

## 2019

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- \* U. Keller  
“Measurements at the limit: Ultrafast laser physics”  
*Heraeus Seminar, Berlin Science Week 2019*, Berlin, 7. Nov. 2019
  - \* U. Keller – **Plenary Talk**  
“Attosecond electron dynamics driven by optical fields: moving from atoms to condensed matter”  
*Ultrafast Science & Technology Spain 2019 (USTS 2019)*, Madrid, Nov. 6-8, 2019
- L. Cattaneo and U. Keller  
“Photoionization dynamics in simple molecules: the case of H<sub>2</sub>, CO and N<sub>2</sub>O”  
*Ultrafast Science & Technology Spain 2019 (USTS 2019)*, Madrid, Nov. 6-8, 2019

- J. Fuchs, N. Douguet, S. Donsa, F. Martin, J. Burgdörfer, L. Argenti, L. Cattaneo, U. Keller  
 “Time delays from one-photon transitions in the continuum” – Poster  
*Ultrafast Science & Technology Spain 2019 (USTS 2019)*, Madrid, Nov. 6-8, 2019
- F. Saltarelli, I. J. Graumann, L. Lang, D. Bauer, C. R. Phillips, U. Keller  
 “High average power modelocked thin-disk lasers: nonlinearity management and power scaling to 350 W” – Poster P1.26  
*Ultrafast Optics 2019 (UFO 2019)*, Bol, Island of Brac, Croatia, 6-11 Oct. 2019
- \* A. S. Mayer, C. R. Phillips, D. Waldburger, L. M. Krüger, A. Klenner, A. R. Johnson, K. Luke, X. Ji, Y. Okawachi, M. Lipson, A. L. Gaeta, C. Langrock, M. M. Fejer, U. Keller  
 “Leveraging Novel Nonlinear Devices for Gigahertz Frequency Combs” – Invited Talk Th13.1  
*Ultrafast Optics 2019 (UFO 2019)*, Bol, Island of Brac, Croatia, 6-11 Oct. 2019
- \* C. R. Phillips, J. Pupeikis, N. Bigler, P.-A. Chevreuril, S. Hrisafov, L. Gallmann, U. Keller  
 “Optical parametric chirped pulse amplification with PPLN: high average power sub-two-cycle 2.5  $\mu\text{m}$  pulses” – Invited Talk M4.1  
*Ultrafast Optics 2019 (UFO 2019)*, Bol, Island of Brac, Croatia, 6-11 Oct. 2019
- \* U. Keller – **Plenary Talk**  
 “Attosecond dynamics in solids”  
*FisMat 2019*, the Italian National Conference on the Physics of Matter, Catania, Italy, Sept. 30 – Oct. 4, 2019
- F. Saltarelli, I. J. Graumann, L. Lang, D. Bauer, C. R. Phillips, U. Keller  
 “Soliton-Modelocked Thin-Disk Laser Oscillator with 350 W Average Power and Sub-ps Pulses” – Talk AM4A.3  
*OSA Laser Congress 2019 (ASSL 2019)*, Vienna, Austria, 29. Sep. – 3. Oct. 2019
- F. Saltarelli, D. Koenen, L. Lang, I. J. Graumann, C. R. Phillips, U. Keller  
 “Beam quality in high-power thin-disk lasers: influence and measurement of the radial inversion profile” – Poster JM5A.35  
*OSA Laser Congress 2019 (ASSL 2019)*, Vienna, Austria, 29. Sep. – 3. Oct. 2019
- J. Pupeikis, P.-A. Chevreuril, C. R. Phillips, U. Keller  
 “Power scaling of few-cycle PPLN-based mid-IR OPCPA” – Talk AM2A.1  
*OSA Laser Congress 2019 (ASSL 2019)*, Vienna, Austria, 29. Sep. – 3. Oct. 2019
- S. Hrisafov, J. Pupeikis, B. Willenberg, F. Brunner, N. Bigler, C. R. Phillips, U. Keller  
 “Few-cycle near-IR OPCPA system with 22 W average power and 100 kHz repetition rate” – Talk AM2A.2  
*OSA Laser Congress 2019 (ASSL 2019)*, Vienna, Austria, 29. Sep. – 3. Oct. 2019
- \* U. Keller (35 Minuten Talk + 10 Minuten Discussion)  
 “Attoclock und Tunnelzeit: Zeitmessung in der Quantenmechanik”  
*Annual Meeting of the Leopoldina 2019*, Halle, Germany 20-21 Sept. 2019

- \* U. Keller – **Keynote Talk**  
 “Novel concepts for ultrafast lasers”  
*15<sup>th</sup> International Conference on Laser Ablation (COLA 2019)*, Maui-Hawaii, USA, 8-13 Sep. 2019
  
- \* U. Keller  
 “Attoclock revisited”  
*Otto Stern Conference*, Frankfurt, Germany, 1-5 Sep. 2019
  
- \* L. Cattaneo, U. Keller  
 “Unfolding the physics of photoionization dynamics in simple molecules”  
*20<sup>th</sup> International Symposium on Correlation, Polarization and Ionization in Atomic and Molecular Collisions (COPIAMC 2019)*, Metz, France, July 31 – Aug. 3, 2019
  
- J. Maurer, B. Willenberg, B. W. Mayer, C. R. Phillips, L. Gallmann, J. Danek, M. Klaiber, K. Z. Hatsagortsyan, C. H. Keitel, U. Keller  
 “Strong-field ionization beyond the dipole approximation: ellipticity dependence, rescattering and holographic interferences” – Talk Special Report  
*XXXIst International Conference on Photonic, Electronic, and Atomic Collisions (ICPEAC 2019)*, Centre International de Deauville, France, July 23-30, 2019
  
- J. Maurer, B. Willenberg, B. W. Mayer, U. Keller  
 “Sub-cycle time resolution of multi-photon momentum transfer in strong-field ionization” – Poster  
*XXXIst International Conference on Photonic, Electronic, and Atomic Collisions (ICPEAC 2019)*, Centre International de Deauville, France, July 23-30, 2019
  
- B. Willenberg, J. Maurer, B. W. Mayer, U. Keller  
 “Sub-cycle time resolution of multi-photon momentum transfer in strong-field ionization” - Poster  
*7<sup>th</sup> International Conference on Attosecond Science and Technology (ATTO2019)*, Szeged, Hungary, July 1-5, 2019
  
- M. Volkov, J. Pupeikis, C. R. Phillips, F. Schlaepfer, L. Gallmann, U. Keller  
 “Sensitive detection scheme for attosecond transient absorption spectroscopy” – Poster requested with submission  
*7<sup>th</sup> International Conference on Attosecond Science and Technology (ATTO2019)*, Szeged, Hungary, July 1-5, 2019
  
- L. Pedrelli, P. D. Keathley, L. Cattaneo, F. X. Kärtner, U. Keller  
 “Electron wavepacket retrieval with Absolute Complex Dipole transition matrix element reConstruction (ACDC) algorithm” - Poster  
*7<sup>th</sup> International Conference on Attosecond Science and Technology (ATTO2019)*, Szeged, Hungary, July 1-5, 2019
  
- L. Cattaneo, J. Vos, D. Baykusheva, H. J. Wörner, U. Keller  
 “Unfolding the physics of shape resonances in photoionization of N<sub>2</sub>O” - Talk  
*7<sup>th</sup> International Conference on Attosecond Science and Technology (ATTO2019)*, Szeged, Hungary, July 1-5, 2019

J. Fuchs, N. Douguet, S. Donsa, F. Martin, J. Burgdörfer, L. Argenti, L. Cattaneo, U. Keller

“Time delays from one-photon transitions in the continuum” - Talk 114  
*7<sup>th</sup> International Conference on Attosecond Science and Technology (ATTO2019)*,  
Szeged, Hungary, July 1-5, 2019

F. Schlaepfer, M. Lucchini, S. A. Sato, M. Volkov, L. Kasmi, N. Hartmann, A. Rubio, L. Gallmann, U. Keller

“Attosecond photocarrier excitation in III-V semiconductors” - Poster  
*7<sup>th</sup> International Conference on Attosecond Science and Technology (ATTO2019)*,  
Szeged, Hungary, July 1-5, 2019

M. Volkov, S. A. Sato, F. Schlaepfer, N. Hartmann, L. Kasmi, M. Lucchini, L. Gallman, A. Rubio, U. Keller

“Attosecond electron localization in metallic titanium” - Poster  
*7<sup>th</sup> International Conference on Attosecond Science and Technology (ATTO2019)*,  
Szeged, Hungary, July 1-5, 2019

F. Schlaepfer, M. Lucchini, S. A. Sato, M. Volkov, L. Kasmi, N. Hartmann, A. Rubio, L. Gallmann, U. Keller

“Optically driven attosecond electron dynamics in III-V semiconductors” – Talk CG-4.4  
*CLEO Europe-EQEC 2019*, Munich, Germany, 23-27 June 2019

M. Volkov, S. A. Sato, F. Schlaepfer, L. Kasmi, N. Hartmann, M. Lucchini, L. Gallman, A. Rubio, U. Keller

“Attosecond electron localization and screening dynamics in metals” – Talk CG-4.3  
*CLEO Europe-EQEC 2019*, Munich, Germany, 23-27 June 2019

M. Volkov, J. Pupeikis, C. R. Phillips, F. Schlaepfer, L. Gallmann, U. Keller

“Reducing spectral fluctuations of high-harmonics with indirect balanced detection scheme” – Poster CG-P.15  
*CLEO Europe-EQEC 2019*, Munich, Germany, 23-27 June 2019

F. Saltarelli, I. J. Graumann, L. Lang, D. Bauer, C. R. Phillips, U. Keller

“350-W Average-Power SESAM-Modelocked Ultrafast Thin-Disk Laser” – Talk CF-1.1  
*CLEO Europe-EQEC 2019*, Munich, Germany, 23-27 June 2019

F. Saltarelli, A. Diebold, I. J. Graumann, C. R. Phillips, U. Keller

“Overcoming the challenges in power scaling ultrafast thin-disk oscillators: nonlinearity management and thermal effects” – Talk CF-1.4  
*CLEO Europe-EQEC 2019*, Munich, Germany, 23-27 June 2019

I. J. Graumann, F. Saltarelli, L. Lang, V. J. Wittwer, T. Südmeyer, C. R. Phillips, U. Keller

“Power-Scaling Nonlinear-Mirror Modelocked Thin-Disk Lasers” – Talk CF-1.6  
*CLEO Europe-EQEC 2019*, Munich, Germany, 23-27 June 2019

N. Bigler, J. Pupeikis, S. Hrisafov, L. Gallmann, C. R. Phillips, U. Keller

“High-Power and Sub-Two-Cycle 2.5  $\mu\text{m}$  OPCPA system” – Talk CF-7.4

*CLEO Europe-EQEC 2019, Munich, Germany, 23-27 June 2019*

B. Willenberg, F. Brunner, C. R. Phillips, U. Keller  
“Efficient 2-W Average Power 206 nm Deep-Ultraviolet Generation from 100-kHz Picosecond Pulses” – Talk CD-11.2  
*CLEO Europe-EQEC 2019, Munich, Germany, 23-27 June 2019*

J. Nürnberg, C. G. E. Alfieri, D. Waldburger, L. Krüger, M. Golling, U. Keller  
“A single free-running dual-comb MIXSEL for fast and precise distance measurements” – Talk CH-2.6  
*CLEO Europe-EQEC 2019, Munich, Germany, 23-27 June 2019*

J. Nürnberg, C. G. E. Alfieri, Z. Chen, D. Waldburger, M. Golling, N. Picqué, U. Keller  
“Dual-comb spectroscopy of acetylene with a single, free-running MIXSEL generating two frequency combs” – Talk ED-3.2  
*CLEO Europe-EQEC 2019, Munich, Germany, 23-27 June 2019*

L.M. Krüger, A.S. Mayer, C.R. Phillips, and U. Keller  
“Towards Fully Stabilized 10GHz Optical Frequency Combs From SESAM-Modelocked Yb:CALGO Lasers” – Talk CF-2.3  
*CLEO Europe-EQEC 2019, Munich, Germany, 23-27 June 2019*

\* U. Keller – **Plenary Talk**  
“Dual-comb generation made simple”  
*Annual Meeting of DGaO (Deutsche Gesellschaft für angewandte Optik), Darmstadt, Deutschland, June 11-15, 2019*

\* U. Keller  
“VECSELS for frequency comb generation”  
*VCSEL-day 2019, Brussel, 9-10 May, 2019*

B. Willenberg, F. Brunner, C. R. Phillips, U. Keller  
“Efficient 2-W Average Power 206 nm Deep-UV Generation from 100-kHz Picosecond Pulses” – Talk FTh1M.8  
*CLEO Laser Science to Photonic Application (CLEO 2019), San Jose, California, USA, 5-10 May 2019*

M. Volkov, J. Pupeikis, C. R. Phillips, F. Schlaepfer, L. Gallmann, U. Keller  
“Reduction of laser-intensity-correlated noise in high-harmonic generation” – Talk FF2C.1  
*CLEO Laser Science to Photonic Application (CLEO 2019), San Jose, California, USA, 5-10 May 2019*

C. R. Phillips, J. Pupeikis, J. Sinanan-Singh, U. Keller  
“Noise characteristics of a free-running femtosecond dual-comb diode-pumped Yb:CaGdAlO<sub>4</sub> laser” – *withdrawn for patent application reasons*  
*CLEO Laser Science to Photonic Application (CLEO 2019), San Jose, California, USA, 5-10 May 2019*

\* J. Pupeikis, N. Bigler, S. Hrisafov, L. Gallmann, C. R. Phillips, U. Keller

“Sub-two-cycle high-average-power pulses at 2.5  $\mu\text{m}$ ” – **upgraded to an invited talk STh3E.2**

*CLEO Laser Science to Photonic Application (CLEO 2019)*, San Jose, California, USA, 5-10 May 2019

F. Saltarelli, I. J. Graumann, L. Lang, D. Bauer, C. R. Phillips, and U. Keller

“Power Scaling of Ultrafast Laser Oscillators: 350-W Output Power Sub-ps SESAM-Modelocked Thin-Disk Laser” – Talk SF3E.3

*CLEO Laser Science to Photonic Application (CLEO 2019)*, San Jose, California, USA, 5-10 May 2019

\* U. Keller

“Recent advances in SESAM-modelocked high-power thin disk lasers” – Talk JM1E.1

*CLEO Laser Science to Photonic Application (CLEO 2019)*, San Jose, California, USA, 5-10 May 2019

\* U. Keller – **Plenary Talk**

“Recent advances in SESAM-modelocked high-power thin disk lasers”

*Optics & Photonics International congress 2019 (OPIC 2019)*, Pacifico Yokohama, Japan, April 22-26, 2019

\* C. R. Phillips, L. M. Krüger, A. S. Mayer, U. Keller

“PPLN-based compact modelocked laser” – Talk ALPS-14-01

*8<sup>th</sup> Advanced Lasers and Photon Sources (ALPS2019)*, Pacifico Yokohama, Japan, 22-25 April 2019

\* L. Cattaneo, L. Pedrelli, U. Keller

“Attosecond photoionization dynamics in molecules”

*13<sup>th</sup> European Conference on Atoms, Molecules and Photons (ECAMP-13)*, Florence, Italy, 8-12 April 2019

L. Pedrelli, P. D. Keathley, L. Cattaneo, F. X. Kärtner, U. Keller

“Absolute Complex Dipole transition matrix element reConstruction (ACDC) for attosecond streaking spectrograms” - Poster

*13<sup>th</sup> European Conference on Atoms, Molecules and Photons (ECAMP-13)*, Florence, Italy, 8-12 April 2019

\* U. Keller – **Plenary Talk**

“Recent advances in SESAM-modelocked high-power thin disk lasers”

*SPIE Optics and Optoelectronics Europe*, Prague, Czech Republic, April 1-4, 2019

J. Nürnberg, C. G. E. Alfieri, D. Waldburger, L. Krüger, M. Golling, U. Keller

“Light detection and ranging with a single free-running dual-comb semiconductor disk laser” – Talk Paper Nr 10901-24

*SPIE Photonics West 2019*, SPIE LASE, Vertical External Surface Emitting Lasers IX (VECSELs IX), Conference LA106, San Francisco, California, USA, Feb. 2-7, 2019

L. M. Krüger, D. Waldburger, A. S. Mayer, C. G. E. Alfieri, A. R. Johnson, X. Ji, A. Klenner, Y. Okawachi, M. Lipson, A. L. Gaeta, U. Keller

- “Self-referencing gigahertz frequency combs from SESAM-modelocked VECSELs and Yb:CALGO bulk lasers: a noise comparison” – Talk Paper Nr 10901-21  
*SPIE Photonics West 2019*, SPIE LASE,, Vertical External Surface Emitting Lasers IX (VECSELs IX), Conference LA106, San Francisco, California, USA, Feb. 2-7, 2019
- \* J. Nürnberg, C. G. E. Alfieri, D. Waldburger, M. Golling, U. Keller  
 “Femtosecond dual-comb MIXSEL” – Invited Talk PW19L-LA106-20  
*SPIE Photonics West 2019*, SPIE LASE,, Vertical External Surface Emitting Lasers IX (VECSELs IX), Conference LA106, San Francisco, California, USA, Feb. 2-7, 2019
- \* U. Keller  
 “Attosecond field-driven dynamics in diamond, GaAs and Ti-metal” – Invited Paper Nr 10916-19  
*SPIE Photonics West 2019*, SPIE OPTO, Ultrafast Phenomena and Nanophotonics XXIII, Conf. OE105, San Francisco, California, USA, Feb. 2-7, 2019
- \* U. Keller  
 “Dual-Comb Spectroscopy of acetylene gas with one unstabilized semiconductor laser” – Invited Paper Nr 10904-7  
*SPIE Photonics West 2019*, SPIE LASE, Laser Resonators, Microresonators and Beam Control XXI, San Francisco, California, USA, Feb. 2-7, 2019
- \* C. R. Phillips  
 “Second-order nonlinearities for high power ultrafast lasers and frequency comb generation” – **Invited Keynote**, Paper Nr 10902-38  
*SPIE Photonics West 2019*, SPIE LASE, Nonlinear Frequency Generation and Conversion: Materials and Devices XVIII, San Francisco, California, USA, Feb. 2-7, 2019

## 2018

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- \* U. Keller  
 “Optical frequency combs”  
*EPFL Photonics Day*, Lausanne, Switzerland, Dec. 10, 2018
- \* C. R. Phillips  
 “New Frontiers in High Repetition Rate Ultrafast Laser Sources”  
*EPIC 2018 Biophotonics workshop*, Birkerød, Denmark, 4-5 Dec. 2018
- \* C. R. Phillips, L. M. Krüger, A. S. Mayer, U. Keller  
 “Adiabatic QPM processes and frequency comb generation”  
*Advanced Solid-State Lasers 2018 (ASSL 2018)*, Boston, Nov. 4-8, 2018
- N. Bigler, J. Pupeikis, S. Hrisafov, L. Gallmann, C. R. Phillips, U. Keller  
 “High-average-power few-cycles pulses at 2.5  $\mu\text{m}$ ”  
*Advanced Solid-State Lasers 2018 (ASSL 2018)*, Boston, Nov. 4-8, 2018
- F. Saltarelli, A. Diebold, I. J. Graumann, C. R. Phillips, U. Keller

- “Self-Phase Modulation Cancellation in 210-W SESAM-Modelocked Thin-Disk Oscillator Operated in Air”  
*Advanced Solid-State Lasers 2018 (ASSL 2018)*, Boston, Nov. 4-8, 2018
- C. G. E. Alfieri, D. Waldburger, J. Nürnberg, M. Golling, U. Keller  
 “Quantum Dot Semiconductor Disk Lasers: Lasing Performance Depending on Growth Techniques”  
*German MBE Workshop (MBE 2018)*, Freiburg, Germany, Oct. 11-12, 2018
- \* L. Gallmann, L. Kasmi, M. Lucchini, L. Castiglioni, P. Kliuiev, J. Osterwalder, M. Hengsberger, P. Krüger, U. Keller  
 "The effective mass in attosecond photoemission from solids,"  
*International Workshop on Dynamics, Interactions and Electronic Transitions at Surfaces (DIET 16 - 2018)*, Garmisch-Partenkirchen, Germany, October 8-12, 2018
- \* L. Gallmann, L. Kasmi, M. Lucchini, L. Castiglioni, P. Kliuiev, J. Osterwalder, M. Hengsberger, P. Krüger, U. Keller  
 "The effective mass in attosecond photoemission from solids,"  
*5th Meeting of Ultrafast Dynamic Imaging of Matter (UDIM 2018)*, Agios Nikolaos, Crete, Greece, September 28 – October 4, 2018
- \* U. Keller, **Keynote**  
 “Attosecond electric-field-driven dynamics in condensed matter”  
*XXV International Summer School "Nicolás Cabrera" in 2018: "Manipulating Light and Matter at the Nanoscale"*, Miraflores de la Sierra, Spain, Sep. 10-14, 2018
- \* L. Gallmann, M. Lucchini, F. Schäfer, M. Volkov, S. A. Sato, L. Kasmi, N. Hartmann, A. Ludwig, J. Herrmann, Y. Shinohara, K. Yabana, A. Rubio, U. Keller  
 “Attosecond electron dynamics in dielectrics and metals driven by optical fields”  
*International Conference 2018, Non-equilibrium Dynamics of Condensed Matter in the Time Domain*, Abbey Rolduc, Germany, Sept. 3-6, 2018
- \* U. Keller, **Plenary Talk**  
 “Transient electric-field-driven dynamics in condensed matter: from Terahertz to Petahertz”  
*Swiss Physical Society Meeting 2018 (SPS Meeting 2018)*, Lausanne, Switzerland, 28-31 August 2018
- \* U. Keller – **Plenary Keynote**  
 “Recent advances in SESAM-modelocked high-power thin disk lasers”  
*The 6<sup>th</sup> International Academy of Photonics and Laser Engineering (IAPLE) conference and general meeting (IAPLE 2018)*, Cape Town, South Africa, 29. July – 4. Aug. 2018
- \* B. Willenberg, J. Maurer, B. W. Mayer, U. Keller  
 “Linear momentum transfer in multiphoton strong-field ionization with subcycle time resolution”  
*27th annual International Laser Physics Workshop (LPHYS'18)*, Seminar 9 "Extreme Light Technologies, Science, and Applications", Nottingham, United Kingdom, July 16-20, 2018

- \* U. Keller, F. Schlöpfer, M. Volkov, S. A. Sato, M. Lucchini, L. Gallmann, A. Rubio  
 “New physical insight gained in condensed matter with attosecond transient absorption spectroscopy” – Invited Talk MON.2  
*Ultrafast Phenomena Conference XXI*, Hamburg, Germany, July 15-20, 2018
  
- C. Cirelli, C. Marante, S. Heuser, C. L. M. Petersson, Á. J. Galán, L. Argenti, S. Zhong, D. Busto, M. Isinger, S. Nandi, S. Maclot, L. Rading, P. Johnsson, M. Gisselbrecht, M. Lucchini, L. Gallmann, J. M. Dahlström, E. Lindroth, A. L’Huillier, F. Martín, U. Keller  
 “Anisotropic photoemission time delays close to a Fano resonance” – Talk TUE.1.3  
*Ultrafast Phenomena Conference XXI*, Hamburg, Germany, July 15-20, 2018”
  
- L. Cattaneo, J. Vos, R. Yulio Bello, A. Palacios, S. Heuser, L. Pedrelli, M. Lucchini, C. Cirelli, F. Martin, U. Keller  
 “Coupled nuclear-electronic dynamics in photoionization of H<sub>2</sub>” – Talk WED.2B.3  
*Ultrafast Phenomena Conference XXI*, Hamburg, Germany, July 15-20, 2018”
  
- J. Vos, L. Cattaneo, S. Patchkovskii, T. Zimmermann, C. Cirelli, M. Lucchini, A. Kheifets, A. S. Landsman, U. Keller  
 “Orientation-dependent stereo Wigner time delay and electron localization in a small molecule” – **Postdeadline Talk** THU.4.3  
*Ultrafast Phenomena Conference XXI*, Hamburg, Germany, July 15-20, 2018”
  
- \* U. Keller, **Plenary Talk**  
 “Attosecond ionization time delays from atoms, molecules to solid surfaces”  
*Conference of the European Group of Atomic Systems, EGAS 2018*, Krakau, 9. - 13. July 2018
  
- \* J. Nürnberg, C. G. E. Alfieri, Z. Chen, D. Waldburger, M. Golling, N. Picqué, U. Keller  
 “Dual-comb spectroscopy with one unstabilized semiconductor laser” – Invited Talk IM3I.1  
*Integrated Photonics Research Conference 2018, OSA Advanced Photonics Congress 2018*, ETH Zurich, Switzerland, July 2-5, 2018
  
- L. M. Krüger, A. S. Mayer, C. R. Phillips, V. J. Wittwer, T. Südmeyer, U. Keller  
 “Overcoming the Q-switching limitation in high-repetition-rate straight-cavity SESAM-modelocked lasers” – Talk NpTh1G.2  
*OSA Advanced Photonics Congress 2018*, ETH Zurich, Switzerland, July 2-5, 2018
  
- J. Nürnberg, C. G. E. Alfieri, D. Waldburger, M. Golling, U. Keller  
 “Pushing integrated semiconductor disk lasers towards 100-fs pulses” – Talk JW2I.4  
*OSA Advanced Photonics Congress 2018*, ETH Zurich, Switzerland, July 2-5, 2018
  
- D. Waldburger, A. S. Mayer, C. G. E. Alfieri, J. Nürnberg, A. R. Johnson, X. Ji, A. Klenner, Y. Okawachi, M. Lipson, A. L. Gaeta, U. Keller  
 “Silicon nitride waveguide enables self-referenced frequency comb from a semiconductor disk laser” – Talk JW3I.7  
*OSA Advanced Photonics Congress 2018*, ETH Zurich, Switzerland, July 2-5, 2018
  
- C. G. E. Alfieri, D. Waldburger, J. Nürnberg, M. Golling, U. Keller

- “Quantum dot semiconductor disk lasers: record performance depending on growth techniques” – Talk NoM2D.3  
*OSA Advanced Photonics Congress 2018*, ETH Zurich, Switzerland, July 2-5, 2018
- N. Bigler, J. Pupeikis, S. Hrisafov, L. Gallmann, C. R. Phillips, U. Keller  
 “Broadband phase-matching using tilted quasi-phase-matching gratings” – Talk NpTh1C.4  
*OSA Advanced Photonics Congress 2018*, ETH Zurich, Switzerland, July 2-5, 2018
- F. Saltarelli, A. Diebold, I. J. Graumann, C. R. Phillips, U. Keller  
 “Soliton-modelocked 153-W thin disk laser oscillator in air enabled by negative nonlinearities in a phase-mismatched  $\chi^{(2)}$  crystal” – Talk NpTh1C.1  
*OSA Advanced Photonics Congress 2018*, ETH Zurich, Switzerland, July 2-5, 2018
- F. Labaye, M. Gaponenko, V. J. Wittwer, A. Diebold, C. Paradis, N. Modsching, L. Merceron, F. Emaury, I. J. Graumann, C. R. Phillips, C. J. Saraceno, C. Kränkel, U. Keller, T. Südmeyer  
 “Extreme ultraviolet light source by high-harmonic generation inside an ultrafast thin-disk laser” – Talk NpTh1C.8  
*OSA Advanced Photonics Congress 2018*, ETH Zurich, Switzerland, July 2-5, 2018
- \* B. Willenberg, J. Maurer, B. W. Mayer, U. Keller  
 “Linear momentum transfer in multiphoton strong-field ionization with subcycle time resolution”  
*Attosecond and Free Electron Laser Science 2018*, International Conference at University College London, July 2-4, 2018
- \* U. Keller  
 “Transient electric-field-driven dynamics in condensed matter: from Terahertz to Petahertz”  
*American Physical Society's Division of Atomic, Molecular and Optical Physics (DAMOP 2018)*, Fort Lauderdale, Florida, May 28- June 1, 2017
- F. Saltarelli, A. Diebold, I. J. Graumann, C. R. Phillips, and U. Keller  
 “210-W Ultrafast Thin-Disk Laser Oscillator in Air Enabled by Negative Nonlinearities from Cascaded  $\chi^{(2)}$  Processes” – Postdeadline Paper  
*CLEO 2018*, San Jose, California, USA, May 13-18, 2018
- C. G. E. Alfieri, D. Waldburger, J. Nürnberg, M. Golling, U. Keller  
 “Ultrafast Quantum Dot VECSELs: Record Performance Depending on Growth Techniques” – Talk SF1G.2  
*CLEO 2018*, San Jose, California, USA, May 13-18, 2018
- \* D. Waldburger, A. S. Mayer, C. G. E. Alfieri, J. Nürnberg, A. R. Johnson, X. Ji, A. Klenner, Y. Okawachi, M. Lipson, A. L. Gaeta, U. Keller – upgraded to Invited Talk SM4L.7  
 “Fully Stabilized Optical Frequency Comb from a Semiconductor Disk Laser”  
*CLEO 2018*, San Jose, California, USA, May 13-18, 2018
- F. Saltarelli, A. Diebold, I. J. Graumann, C. J. Saraceno, C. R. Phillips, and U. Keller

“Gas Lens in kW-Class Thin-Disk Lasers” – Talk SM3N.5  
*CLEO 2018*, San Jose, California, USA, May 13-18, 2018

F. Saltarelli, A. Diebold, I. J. Graumann, C. R. Phillips, and U. Keller  
“Femtosecond Nonlinear-Mirror Thin-Disk Oscillator” – Talk SF2N.6  
*CLEO 2018*, San Jose, California, USA, May 13-18, 2018

J. Nürnberg, C. G. E. Alfieri, Z. Chen, D. Waldburger, M. Golling, N. Picqué, U. Keller  
“Free-running, Femtosecond Dual-Comb MIXSEL for Spectroscopy of Acetylene” –  
Poster JW2A.157  
*CLEO 2018*, San Jose, California, USA, May 13-18, 2018

L. M. Krüger, A. S. Mayer, C. R. Phillips, V. J. Wittwer, O. Razskazovskaya, T.  
Südmeyer and U. Keller  
“Repetition-Rate Stabilized 10-GHz Straight-Cavity SESAM-Modelocked Yb:CALGO  
Laser” – Talk SF2N.7  
*CLEO 2018*, San Jose, California, USA, May 13-18, 2018

A. Jallageas, J. Nürnberg, C. G. E. Alfieri, D. Waldburger, S. M. Link, F. Emaury, J.  
Morel, U. Keller  
“Wavelength calibration of high-performance spectrometers with a stabilized optical  
comb from an ultrafast semiconductor disk laser” – Talk AT30.6  
*CLEO 2018*, San Jose, California, USA, May 13-18, 2018

\* U. Keller  
“Optical dual-comb generation and molecular spectroscopy using only one unstabilized  
semiconductor laser” – Invited talk 10682-19  
*SPIE Photonics Europe 2018*, Strasbourg, France, April 22-26, 2018

F. Emaury, F. F. Voigt, P. Bethge, D. Waldburger, S. M. Link, S. Carta, A. van der  
Bourg, F. Helmchen, U. Keller - Poster 10685-177  
“Femtosecond semiconductor disk lasers: a promising tool for the future of multiphoton  
imaging”  
*SPIE Photonics Europe 2018*, Strasbourg, France, April 22-26, 2018

\* C. R. Phillips, N. Bigler, J. Pupeikis, S. Hrisafov, L. Gallmann, H. Ishizuki, T. Taira, U.  
Keller  
“Broadband and high power mid-infrared optical parametric amplification via structured  
quasi-phase-matching devices”  
*Mid-Infrared Coherent Sources (MICS 2018)*, Strasbourg, France, 26-28 March 2018

\* L. Cattaneo, J. Vos, R. Y. Bello, A. Palacios, S. Heuser, L. Pedrelli, M. Lucchini, C.  
Cirelli, F. Martín, U. Keller  
“Nuclear-Electronic Coupled Photoionization Dynamics of H<sub>2</sub>”  
*Extreme Atomic Systems (EAS 2018)*, Haus Bergkranz in Riezlern/Kleinwalsertal, 18–23  
Feb. 2018

J. Nürnberg, C. G. E. Alfieri, S. M. Link, D. Waldburger, M. Golling, U. Keller  
“Femtosecond dual-comb MIXSEL at 1030 nm”

*SPIE Photonics West 2018*, LASE, Vertical External Surface Emitting Lasers VIII (VECSELS VIII), Conference LA106, San Francisco, California, USA, Jan. 27 – Feb. 1, 2018

D. Waldburger, S. M. Link, C. G. E. Alfieri, M. Golling, U. Keller  
“Coherent beam combining of a colliding pulse modelocked VECSEL” – Talk 10515-16  
*SPIE Photonics West 2018*, LASE, Vertical External Surface Emitting Lasers VIII (VECSELS VIII), Conference LA106, San Francisco, California, USA, Jan. 27 – Feb. 1, 2018

\* D. Waldburger, A. S. Mayer, C. G. E. Alfieri, A. R. Johnson, X. Ji, A. Klenner, Y. Okawachi, M. Lipson, A. L. Gaeta, U. Keller  
“Octave-spanning supercontinuum generated in silicon nitride waveguide directly from a SESAM-modelocked VECSEL” – Talk 10515-17  
*SPIE Photonics West 2018*, LASE, Vertical External Surface Emitting Lasers VIII (VECSELS VIII), Conference LA106, San Francisco, California, USA, Jan. 27 – Feb. 1, 2018

\* C. G. E. Alfieri, D. Waldburger, J. Nürnberg, M. Golling, U. Keller  
“Sub-300-fs semiconductor disk laser based on active quantum dots” – Talk 10515-13  
*SPIE Photonics West 2018*, LASE, Vertical External Surface Emitting Lasers VIII (VECSELS VIII), Conference LA106, San Francisco, California, USA, Jan. 27 – Feb. 1, 2018

N. Jornod, K. Gürel, V. J. Wittwer, P. Brochard, S. Hakobyan, S. Schilt, D. Waldburger, U. Keller, T. Südmeyer  
“Carrier-envelope offset frequency stabilization of an ultrafast semiconductor laser” – Talk 10515-18  
*SPIE Photonics West 2018*, LASE, Vertical External Surface Emitting Lasers VIII (VECSELS VIII), Conference LA106, San Francisco, California, USA, Jan. 27 – Feb. 1, 2018

\* U. Keller – **Plenary Talk LASE Symposium**  
“Gigahertz laser frequency combs and dual-comb spectroscopy”  
*SPIE Photonics West 2018*, LASE, San Francisco, California, USA, Jan. 27 – Feb. 1, 2018

F. Emaury, F. F. Voigt, P. Bethge, D. Waldburger, S. M. Link, Stefano Carta, A. van der Bourg, F. Helmchen, U. Keller  
“Femtosecond semiconductor disk lasers: a promising tool for the future of multiphoton imaging”  
*SPIE Photonics West 2018*, San Francisco, California, USA, Jan. 27 – Feb. 1, 2018

\* U. Keller  
“Transient electric-field-driven dynamics in condensed matter: from Terahertz to Petahertz”  
2<sup>nd</sup> ETH Zurich – The University of Tokyo Symposium, ETH Zurich, 16-17 January 2018

\* U. Keller – **Plenary Talk**

“Attosecond field-driven dynamics in condensed matter”

*Physics of Quantum Electronics conference 2017 (PQE-2017)*, Snowbird, Utah, Jan. 7-12, 2018

## 2017

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\* U. Keller – **Plenary Talk**

“Attoclock revisited on quantum tunneling time”

*International Conference on Extreme Light (ICEL 2017)*, Szeged, Hungary, Nov. 5-9, 2017

\* M. Lucchini, S. A. Sato, J. Herrmann, A. Ludwig, M. Volkov, L. Kasmi, Y. Shinohara, K. Yabana, L. Gallmann, U. Keller

“Attosecond time-resolved dynamical Franz-Keldysh effect in polycrystalline diamond”

*International Conference on Extreme Light (ICEL 2017)*, Szeged, Hungary, Nov. 5-9, 2017

\* C. Hofmann, A. S. Landsman, U. Keller

“Attoclock revisited”

*International Conference on Extreme Light (ICEL 2017)*, Szeged, Hungary, Nov. 5-9, 2017

D. J. H. C. Maas, S. M. Link, D. Waldburger, and U. Keller

“Dual-Comb Spectroscopy with a Semiconductor Disk Laser”,

*IEEE Sensors 2017*, Glasgow, Scotland UK, Oct. 29 – Nov. 1, 2017

\* F. Labaye, M. Gaponenko, V. J. Wittwer, C. Paradis, N. Modsching, L. Merceron, A. Diebold, F. Emaury, I. Graumann, C. R. Phillips, C. J. Saraceno, C. Kränkel, U. Keller and T. Südmeyer

“Compact megahertz repetition rate coherent XUV light source based on HHG inside a modelocked thin-disk laser”

*Ultrafast Optics 2017 (UFO 2017)*, Jackson, Wyoming, USA, Oct. 8-13, 2017

\* F. Labaye, M. Gaponenko, V. J. Wittwer, C. Paradis, N. Modsching, L. Merceron, A. Diebold, F. Emaury, I. J. Graumann, C. R. Phillips, C. J. Saraceno, C. Kränkel, U. Keller, T. Südmeyer

“Compact megahertz repetition rate coherent XUV light source based on HHG inside a mode-locked thin-disk laser” – Talk Tu7.5

*Ultrafast Optics 2017 (UFO 2017)*, Jackson, Wyoming, USA, Oct. 8-13, 2017

A. S. Mayer, C. R. Phillips, U. Keller

“Watt-level femtosecond 10-GHz SESAM modelocked Yb:CALGO laser operating in the normal dispersion regime” – Talk We8.4

*Ultrafast Optics 2017 (UFO 2017)*, Jackson, Wyoming, USA, Oct. 8-13, 2017

\* U. Keller, **Plenary Talk**

“Dual-comb spectroscopy with one unstabilized semiconductor laser” – Talk We8.1

*Ultrafast Optics 2017 (UFO 2017)*, Jackson, Wyoming, USA, Oct. 8-13, 2017

- \* U. Keller, **Keynote**  
 “Attoclock revisited on quantum tunneling time” – Talk WI1.1  
*IEEE Photonics Conference 2017 (IPC 2017)*, Orlando, Florida, Oct. 1-5, 2017
- D. Waldburger, A. S. Mayer, C. G. E. Alfieri, A. R. Johnson, X. Ji, A. Klenner, Y. Okawachi, M. Lipson, A. L. Gaeta, and U. Keller  
 “Self-referenced CEO frequency detection of a semiconductor disk laser using a silicon nitride waveguide” – **Postdeadline Paper** JTU6A.3  
*Advanced Solid-State Lasers 2017 (ASSL 2017)*, Nagoya, Aichi, Japan, Oct. 1-5, 2017
- F. Labaye, M. Gaponenko, V. J. Wittwer, C. Paradis, N. Modsching, L. Merceron, A. Diebold, F. Emaury, I. Graumann, C. R. Phillips, C. J. Saraceno, C. Kränkel, U. Keller and T. Südmeyer  
 “SESAM-modelocked thin-disk laser (TDL) with intracavity high-harmonic generation (HHG)” – Talk ATh5A.3  
*Advanced Solid-State Lasers 2017 (ASSL 2017)*, Nagoya, Aichi, Japan, Oct. 1-5, 2017
- S. Hakobyan, V. J. Wittwer, K. Gürel, P. Brochard, S. Schilt, A. S. Mayer, U. Keller, T. Südmeyer  
 “Opto-optical modulation for carrier-envelope-offset stabilization in a GHz diode-pumped solid-state laser” – Talk AW1A.4  
*Advanced Solid-State Lasers 2017 (ASSL 2017)*, Nagoya, Aichi, Japan, Oct. 1-5, 2017
- N. Jornod, K. Gürel, V. J. Wittwer, P. Brochard, S. Hakobyan, S. Schilt, D. Waldburger, U. Keller, T. Südmeyer  
 “Carrier-envelope offset frequency stabilization of a mode-locked semiconductor laser” – Talk AW1A.6  
*Advanced Solid-State Lasers 2017 (ASSL 2017)*, Nagoya, Aichi, Japan, Oct. 1-5, 2017
- F. Saltarelli, A. Diebold, I. J. Graumann, C. R. Phillips, and U. Keller  
 “Nonlinear-mirror modelocked thin-disk laser delivering 21 W average power with 324-fs pulses” – Talk ATh1A.2  
*Advanced Solid-State Lasers 2017 (ASSL 2017)*, Nagoya, Aichi, Japan, Oct. 1-5, 2017
- A. S. Mayer, C. R. Phillips, U. Keller  
 “10-GHz straight-cavity SESAM-modelocked Yb:CALGO laser enabled by cascading of second-order nonlinearities” – Talk ATh1A.3  
*Advanced Solid-State Lasers 2017 (ASSL 2017)*, Nagoya, Aichi, Japan, Oct. 1-5, 2017
- D. Waldburger, S. M. Link, D. J. H. C. Maas, U. Keller  
 “Free-running dual-comb MIXSEL used for dual-comb spectroscopy” – Talk AW1A.3  
*Advanced Solid-State Lasers 2017 (ASSL 2017)*, Nagoya, Aichi, Japan, Oct. 1-5, 2017
- D. Waldburger, S. M. Link, C. G. E. Alfieri, M. Golling, U. Keller  
 “Coherent beam combining of a colliding pulse modelocked VECSEL” – Talk AW4A.5  
*Advanced Solid-State Lasers 2017 (ASSL 2017)*, Nagoya, Aichi, Japan, Oct. 1-5, 2017
- \* M. Lucchini, S. A. Sato, J. Herrmann, A. Ludwig, M. Volkov, L. Kasmi, Y. Shinohara, K. Yabana, L. Gallmann, U. Keller  
 “Time-resolved attosecond dynamical Franz-Keldysh effect”

*14<sup>th</sup> International Conference on Multiphoton Processes (ICOMP 2017)*, Budapest, Hungary, Sept. 24-27, 2017

J. Vos, L. Cattaneo, S. Patchkovskii, T. Zimmermann, C. Cirelli, M. Lucchini, A. Kheifets, A.S. Landsman, U. Keller  
“Orientation-dependent stereo Wigner time delay in a small molecule” – Poster P66  
*14<sup>th</sup> International Conference on Multiphoton Processes (ICOMP 2017)*, Budapest, Hungary, Sept. 24-27, 2017

L. Cattaneo, J. Vos, R. Bello, A. Palacios, S. Heuser, L. Pedrelli, L. Gallmann, M. Lucchini, C. Cirelli, F. Martín, U. Keller  
“Nuclear-electronic coupled photoionisation dynamics of H<sub>2</sub>” – Poster P67  
*14<sup>th</sup> International Conference on Multiphoton Processes (ICOMP 2017)*, Budapest, Hungary, Sept. 24-27, 2017

\* S. M. Link, D. J. H. C. Maas, D. Waldburger, U. Keller  
“Dual-comb spectroscopy with one unstabilized semiconductor laser” – Talk LTh4F.4  
*33<sup>rd</sup> Annual Meeting of the APS Division of Laser Science (2017 Laser Science)*  
(collocated with *Frontiers in Optics*), Washington DC, Sept. 17-21, 2017

\* J. Maurer, B. Willenberg, U. Keller  
“Attosecond dynamics without dipole approximation” – Talk LTu4F.3  
*OSA Frontiers in Optics, OSA Annual Meeting 2017*, Washington DC, Sept. 17-21, 2017

M. Gaponenko, F. Labaye, V. J. Wittwer, C. Paradis, N. Modsching, L. Merceron, A. Diebold, F. Emaury, I. J. Graumann, C. R. Phillips, C. J. Saraceno, C. Kränkel, U. Keller, and T. Südmeyer  
“High harmonic generation (HHG) inside a modelocked thin-disk laser” – Talk FTh2B.1  
*OSA Frontiers in Optics, OSA Annual Meeting 2017*, Washington DC, Sept. 17-21, 2017

\* U. Keller, **Plenary Keynote Talk**  
“Gigahertz Laser Frequency Combs”  
*The 5<sup>th</sup> International Academy of Photonics and Laser Engineering (IAPLE) conference and general meeting (IAPLE 2017)*, Kos, Greece, 31. July – 5. Aug. 2017

\* U. Keller, **Plenary Talk**  
“Attosecond charge transport in atoms and condensed matter”  
*The 30<sup>th</sup> International Vacuum and Nanoelectronics Conference (IVNC 2017)*, Regensburg, Germany, July 10-14, 2017

S. Hakobyan, V. J. Wittwer, P. Brochard, K. Gürel, S. Schilt, T. Südmeyer, A. S. Mayer, U. Keller  
“Fully-stabilized 1-GHz optical frequency comb from a diode-pumped solid-state laser” – Talk  
*European Frequency and Time Forum & International Frequency Control Symposium (EFTF 2017 – IFCS 2017)*, Besancon, France, 9. - 13. July 2017

C. Hofmann, A. S. Landsman, U. Keller  
“Attoclock revisited” - Poster

6<sup>th</sup> International Conference on Attosecond Physics (ATTO 2017), Xi'an, China, July 2-7, 2017

L. Cattaneo, J. Vos, M. Lucchini, L. Gallmann, C. Cirelli and U. Keller

“Comparison of attosecond streaking and RABBITT” - Poster

6<sup>th</sup> International Conference on Attosecond Physics (ATTO 2017), Xi'an, China, July 2-7, 2017

L. Kasmi, M. Lucchini, L. Castiglioni, P. Kliuiev, J. Osterwalder, M. Hengsberger, L. Gallmann, P. Krüger, U. Keller

“Effective mass effect on atomic scale electron propagation in solids” - Talk

6<sup>th</sup> International Conference on Attosecond Physics (ATTO 2017), Xi'an, China, July 2-7, 2017

\* M. Lucchini, S. A. Sato, J. Herrmann, A. Ludwig, M. Volkov, L. Kasmi, Y. Shinohara, K. Yabana, L. Gallmann, U. Keller

“Attosecond dynamical Franz-Keldysh effect in polycrystalline diamond”

6<sup>th</sup> International Conference on Attosecond Physics (ATTO 2017), Xi'an, China, July 2-7, 2017

\* Clara Saraceno – *New affiliation: Ruhr University Bochum, Germany*

“High-power ultrafast thin-disk oscillators: a path towards compact high-power oscillator driven ultrafast sources from XUV to THz” – Invited Talk CF-5.1

CLEO Europe – EQEC 2017, Munich, Germany, 25-29 June 2017

S. M. Link, D. J. H. C. Maas, D. Waldburger, U. Keller

“Gas Spectroscopy with a Free-Running Dual-Comb Semiconductor Disk Laser” – Talk ED-3.4

Topic area: ED – Precision Metrology and Frequency Combs

CLEO Europe – EQEC 2017, Munich, Germany, 25-29 June 2017

F. Schlaepfer, A. Ludwig, M. Lucchini, L. Kasmi, M. Volkov, L. Gallmann, U. Keller

“Gouy Phase Shift for Annular Beam Profiles in Attosecond Pump-Probe Measurements” – Talk CG-1.1

Topic area: CG – High-Field Laser and Attosecond Science

CLEO Europe – EQEC 2017, Munich, Germany, 25-29 June 2017

F. Emaury, F. Voigt, Ph. Bethge, D. Waldburger, S. M. Link, S. Carta, A. van der Bourg, F. Helmchen, U. Keller

“Multiphoton microscopy in every lab: the promise of ultrafast semiconductor disk lasers” – Talk EW2B.5

Topic area: Joint session CLEO EU – ECBO

CLEO Europe – EQEC 2017, Munich, Germany, 25-29 June 2017

D. Waldburger, C. G. E. Alfieri, S. M. Link, E. Gini, M. Golling, U. Keller

“High-Power Semiconductor Disk Lasers with Record-Short Pulse Durations” – Talk CB-8.1

Topic area: CB – Semiconductor Lasers

CLEO Europe – EQEC 2017, Munich, Germany, 25-29 June 2017

C. G. E. Alfieri, D. Waldburger, S. M. Link, M. Golling, U. Keller  
"Ultrafast dynamics of semiconductor disk lasers" – Talk CB-8.3  
Topic area: CB – Semiconductor Lasers  
*CLEO Europe – EQEC 2017*, Munich, Germany, 25-29 June 2017

N. Bigler, C. R. Phillips, J. Pupeikis, L. Gallmann, H. Ishizuki, T. Taira, U. Keller  
"Ultra-Broadband Optical Parametric Chirped-Pulse Amplifier Generating 9.1 W at 2.2  $\mu\text{m}$ " – Talk CF-4.2  
Topic area: CF – Ultrafast Optical Technologies  
*CLEO Europe – EQEC 2017*, Munich, Germany, 25-29 June 2017

B. Willenberg, J. Maurer, B. W. Mayer, C. R. Phillips, L. Gallmann, U. Keller  
"Sub-cycle resolution of field-momentum transfer in non-dipole strong-field ionization"  
– Talk CG-7.4  
Topic area: CG – High-Field Laser and Attosecond Science  
*CLEO Europe – EQEC 2017*, Munich, Germany, 25-29 June 2017

I. J. Graumann, A. Diebold, F. Emaury, B. Deppe, C. R. Phillips, M. Golling, D. Bauer, P. Heu, D. Follman, G. D. Cole, M. Aspelmeyer, D. Sutter, C. Kränkel, C. J. Saraceno, U. Keller  
"Peak-power Scaling of Femtosecond SESAM-modelocked Yb:Lu<sub>2</sub>O<sub>3</sub> Thin-disk Laser" – Talk CF-5.4  
Topic area: CF – Ultrafast Optical Technologies  
*CLEO Europe – EQEC 2017*, Munich, Germany, 25-29 June 2017

S. Hakobyan, V. J. Wittwer, K. Gürel, P. Brochard, S. Schilt, Aline S. Mayer, U. Keller, T. Südmeyer  
"Opto-Optical Modulator for CEO Control and Stabilization in an Yb:CALGO GHz Diode-Pumped Solid-State Laser" – Talk CF-1.1  
*CLEO Europe – EQEC 2017*, Munich, Germany, 25-29 June 2017

N. Jornod, K. Gürel, V. J. Wittwer, P. Brochard, S. Hakobyan, S. Schilt, D. Waldburger, U. Keller, T. Südmeyer  
"Towards Self-Referencing of a VECSEL Frequency Comb" – Talk CF-1.4  
*CLEO Europe – EQEC 2017*, Munich, Germany, 25-29 June 2017

L. Gallmann, L. Kasmi, M. Lucchini, L. Catiglioni, P. Kliuiev, J. Osterwalder, M. Hengsberger, P. Krüger, U. Keller  
"Band structure effect in attosecond photoemission delays from Cu(111) surface" – Poster  
*10<sup>th</sup> International Symposium on Ultrafast Surface Dynamics (USD 10)*, Inzell, Germany, June 11-16, 2017

\* C. R. Phillips, N. Bigler, J. Pupeikis, L. Gallmann, U. Keller  
"High power mid-infrared optical parametric chirped pulse amplification for attosecond science"  
*19<sup>th</sup> Photonics North Conference 2017*, Ottawa, June 6-8, 2017

F. Schlaepfer, A. Ludwig, M. Lucchini, L. Kasmi, M. Volkov, L. Gallmann, U. Keller

“Gouy phase shift for annularly truncated beam profiles in attosecond pump-probe measurements” – Poster JTh2A  
*CLEO 2017*, Fundamental Science, High-Field Physics and Attoscience (FS 7), San Jose, California, USA, May 14-19, 2017

N. Bigler, C. R. Phillips, J. Pupeikis, L. Gallmann, H. Ishizuki, T. Taira, U. Keller  
“High-power optical parametric chirped-pulse amplifier operating at 2.2  $\mu\text{m}$ ” – Talk SM3I.2  
*CLEO 2017*, Science and Innovations, Ultrafast Optics, Optoelectronics & Applications (S&I 8), San Jose, California, USA, May 14-19, 2017

S. Habobyan, V. J. Wittwer, P. Brochard, K. Gürel, S. Schilt, A. S. Mayer, U. Keller, T. Südmeyer  
“Fully-stabilized optical frequency comb from a diode-pumped solid-state laser with GHz repetition rate” – Talk SF1C.1  
*CLEO 2017*, Science and Innovations, Optical Metrology (S&I 14), San Jose, California, USA, May 14-19, 2017

A. S. Mayer, C. R. Phillips, U. Keller  
“10-GHz straight-cavity SESAM-modelocked Yb:CALGO laser operating in the normal dispersion regime” – Talk SM1I.2  
*CLEO 2017*, Science and Innovations, Ultrafast Optics, Optoelectronics & Applications (S&I 8), San Jose, California, USA, May 14-19, 2017

F. Emaury, F. F. Voigt, P. Bethge, D. Waldburger, S. M. Link, S. Carta, F. Helmchen, U. Keller  
“Ultrafast semiconductor disk lasers for in-vivo multi-photon microscopy” – Talk 4M4A.4  
*CLEO 2017*, Application & Technology, Biomedical Applications (A&T 1), San Jose, California, USA, May 14-19, 2017

C. G. E. Alfieri, D. Waldburger, S. M. Link, M. Golling, U. Keller  
“Carrier dynamics of ultrafast semiconductor disk lasers” – Poster JTU5A  
*CLEO 2017*, Science and Innovations, Semiconductor Lasers (S&I 3), San Jose, California, USA, May 14-19, 2017

S. M. Link, D. J. H. C. Maas, D. Waldburger, C. G. E. Alfieri, M. Golling, F. Emaury, U. Keller  
“Gas spectroscopy with a dual-comb semiconductor disk laser” – Talk STh3L.8  
*CLEO 2017*, Science and Innovations, Optical Metrology (S&I 14), San Jose, California, USA, May 14-19, 2017

- \* Clara Saraceno  
“High-power modelocked thin-disk oscillators: latest progress and future perspectives” – Talk SM1I.1  
*CLEO 2017*, Science and Innovations, San Jose, California, USA, May 14-19, 2017
- \* U. Keller  
“Ultrafast semiconductor disk lasers “ – Invited Talk 4M4A.2

*CLEO 2017*, Topical Review Semiconductor Lasers, San Jose, California, USA, May 14-19, 2017

\* U. Keller, **Plenary Talk**

“Ultrafast solid-state lasers: a success story with no end in sight “  
*CLEO 2017*, San Jose, California, USA, May 14-19, 2017

D. Waldburger, C. G. E. Alfieri, S. M. Link, E. Gini, M. Golling, U. Keller  
“Gigahertz 100-fs semiconductor disk lasers” – Talk accepted  
*Compound Semiconductor Week (CSW 2017)*, Berlin, Germany, May 14-18, 2017

C. G. E. Alfieri, D. Waldburger, M. Golling, U. Keller  
“High-power sub-200-fs semiconductor disk laser based on quantum dot layers” –  
Postdeadline Paper accepted  
*Compound Semiconductor Week (CSW 2017)*, Berlin, Germany, May 14-18, 2017

\* A. Diebold and U. Keller  
“Optimized components for high-power ultrafast thin-disk lasers”  
*Optical Coatings for Laser Applications (OCLA) Symposiums*, Buchs SG, 12. April 2017

\* U. Keller, **Keynote speaker**  
“Frequency combs/modelocked lasers and optically pumped semiconductor lasers”  
*4<sup>th</sup> International School and Conference Saint-Petersburg OPEN 2017*, Saint Petersburg, Russia, April 4-5, 2017

\* U. Keller  
“Attosecond charge transport in atoms and condensed matter”  
*Technion Photonics Symposium*, Israel, March 2. 2017

\* U. Keller, **Plenary Talk**  
“Gigahertz Laser Frequency Combs”  
*International Conference and Exhibition on Optics and Electro-Optics 2017 (Oasis6)*,  
Tel Aviv, Israel, Feb. 27-28, 2017

M. Volkov, M. Lucchini, S. A. Sato, J. Herrmann, A. Ludwig, L. Kasmi, Y. Shinohara,  
K. Yabana, L. Gallmann, U. Keller  
“Attosecond dynamical Franz-Keldysh effect in dielectric nanofilms” - Talk  
*Extreme Atomic Systems (EAS 2017)*, Riezlern, Kleinwalsertal, Austria, Jan. 29 – Feb. 3,  
2017

\* C. G. E. Alfieri, D. Waldburger, S. M. Link, M. Golling, U. Keller  
“Optical efficiency and gain dynamics of semiconductor disk lasers” – Invited Talk  
10087-7  
*SPIE Photonics West 2017*, LASE, Vertical External Surface Emitting Lasers VII  
(VECSELs VII), Conference LA106, San Francisco, California, USA, Jan. 28 – Feb. 2,  
2017

\* D. Waldburger, S. M. Link, C. G. E. Alfieri, M. Golling, U. Keller  
“High-power 100-fs SESAM modelocked VESCEL” – Invited Talk 10087-14

*SPIE Photonics West 2017, LASE, Vertical External Surface Emitting Lasers VII (VECSELS VII), Conference LA106, San Francisco, California, USA, Jan. 28 – Feb. 2, 2017*

- \* S. M. Link, D. Waldburger, C. G. E. Alfieri, M. Golling, U. Keller  
“Stabilized dual-comb MIXSEL” – Invited Talk 10087-24  
*SPIE Photonics West 2017, LASE, Vertical External Surface Emitting Lasers VII (VECSELS VII), Conference LA106, San Francisco, California, USA, Jan. 28 – Feb. 2, 2017*
- \* U. Keller  
“Gigahertz Laser Frequency Combs and Dual Comb Spectroscopy”  
*DWC Symposium, Dunedin, New Zealand, Jan. 23-27, 2017*

## **2016**

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- \* M. Lucchini  
“Attosecond dynamical Franz-Keldysh effect”  
*International Workshop on Atomic Physics, Dresden, Germany, 27. Nov. – 2. Dec. 2016*
- \* N. Bigler, C. R. Phillips, J. Pupeikis, L. Gallmann, U. Keller  
“Mid-infrared OPCPA based on two-dimensional quasi-phase-matching devices” – upgraded Invited Talk AW4A.1  
*Advanced Solid-State Lasers Conference 2016 (ASSL 2016), Boston, USA, 30. Oct. – 3. Nov. 2016*  
  
C. R. Phillips, A. S. Mayer, C. Langrock, A. Klenner, A. R. Johnson, K. Luke, Y. Okawachi, M. Lipson, A. L. Gaeta, M. M. Fejer, U. Keller  
“1-GHz mid-infrared frequency comb based on PPLN-waveguide optical parametric amplification” - Talk AW4A.3  
*Advanced Solid-State Lasers Conference 2016 (ASSL 2016), Boston, USA, 30. Oct. – 3. Nov. 2016*  
  
S. M. Link, D. Waldburger, C. G. E. Alfieri, M. Golling, U. Keller  
“Stabilized microwave frequency comb from a dual-comb modelocked semiconductor disk laser” – Talk ATu1A.7  
*Advanced Solid-State Lasers Conference 2016 (ASSL 2016), Boston, USA, 30. Oct. – 3. Nov. 2016*  
  
D. Waldburger, S. M. Link, C. G. E. Alfieri, M. Golling, U. Keller  
“High-power 100-fs SESAM-modelocked VECSEL” – Talk ATu1A.8  
*Advanced Solid-State Lasers Conference 2016 (ASSL 2016), Boston, USA, 30. Oct. – 3. Nov. 2016*  
  
I. J. Graumann, A. Diebold, F. Emaury, B. Deppe, C. Kränkel, C. J. Saraceno, U. Keller  
“High-power modelocked Yb:Lu<sub>2</sub>O<sub>3</sub> thin disk laser with 10-MW sub-500-fs pulses” – Talk ATu1A.3  
*Advanced Solid-State Lasers Conference 2016 (ASSL 2016), Boston, USA, 30. Oct. – 3. Nov. 2016*

- A. Diebold, Z. Jia, I. J. Graumann, Y. Yin, F. Emaury, C. J. Saraceno, X. Tao, U. Keller  
 “Yb:GGG thin-disk oscillator with high power continuous wave operation” – Poster  
 submission Poster AM5A.18  
*Advanced Solid-State Lasers Conference 2016 (ASSL 2016), Boston, USA, 30. Oct. – 3.  
 Nov. 2016*
- M. Müller, C. Jauregui, M. Kienel, F. Emaury, C. J. Saraceno, U. Keller, J. Limpert, A.  
 Tünnermann  
 “Amplitude and noise reduction in Yb-doped fiber amplifiers” – Poster JTh2A.33  
*Advanced Solid-State Lasers Conference 2016 (ASSL 2016), Boston, USA, 30. Oct. – 3.  
 Nov. 2016*
- M. Golling, C. G. E. Alfieri, D. Waldburger, S. M. Link, E. Gini, U. Keller  
 “Progress in MBE and MOVPE semiconductor disk laser growth”  
*German MBE-workshop 2016, Walter Schottky Institute, Technische University of  
 Munich, Garching, Germany, Oct. 13-14, 2016*
- \* L. Gallmann, N. Bigler, C. R. Phillips, B. W. Mayer, B. Willenberg, J. Maurer, U. Keller  
 "Advanced quasi-phase-matching structures for ultrabroadband parametric  
 amplification,"  
*Future of Ultrashort Pulses II Workshop, Stirin Castle, Prague, Czech Republic, Sep. 16-  
 17, 2016*
- J. Vos, L. Cattaneo, S. Heuser, M. Lucchini, C. Cirelli, U. Keller  
 “Asymmetric Wigner Time Delay in CO Photoionization” – Poster Nr. Tue144  
*12<sup>th</sup> European Conference on Atoms, Molecules and Photons (ECAMP 2016), Frankfurt,  
 Germany, Sept. 5-9, 2016*
- \* U. Keller, **Invited Tutorial (2 hours)**  
 “Semiconductor saturable absorber mirror (SESAM)”  
*7<sup>th</sup> EPS-QEOD Europhoton Conference 2016, Vienna, Austria, Aug. 21-26, 2016*
- S. M. Link, D. Waldburger, C. G. E. Alfieri, M. Golling, U. Keller  
 “Stabilized dual-comb modelocked semiconductor disk laser” – **Postdeadline Paper PD-  
 1.1**  
*7<sup>th</sup> EPS-QEOD Europhoton Conference 2016, Vienna, Austria, Aug. 21-26, 2016*
- A. Diebold, Z. Jia, I. J. Graumann, Y. Yin, F. Emaury, C. J. Saraceno, X. Tao, U. Keller  
 “High-power continuous wave Yb:GGG thin-disk laser” – Talk SSL-7.5  
*7<sup>th</sup> EPS-QEOD Europhoton Conference 2016, Vienna, Austria, Aug. 21-26, 2016*
- A. S. Mayer, C. R. Phillips, C. Langrock, A. Klenner, A. R. Johnson, K. Luke, Y.  
 Okawachi, M. Lipson, A. L. Gaeta, M. M. Fejer, U. Keller  
 “Gigahertz offset-free mid-infrared frequency comb” – Talk SSL-1.2  
*7<sup>th</sup> EPS-QEOD Europhoton Conference 2016, Vienna, Austria, Aug. 21-26, 2016*
- C. G. E. Alfieri, A. Diebold, M. Kopp, F. Emaury, C. J. Saraceno, E. Gini, U. Keller  
 “SESAMs for short-pulse, high-power thin-disk lasers” – Talk SSL-6.3  
*7<sup>th</sup> EPS-QEOD Europhoton Conference 2016, Vienna, Austria, Aug. 21-26, 2016*

D. Waldburger, S. M. Link, C. G. E. Alfieri, M. Golling, U. Keller  
“Multi-pulse behavior of a high-power sub-100-fs SESAM-modelocked VECSEL” –  
Poster PO-3.21  
*7<sup>th</sup> EPS-QEOD Europhoton Conference 2016*, Vienna, Austria, Aug. 21-26, 2016

S. M. Link, D. Waldburger, C. G. E. Alfieri, M. Golling, E. Gini, U. Keller  
“Record-short pulses from semiconductor disk lasers” – Talk SSL-6.2  
*7<sup>th</sup> EPS-QEOD Europhoton Conference 2016*, Vienna, Austria, Aug. 21-26, 2016

I. J. Graumann, A. Diebold, F. Emaury, B. Deppe, C. Kränkel, C. J. Saraceno, U. Keller  
“10-MW sub-500-fs high-power SESAM-modelocked Yb:Lu<sub>2</sub>O<sub>3</sub> thin disk laser” – Talk  
SSL-5.2  
*7<sup>th</sup> EPS-QEOD Europhoton Conference 2016*, Vienna, Austria, Aug. 21-26, 2016

A. Diebold, F. Emaury, C. J. Saraceno, U. Keller  
“Thin-Disk-Laser-Driven High Harmonic Generation at Megahertz Repetition Rate” –  
Poster UTh4A.23  
*OSA International Conference on Ultrafast Phenomena 2016*, Santa Fe, New Mexico,  
USA, July 17-22, 2016

J. Maurer, B. Willenberg, B. W. Mayer, C. R. Phillips, L. Gallmann, U. Keller  
“Non-dipole effects on rescattered photoelectrons from strong-field ionization with  
elliptical polarization” – Poster UTu4A.18  
*OSA International Conference on Ultrafast Phenomena 2016*, Santa Fe, New Mexico,  
USA, July 17-22, 2016

L. Cattaneo, J. Vos, S. Heuser, M. Lucchini, C. Cirelli, U. Keller  
“Asymmetric Wigner time delay in CO photoionization” – Talk UM2B.3  
*OSA International Conference on Ultrafast Phenomena 2016*, Santa Fe, New Mexico,  
USA, July 17-22, 2016

M. Lucchini, A. Ludwig, E. Liberatore, J. Herrmann, L. Kasmi, L. Gallmann, U.  
Röthlisberger, U. Keller  
“New Insights into Ultrafast Relaxation Dynamics of the Ethylene Cation C<sub>2</sub>H<sub>4</sub><sup>+</sup>” – Talk  
UTu1A.3  
*OSA International Conference on Ultrafast Phenomena 2016*, Santa Fe, New Mexico,  
USA, July 17-22, 2016

M. Lucchini, S. A. Sato, J. Herrmann, A. Ludwig, M. Volkov, L. Kasmi, Y. Shinohara,  
K. Yabana, L. Gallmann, U. Keller  
“Direct Observation of a Sub-Femtosecond Optical Response in the Diamond  
Conduction Band” – Talk UM1A.4  
*OSA International Conference on Ultrafast Phenomena 2016*, Santa Fe, New Mexico,  
USA, July 17-22, 2016

\* U. Keller  
“Attosecond charge transport in atoms and condensed matter”  
*Ultrafast Dynamics at the Nanoscale 2016*, Okinawa Institute for Science and  
Technology Graduate University (OIST), Okinawa, Japan, July 13-16, 2016

- \* J. Maurer, B. Willenberg, B. W. Mayer, C. R. Phillips, L. Gallmann, U. Keller  
 “Non-Dipole Effects on Rescattered Electrons from Strong-Field Ionization with Elliptical Polarization” – Invited Talk Nr. S 2.4.2  
 25th annual International Laser Physics Workshop (LPHYS 2016), Yerevan, Republic of Armenia, July 11-15, 2016

L. Kasmi, L. Castiglioni, M. Lucchini, P. Kliuiev, J. Osterwalder, P. Krüger, M. Hengsberger, L. Gallmann, U. Keller  
 “Band structure effects in attosecond photoemission delays from the 3d valence band of copper” – Poster P\_224  
*39<sup>th</sup> International Conference on Vacuum Ultraviolet and X-ray Physics (VUVX2016)*, ETH Zürich, Switzerland, July 3-8, 2016

M. Lucchini, A. Ludwig, E. Liberatore, J. Herrmann, L. Kasmi, L. Gallmann, U. Röthlisberger, U. Keller  
 “Ultrafast relaxation dynamics of the ethylene ionized by XUV attosecond pulses” – Talk Thu\_Time1\_4  
*39<sup>th</sup> International Conference on Vacuum Ultraviolet and X-ray Physics (VUVX2016)*, ETH Zürich, Switzerland, July 3-8, 2016

L. Castiglioni, M. Lucchini, P. Kliuiev, L. Kasmi, M. Greif, A. Ludwig, P. Krüger, L. Gallmann, J. Osterwalder, M. Hengsberger, U. Keller  
 “Final state effects in attosecond photoemission from solids” – Poster P\_042  
*39<sup>th</sup> International Conference on Vacuum Ultraviolet and X-ray Physics (VUVX2016)*, ETH Zürich, Switzerland, July 3-8, 2016

M. Hengsberger, M. Greif, L. Kasmi, L. Castiglioni, M. Lucchini, L. Gallmann, U. Keller, P. Krüger, J. Osterwalder  
 “Study of structural dynamics by means of time- and angle-resolved photoelectron spectroscopy and diffraction” – Talk Wed\_ARPES2\_1  
*39<sup>th</sup> International Conference on Vacuum Ultraviolet and X-ray Physics (VUVX2016)*, ETH Zürich, Switzerland, July 3-8, 2016

- \* U. Keller, **Plenary Talk**  
 “Attosecond Ionization Dynamics and Time Delays”  
*7th International Conference on Optical, Optoelectronic and Photonic Materials and Applications (ICOOPMA 2016)*, Montreal, Canada, June 12-18, 2016

M. Lucchini, S. A. Sato, J. Herrmann, A. Ludwig, M. Volkov, L. Kasmi, Y. Shinohara, K. Yabana, L. Gallmann, U. Keller  
 “Observation of femtosecond dynamical Franz-Keldysh effect in polycrystalline Diamond” – **Postdeadline Paper**  
*CLEO 2016*, San Jose, California, USA, June 5-10, 2016

M. Lucchini, L. Castiglioni, L. Kasmi, P. Kliuiev, A. Ludwig, M. Greif, M. Hengsberger, J. Osterwalder, L. Gallmann, U. Keller  
 “Photoemission time delays from a Cu(111)-surface: validity of macroscopic laws for probe-field effects” – Special Symposium on Ultrafast Dynamics in Solids – Talk FTu4N.5

CLEO 2016, San Jose, California, USA, June 5-10, 2016

B. Willenberg, J. Maurer, B. W. Mayer, C. R. Phillips, L. Gallmann, U. Keller  
“Non-Dipole Effects on Rescattered Photoelectrons from Strong-Field Ionization with Elliptical Polarization” – Talk FTh4M.5  
CLEO 2016, San Jose, California, USA, June 5-10, 2016

A. Diebold, F. Emaury, C. J. Saraceno, U. Keller  
“Table-Top Megahertz XUV Source Driven by High-Power Modelocked Thin-Disk Laser” – Talk SF1I.5  
CLEO 2016, San Jose, California, USA, June 5-10, 2016

C. G. E. Alfieri, A. Diebold, M. Kopp, D. Waldburger, C. J. Saraceno, E. Gini, U. Keller  
“SESAMs for high-power lasers” – Talk SM1I.5  
CLEO 2016, San Jose, California, USA, June 5-10, 2016

A. S. Mayer, C. R. Phillips, C. Langrock, A. Klenner, A. R. Johnson, K. Luke, Y. Okawachi, M. Lipson, A. L. Gaeta, M. M. Fejer, U. Keller  
“1-GHz offset-free frequency comb in the mid-infrared” – Talk SF2O.1  
CLEO 2016, San Jose, California, USA, June 5-10, 2016

A. Klenner, A. S. Mayer, A. R. Johnson, K. Luke, M. R. E. Lamont, Y. Okawachi, M. Lipson, A. L. Gaeta, U. Keller  
“Compact low-noise frequency combs: microchip or photonic crystal fiber?” – Talk SM3H.2  
CLEO 2016, San Jose, California, USA, June 5-10, 2016

S. M. Link, C. G. E. Alfieri, D. Waldburger, A. Klenner, M. Golling, U. Keller  
“Saturable absorber decouples noise stabilization in dual-comb modelocked lasers” – Talk SW1H.1  
CLEO 2016, San Jose, California, USA, June 5-10, 2016

N. Jornod, P. Brochard, V. J. Wittwer, S. Schilt, S. Hakobyan, D. Waldburger, S. M. Link, C. G. E. Alfieri, M. Golling, L. Devenoges, J. Morel, U. Keller, T. Südmeyer  
“First Investigation of the Noise and Modulation Properties of the Carrier Envelope Offset Frequency in a Modelocked Semiconductor Laser” – Talk SM3I.4  
CLEO 2016, San Jose, California, USA, June 5-10, 2016

\* Chris Phillips

*Invitation cancelled on 4. March 2016 because they did not accept Dr. Chris Phillips as a replacement for me as a speaker!*

“Ultrafast mid-infrared parametric amplification sources for strong-field physics beyond the dipole approximation”

*47<sup>th</sup> Annual DAMOP Meeting 2016, APS Division of Atomic, Molecular and Optical Physics, Providence, Rhode Island, May 23-27, 2016*

\* J. Maurer, B. Willenberg, B. W. Mayer, A. Ludwig, C. R. Phillips, L. Gallmann, U. Keller  
“Photoelectron rescattering dynamics beyond the dipole approximation”

*Molecules and Laser Fields - An Honorary Andre Bandrauk Symposium 2016*, University of Sherbrooke (Sherbrooke, Canada) on May 4-7, 2016

- \* U. Keller  
“Attosecond ionization dynamics”  
8<sup>th</sup> meeting “From the witches Cauldrons in Materials Science”, Goslar, Germany, April 29-30, 2016
  
- \* C. J. Saraceno, F. M. Emaury, A. Diebold, M. Kopp, Ivan Graumann, M. Golling, U. Keller, **Keynote Talk**  
“Trends in high-power ultrafast lasers”  
*Ultrafast Bandgap Photonics*, SPIE, Baltimore, Maryland, USA, 17-21 April 2016
  
- P. Brochard, N. Jornod, V.J. Wittwer, S. Schilt, D. Waldburger, S.M. Link, C. G. E. Alfieri, M. Golling, L. Devenoges, J. Morel, U. Keller, T. Südmeyer  
“Carrier-envelope offset characterization in a semiconductor modelocked laser without  $f$ -to- $2f$  interferometry”  
*30<sup>th</sup> European Frequency and Time Forum (EFTF 2016)*, York, United Kingdom, April 4-7, 2016
  
- \* J. Maurer, B. Willenberg, B. W. Mayer, C. R. Phillips, L. Gallmann, U. Keller  
“Non-dipole effects on rescattered photoelectrons from strong-field ionization with elliptical polarization” – Invited Talk HM1B.4  
*High-Intensity Lasers and High-Field Phenomena (HILAS 2016)*, Hilton Long Beach, California, USA, March 20-22, 2016
  
- \* U. Keller, **Keynote Talk**  
“Attosecond Science: Recent Highlights and Future Trends”  
*Open Readings 2016*, 59<sup>th</sup> annual international conference for students of physics and natural sciences, Vilnius, Lithuania, March 15-18, 2015
  
- \* C. J. Saraceno and U. Keller, **Plenary Talk**  
“Trends in high-power ultrafast lasers”  
*International Laser Symposium & International Symposium “Tailored Joining” 2016*, Dresden, Germany, Feb. 23-24, 2016
  
- C. G. E. Alfieri, D. Waldburger, S. M. Link, E. Gini, M. Golling, B. W. Tilma, M. Mangold, U. Keller  
“Recent progress in high-power ultrafast MIXSELS” – Paper Nr. 9734-6  
*SPIE Photonics West 2016*, LASE, Vertical External Surface Emitting Lasers VI (VECSELS VI), Conference LA116, San Francisco, California, USA, Feb. 13-18, 2016
  
- D. Waldburger, C. G. E. Alfieri, S. M. Link, E. Gini, M. Golling, M. Mangold, B. W. Tilma, U. Keller  
“High-power sub-150-fs VECSELS” – Paper Nr. 9734-8  
*SPIE Photonics West 2016*, LASE, Vertical External Surface Emitting Lasers VI (VECSELS VI), Conference LA116, San Francisco, California, USA, Feb. 13-18, 2016
  
- \* S. M. Link, M. Mangold, M. Golling, A. Klenner, U. Keller

“Gigahertz dual-com modelocked diode-pumped semiconductor and solid-state lasers”  
– Paper Nr. 9734-5  
*SPIE Photonics West 2016*, LASE, Vertical External Surface Emitting Lasers VI  
(VECSELS VI), Conference LA116, San Francisco, California, USA, Feb. 13-18, 2016

- \* U. Keller  
“Ultrafast vertical external cavity surface emitting lasers (VECSELS)” – Paper Nr. 9734-4  
*SPIE Photonics West 2016*, LASE, Vertical External Surface Emitting Lasers VI  
(VECSELS VI), Conference LA116, San Francisco, California, USA, Feb. 13-18, 2016
- \* U. Keller  
“Attosecond ionization time delays: back to the basics with Ehrenfest's theorem and its classical limit”  
*Physics of Quantum Electronics conference 2016 (PQE-2016)*, Snowbird, Utah, Jan. 3-8, 2016

## 2015

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C. J. Saraceno, F. Emaury, A. Diebold, M. Golling, T. Südmeyer, U. Keller  
“High-power modelocked thin disk lasers”  
*ANZCOP (Australia and New Zealand Conference on Optics and Photonics) 2015*  
Adelaide, Australia, 30. Nov. – 3. Dec. 2015

- \* A. Klenner, M. Mangold, A. S. Mayer, A. R. Johnson, D. Waldburger, S. M. Link, M. Golling, E. Gini, B. W. Tilma, K. Luke, M. R. E. Lamont, Y. Okawachi, M. Lipson, A. L. Gaeta, U. Keller  
“Gigahertz Laser Frequency Combs”  
*ANZCOP (Australia and New Zealand Conference on Optics and Photonics) 2015*  
Adelaide, Australia, 30. Nov. – 3. Dec. 2015
- \* U. Keller, **Plenary Talk** (Frew Fellow 2015)  
“Attosecond Ionization Dynamics and Time Delays”  
*ANZCOP (Australia and New Zealand Conference on Optics and Photonics) 2015*  
Adelaide, Australia, 30. Nov. – 3. Dec. 2015
- \* L. Gallmann, C. R. Phillips, B. W. Mayer, A. Ludwig, J. Maurer, U. Keller  
“Exploring the long-wavelength limit of the electric dipole approximation”  
*International Conference on Extreme Light (ICEL 2015)*, Bucharest, Romania, 23-27  
Nov 2015
- \* U. Keller  
“Light from Lasers”  
6<sup>th</sup> symposium of the Royal Swedish Academy of Sciences “Light in the service of  
mankind – from the cosmic to the nanoscale”, Lund, 22-23 Oct. 2015

C. G. E. Alfieri, D. Waldburger, S. M. Link, E. Gini, M. Mangold, B. W. Bauke, M. Golling, U. Keller

“Recent progress in high-power femtosecond semiconductor disk lasers” – Talk  
ATH4A.1

*Advanced Solid-State Lasers Conference 2015 (ASSL 2015)*, Berlin, Germany, Oct. 4-9,  
2015

A. S. Mayer, A. Klenner, A. R. Johnson, K. Luke, M. R. E. Lamont, Y. Okawachi, M.  
Lipson, A. L. Gaeta, U. Keller

“Low-noise gigahertz frequency comb from diode-pumped solid-state laser using silicon  
nitride waveguides” – Talk ATH4A.5

*Advanced Solid-State Lasers Conference 2015 (ASSL 2015)*, Berlin, Germany, Oct. 4-9,  
2015

S. M. Link, M. Mangold, M. Golling, A. Klenner, U. Keller

“Modelocked dual-comb lasers” – Talk ATH4A.3

*Advanced Solid-State Lasers Conference 2015 (ASSL 2015)*, Berlin, Germany, Oct. 4-9,  
2015

F. Emaury, A. Diebold, C. J. Saraceno, U. Keller

“Oscillator-driven high harmonic generation” – Talk ATu4A.5

*Advanced Solid-State Lasers Conference 2015 (ASSL 2015)*, Berlin, Germany, Oct. 4-9,  
2015

J. Maurer, B. W. Mayer, C. R. Phillips, A. Ludwig, L. Gallmann, U. Keller

“Rescattering dynamics in strong-field ionization of atomic and molecular targets beyond  
the dipole approximation”

*Super Intense Laser-Atom Physics (SILAP 2015)*, Bordeaux, Sept. 7-10, 2015

\* U. Keller, **Invited Keynote Talk**

“Attosecond ionization dynamics and time delays”

*International Conference on Quantum, Atomic, Molecular and Plasma Physics (QuAMP  
2015)*, Sept. 1-4, 2015, University of Sussex, Brighton, United Kingdom

\* T. Südmeyer, C. J. Saraceno, F. Emaury, A. Diebold, M. Golling, A. Klenner, S. Schilt,  
U. Keller

“Ultrafast thin disk lasers: towards intralaser extreme nonlinear optics”

*CLEO-PR 2015, the 11<sup>th</sup> Conference on Lasers and Electro-Optics Pacific Rim*, Bexon,  
Busan, Korea, Aug. 24-28, 2015

\* L. Gallmann, C. R. Phillips, B. W. Mayer, U. Keller

“Broadband mid-infrared OPA through nonlinear-fanout quasi-phasematching in the  
Fourier-plane”

*Ultrafast Optics 2015*, Beijing, China, Aug. 16-21, 2015

A. S. Mayer, A. Klenner, A. R. Johnson, K. Luke, M. R. E. Lamont, Y. Okawachi, M.  
Lipson, A. L. Gaeta, U. Keller

“Coherent silicon nitride chip-based supercontinuum for self-referencing of a 1-GHz  
diode-pumped solid-state laser”

*Ultrafast Optics 2015*, Beijing, China, Aug. 16-21, 2015

- S. Heuser, Á. Jiménez-Galán, C. Cirelli, M. Sabbar, R. Boge, M. Lucchini, L. Gallmann, I. Ivanov, A. Kheifets, M. Dahlström, E. Lindroth, L. Argenti, F. Martín, U. Keller  
 “Time delay anisotropy in the photoelectron emission from isotropic helium” - Poster  
*XXIX International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC 2015)*, Toledo, Spain, July 22-28, 2015
- \* J. Maurer, A. Ludwig, B. W. Mayer, C. R. Phillips, L. Gallmann, U. Keller  
 “Strong-field ionization beyond the long-wavelength limit of the dipole approximation”  
*Extremely High-Intensity Laser Physics*, MPI for Nuclear Physics, Heidelberg, July 21-24, 2015
- \* S. Heuser, Á. Jiménez-Galán, C. Cirelli, M. Sabbar, R. Boge, M. Lucchini, L. Gallmann, I. Ivanov, A. Kheifets, M. Dahlström, E. Lindroth, L. Argenti, F. Martín and U. Keller  
 “Time delay anisotropy in the photoelectron emission from isotropic ground state of helium” — Invited Talk Nr. 34  
*Attosecond Physics (ATTO 2015)*, Saint-Sauveur, Québec, Canada, July 6-10, 2015
- L. Kasmi, M. Lucchini, L. Castiglioni, P. Kliuiev, A. Ludwig, M. Greif, M. Hengsberger, J. Osterwalder, L. Gallmann, U. Keller  
 “Probe field in photoemission delay measurements on a Cu(111)-Surface: validity of macroscopic laws on atomic and attosecond scales” — Talk Nr. 67  
*Attosecond Physics (ATTO 2015)*, Saint-Sauveur, Québec, Canada, July 6-10, 2015
- M. Lucchini, S. A. Sato, J. Herrmann, A. Ludwig, M. Volkov, L. Kasmi, K. Yabana, Y. Shinohara, L. Gallmann, U. Keller  
 “Direct observation of sub-cycle electron dynamics in polycrystalline diamond” — Poster Nr. P3-8  
*Attosecond Physics (ATTO 2015)*, Saint-Sauveur, Québec, Canada, July 6-10, 2015
- C. Hofmann, A. S. Landsman, H. Soifer, D. Shafir, B. Brunner, N. Dudovich, U. Keller  
 “Disentangling contributing factors to electron trajectories in two-color high harmonic generation using semiclassical simulations” — Poster Nr. P2-17  
*Attosecond Physics (ATTO 2015)*, Saint-Sauveur, Québec, Canada, July 6-10, 2015
- M. Lucchini, M. Brüggemann, A. Ludwig, L. Gallmann, U. Keller, T. Feuer  
 “Reconstruction of attosecond pulses by ptychography” — Poster Nr. P2-38  
*Attosecond Physics (ATTO 2015)*, Saint-Sauveur, Québec, Canada, July 6-10, 2015
- L. Cattaneo, J. Vos, S. Heuser, M. Lucchini, C. Cirelli, U. Keller  
 “Wigner time delay asymmetry in CO photoionization” — Poster P3-35  
*Attosecond Physics (ATTO 2015)*, Saint-Sauveur, Québec, Canada, July 6-10, 2015
- A. Klenner, A. S. Mayer, A. R. Johnson, K. Luke, M. R. E. Lamont, Y. Okawachi, M. Lipson, A. L. Gaeta, U. Keller  
 “Silicon nitride waveguides enable stabilization of gigahertz frequency combs from diode-pumped solid-state lasers” – Postdeadline Paper PD-A.5.0  
*CLEO EUROPE - EQEC 2015*, Munich, Germany, 21-25 June 2015
- A. Ludwig, J. Maurer, B. W. Mayer, C. R. Phillips, L. Gallmann, U. Keller  
 “Breakdown of dipole approximation in strong-field ionization” – Talk EE-4.2

*CLEO EUROPE - EQEC 2015*, Munich, Germany, 21-25 June 2015

M. Lucchini, T. Zimmermann, A. Ludwig, L. Kasmi, J. Herrmann, A. Landsman, L. Gallmann, U. Keller

“Time-resolved study of helium excited states performed with attosecond quantum-beat spectroscopy” – Talk CG-5.3

*CLEO EUROPE - EQEC 2015*, Munich, Germany, 21-25 June 2015

L. Kasmi, M. Lucchini, P. Kliuiev, L. Castiglioni, A. Ludwig, M. Hengsberger, J. Osterwalder, L. Gallmann, U. Keller

“Probe-induced time delays in single photon emission from a Copper (111) surface ” – Talk CG-4.5

*CLEO EUROPE - EQEC 2015*, Munich, Germany, 21-25 June 2015

C. Cirelli, M. Sabbar, S. Heuser, R. Boge, M. Lucchini, L. Gallmann, U. Keller  
“Attosecond time delays in single and multi-photon ionization” – Talk CG-4.1

*CLEO EUROPE - EQEC 2015*, Munich, Germany, 21-25 June 2015

T. Zengerle, A. Diebold, M. Mangold, C. Schriber, C. Alfieri, F. Emaury, M. Hoffmann, C. J. Saraceno, M. Golling, D. Follman, G. D. Cole, M. Aspelmeyer, T. Südmeyer, U. Keller

“Novel Optimized SESAMs for kilowatt ultrafast lasers” – Talk CF-9.3

*CLEO EUROPE - EQEC 2015*, Munich, Germany, 21-25 June 2015

F. Emaury, A. Diebold, B. Debord, F. Gerome, C. J. Saraceno, T. Südmeyer, F. Benabid, U. Keller

“High-power pulse compression of modelocked thin-disk lasers using Kagome-type HC-PCF: low-noise source for HHG” – Talk CJ-8.4

*CLEO EUROPE - EQEC 2015*, Munich, Germany, 21-25 June 2015

F. Emaury, A. Diebold, A. Klenner, C. J. Saraceno, S. Schilt, T. Südmeyer, U. Keller  
“Guidelines towards multi-100-W average power frequency combs from thin-disk lasers” – Talk CH-8.2

*CLEO EUROPE - EQEC 2015*, Munich, Germany, 21-25 June 2015

A. S. Mayer, A. Klenner, A. R. Johnson, K. Luke, M. R. E. Lamont, Y. Okawachi, M. Lipson, A. L. Gaeta, U. Keller

“Silicon nitride chip-based coherent supercontinuum for highly efficient self-referencing of 1-GHz diode-pumped solid-state lasers” – Talk CH-8.6

*CLEO EUROPE - EQEC 2015*, Munich, Germany, 21-25 June 2015

C. R. Phillips, A. S. Mayer, A. Klenner, U. Keller

“Soliton modelocking via adiabatic excitation of cascaded quadratic nonlinearities in apodized fanout QPM devices” – Talk CD-2.5

*CLEO EUROPE - EQEC 2015*, Munich, Germany, 21-25 June 2015

B. W. Mayer, C. R. Phillips, L. Gallmann, U. Keller

“Monolithic 2D-QPM frequency domain OPA” – Talk CF-2.3

*CLEO EUROPE - EQEC 2015*, Munich, Germany, 21-25 June 2015

- A. Klenner, U. Keller  
 “All-passive Q-switching limiter enables a high peak power 5-GHz SESAM modelocked laser” – Talk CA-7.1  
*CLEO EUROPE - EQEC 2015*, Munich, Germany, 21-25 June 2015
- S. M. Link, A. Klenner, M. Mangold, M. Golling, B. W. Tilma, U. Keller  
 “Dual-comb modelocked lasers” – Talk CH-8.3  
*CLEO EUROPE - EQEC 2015*, Munich, Germany, 21-25 June 2015
- \* M. Mangold, D. Waldburger, S. M. Link, M. Golling, E. Gini, B. W. Tilma, U. Keller  
 “High-power sub-300-fs semiconductor disk lasers” – upgraded to invited CF-4.1  
*CLEO EUROPE - EQEC 2015*, Munich, Germany, 21-25 June 2015
- L. Castiglioni, M. Lucchini, P. Kliuiev, L. Kasmi, M. Greif, R. Locher, P. Krüger, L. Gallmann, J. Osterwalder, U. Keller, M. Hengsberger  
*The 9<sup>th</sup> International Symposium on Ultrafast Surface Dynamics (USD9)*, Lake Biwa, Japan, May 25-29, 2015
- \* U. Keller  
 “Attosecond ionization delays: Wigner delay resp. group delay can be misleading”  
*7th International Conference on Laser Probing (LAP2015)*, Michigan State University, June 7-11, 2015
- A. R. Johnson, A. S. Mayer, A. Klenner, K. Luke, E. S. Lamb, M. R. E. Lamont, Y. Okawachi, F. W. Wise, M. Lipson, U. Keller, A. L. Gaeta  
 “Coherent supercontinuum from a silicon nitride waveguide” – Talk SF2D.1  
*CLEO USA 2015*, San Jose, USA, May 10-15, 2015
- A. S. Mayer, A. Klenner, A. R. Johnson, K. Luke, M. R. E. Lamont, Y. Okawachi, M. Lipson, A. L. Gaeta, U. Keller  
 “Highly efficient self-referencing of a 1-GHz diode-pumped solid-state laser using a silicon nitride chip” – Talk SW4G.6  
*CLEO USA 2015*, San Jose, USA, May 10-15, 2015
- A. Klenner, U. Keller  
 “All-optical Q-switching limiter for a 5-GHz SESAM-modelocked laser with record-high peak power” – Talk SM3P.8  
*CLEO USA 2015*, San Jose, USA, May 10-15, 2015
- D. Waldburger, M. Mangold, S. M. Link, M. Golling, E. Gini, B. W. Tilma, U. Keller  
 “Sub-300-femtosecond semiconductor disk lasers” – Talk SM3F.2  
*CLEO USA 2015*, San Jose, USA, May 10-15, 2015
- S. M. Link, A. Klenner, M. Mangold, M. Golling, B. W. Tilma, U. Keller  
 “Dual-comb modelocked lasers” – Talk SW3G.5  
*CLEO USA 2015*, San Jose, USA, May 10-15, 2015
- A. Diebold, T. Zengerle, M. Mangold, C. Schriber, F. Emaury, M. Hoffmann, C. J. Saraceno, M. Golling, D. Follman, G. D. Cole, M. Aspelmeyer, F. Südmeyer, U. Keller  
 “Optimized SESAMs for kilowatt ultrafast lasers” – Talk STu1O.5

*CLEO USA 2015*, San Jose, USA, May 10-15, 2015

A. Diebold, F. Emaury, A. Klenner, C. J. Saraceno, S. Schilt, T. Südmeyer, U. Keller  
“Thin-disk lasers for multi-100-W average power frequency combs: challenges and analysis” – Talk SW4G.5

*CLEO USA 2015*, San Jose, USA, May 10-15, 2015

F. Emaury, A. Diebold, B. Debord, D. Ghosh, F. Gerome, C. J. Saraceno, T. Südmeyer, F. Benabid, U. Keller

“Kagome-type HC-PCF pulse compression: high average power (>100 W), high efficiency and very low noise performance” – Talk STu1N.7

*CLEO USA 2015*, San Jose, USA, May 10-15, 2015

C. R. Phillips, A. S. Mayer, A. Klenner, U. Keller

“Soliton modelocking with normal dispersion via adiabatic excitation of  $\chi^{(2)}$  solitons in apodized fanout PPLN devices” – Talk SW1O.4

*CLEO USA 2015*, San Jose, USA, May 10-15, 2015

C. R. Phillips, B. W. Mayer, L. Gallmann, U. Keller

“Broadband 2D-QPM frequency domain OPA” – Talk SF2M.3

*CLEO USA 2015*, San Jose, USA, May 10-15, 2015

S. Heuser, M. Sabbar, R. Boge, M. Lucchini, L. Gallmann, C. Cirelli, U. Keller

“Photoionization time delay dynamics in noble gases” – Talk FTh4C.3

*CLEO USA 2015*, San Jose, USA, May 10-15, 2015

\* U. Keller, **Tutorial**

“Attosecond ionization dynamics and time delays” – Tutorial FTh3C.1

*CLEO USA 2015*, San Jose, USA, May 10-15, 2015

P. Kliuiev, L. Kasmi, L. Castiglioni, M. Lucchini, J. Osterwalder, L. Gallmann, M. Hengsberger and U. Keller

“Description and influence of the IR probe field in attosecond spectroscopy of solid surfaces”

*Molecular Plasmonics 2015*, Jena, Germany, May 7-9, 2015

\* U. Keller, **Invited Keynote Talk**

“The future is ultrafast”

*3<sup>rd</sup> UKP-Workshop: Ultrafast Laser Technology*, Aachen, Germany, April 22-23, 2015

\* C. Cirelli, M. Sabbar, S. Heuser, R. Boge, M. Lucchini, L. Gallmann, U. Keller

“Attosecond ionization dynamics”

*Photon and Ion induced Processes in Atoms, MOlecules and Nanostructures*

(*PIPAMON*), the MTA ATOMKI and the ELI ALPS Scientific Workshop, March 24-26, 2015, Debrecen, Hungary

M. Golling, M. Mangold, C. Z. Zaugg, S. M. Link, D. Waldburger, C. G. E. Alfieri, B. W. Tilma, U. Keller

“MBE growth of semiconductor disk laser for repetition rate scaling from 5 to 100 GHz” – Talk

18<sup>th</sup> European Molecular Beam Epitaxy 2015 (Euro MBE 2015), Canazei IT, March 15-18, 2015

M. Lucchini, T. Zimmermann, A. Ludwig, L. Kasmi, J. Herrmann, A. Landsman, L. Gallmann, U. Keller

“Attosecond quantum-beat spectroscopy of helium excited states” – Poster  
*Ultrafast Dynamic Imaging of Matter (UDIM 2015)*, March 8-12, Grindelwald, Switzerland

L. Catiglioni, M. Lucchini, M. Greif, R. Locher, L. Kasmi, P. Kliuiev, P. Krüger, L. Gallmann, J. Osterwalder, U. Keller, M. Hengsberger

“Photoemission delays and ultrafast electron dynamics in solids by attosecond interferometry” – Poster  
*Ultrafast Dynamic Imaging of Matter (UDIM 2015)*, March 8-12, Grindelwald, Switzerland

M. Hengsberger, M. Greif, A. Schuler, L. Kasmi, L. Castiglioni, M. Lucchini, L. Gallmann, U. Keller, P. Krüger, J. Osterwalder

“Time-resolved photoelectron diffraction from solids” – Talk  
*Ultrafast Dynamic Imaging of Matter (UDIM 2015)*, March 8-12, Grindelwald, Switzerland

C. Cirelli, M. Sabbar, S. Heuser, R. Boge, M. Lucchini, L. Gallmann, U. Keller

“Direct measurement of photoemission time-delays in argon and neon” – Talk  
*Ultrafast Dynamic Imaging of Matter (UDIM 2015)*, March 8-12, Grindelwald, Switzerland

- \* A. S. Landsman, T. Zimmermann, S. Mishra  
“Tunneling time in the adiabatic limit of strong field ionization”  
*Ultrafast Dynamic Imaging of Matter (UDIM 2015)*, Grindelwald, Switzerland, March 8-12, 2015
- \* C. J. Saraceno, F. Emaury, B. Debord, A. Diebold, C. Schriber, F. Gerome, T. Südmeyer, F. Benabid, U. Keller  
“Kagome-type hollow-core photonic-crystal fibers for beam delivery and pulse compression of high-power ultrafast lasers”  
*SPIE Photonics West 2015*, LASE and OPTO Symposia “Components and Packaging for Laser Systems” Conference LA106, San Francisco, California, USA, Feb. 4-12, 2015
- S. M. Link, C. A. Zaugg, A. Klenner, M. Mangold, M. Golling, B. W. Tilma, U. Keller  
“Dual-comb MIXSEL”  
*SPIE Photonics West 2014*, LASE, Vertical External Surface Emitting Lasers (VECSELs) V, Conference LA116, San Francisco, California, USA, Feb. 4-12, 2015
- \* M. Mangold, C. A. Zaugg, A. Klenner, A. S. Mayer, S. M. Link, F. Emaury, M. Golling, E. Gini, C. J. Saraceno, B. W. Tilma, U. Keller  
“Carrier-envelope-offset frequency detection of an ultrafast VECSEL”  
*SPIE Photonics West 2014*, LASE, Vertical External Surface Emitting Lasers (VECSELs) V, Conference LA116, San Francisco, California, USA, Feb. 4-12, 2015

- \* U. Keller, **Keynote Talk**  
*SPIE Photonics West 2015, Lasers & Photonics Marketplace Seminar, San Francisco, California, USA, Feb. 9, 2015*
- \* M. Mangold, S. M. Link, C. A. Zaugg, A. Klenner, A. S. Mayer, M. Golling, B. W. Tilma, U. Keller  
“MIXSEL: a novel ultrafast semiconductor laser”  
*Physics of Quantum Electronics conference 2015 (PQE-2015), Snowbird, Utah, Jan. 4-8, 2015*

## 2014

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- S. Heuser, C. Cirelli, M. Sabbar, R. Boge, M. Lucchini, L. Gallmann, U. Keller  
“Role of electron correlation in photoionization of H<sub>2</sub>” - Poster  
*The 13<sup>th</sup> International Conference on Multiphoton Processes (ICOMP13), Shanghai, China, 7-10. Dec. 2014*
- \* S. Heuser, M. Sabbar, R. Boge, M. Lucchini, L. Gallmann, C. Cirelli, U. Keller  
“Attosecond ionization dynamics”  
*The 13<sup>th</sup> International Conference on Multiphoton Processes (ICOMP13), Shanghai, China, 7-10. Dec. 2014*
- \* U. Keller  
“Attosecond ionization dynamics”  
*International Workshop on Atomic Physics, Focus topic: slow electrons and short light pulses, Dresden, Germany, Nov. 24-28, 2014*
- F. Emaury, A. Diebold, A. Klenner, C. J. Saraceno, S. Schilt, T. Südmeyer, U. Keller  
“Toward frequency combs with >100 W average power based on thin disk lasers” – Talk AW1A.2  
*Advanced Solid-State Lasers 2014 (ASSL 2014), Shanghai, China, 16.-21. Nov. 2014*
- A. Klenner, C. A. Zaugg, M. Mangold, A. S. Mayer, S. M. Link, F. Emaury, M. Golling, E. Gini, C. J. Saraceno, B. W. Bauke, S. Schilt, T. Südmeyer, U. Keller  
“Diode-pumped gigahertz frequency combs” – Talk AW1A.4  
*Advanced Solid-State Lasers 2014 (ASSL 2014), Shanghai, China, 16.-21. Nov. 2014*
- M. Mangold, S. M. Link, C. A. Zaugg, A. Klenner, A. S. Mayer, M. Golling, B. W. Tilma, U. Keller  
“High pulse repetition rate and low noise MIXSEL” – Talk AW2A.3  
*Advanced Solid-State Lasers 2014 (ASSL 2014), Shanghai, China, 16.-21. Nov. 2014*
- C. Schriber, Loic Merceron, A. Diebold, F. Emaury, M. Golling, Kolja Beil, Christian Kränkel, C. J. Saraceno, T. Südmeyer, U. Keller  
“Pushing SESAM modelocked thin-disk lasers to shortest pulse durations” – Talk AF1A.4  
*Advanced Solid-State Lasers 2014 (ASSL 2014), Shanghai, China, 16.-21. Nov. 2014*

F. Emaury, C. J. Saraceno, B. Debord, A. Diebold, F. Gerome, T. Südmeyer, F. Benabid, U. Keller

“Highly efficient compression of thin disk laser to 88 fs pulse duration at 100 W of average power” – Talk AF4A.2

*Advanced Solid-State Lasers 2014 (ASSL 2014)*, Shanghai, China, 16.-21. Nov. 2014

- \* M. Mangold, C. A. Zaugg, S. M. Link, A. Klenner, M. Golling, B. W. Tilma, U. Keller  
“Ultrashort-pulse generation using VECSELs and MIXSELs”

*Frontiers in Optics 2014/Laser Science*, Tucson, USA, Oct. 19-23, 2014

- \* M. Lucchini, L. Castiglioni, L. Kasmi, M. Greif, R. Locher, L. Gallmann, J. Osterwalder, M. Hengsberger, U. Keller

“Accessing energy-dependent absolute photoemission delays in solids”

*International Symposium on Ultrafast Intense Laser Science 13 (ISUILS13)*, Frontiers in attosecond science, Jodhpur, Rajasthan, India, Oct. 5-10, 2014

M. Golling, M. Mangold, C. A. Zaugg, S. M. Link, B. W. Tilma, U. Keller

“Wachstum von optisch gepumpten vertikal-emittierenden Scheibenlasern und SESAMs in der MBE”

*Deutscher MBE Workshop (DMBE 2014)*, Darmstadt, 15.-16. Sep. 2014

- \* U. Keller

“Ultrafast semiconductor lasers” – Invited Talk WA1

*IEEE International Semiconductor Laser Conference (ISLC 2014)*, Mallorca, Spain, 7.-10. Sep. 2014

- \* U. Keller

“Attosecond ionization dynamics”

*Kavli Institute for Theoretical Physics, Frontiers of Intense Laser Physics*, Santa Barbara, USA, 3.-5. Sept. 2014

- \* A. S. Landsman

“Dynamics of strong field tunnel ionization”

*Frontiers of Intense Laser Physics, The Kavli Institute for Theoretical Physics*, University of California, Santa Barbara, July 21 – Sept. 19, 2014

M. Hengsberger, L. Castiglioni, M. Greif, J. Osterwalder, M. Lucchini, R. Locher, L. Gallmann, U. Keller

“Attosecond dynamics of the photoelectric effect in solids” - Talk

30<sup>th</sup> European Conference on Surface Science (ECOSS-30), Antalya, Turkey, 31. Aug. – 5. Sep. 2014

L. Castiglioni, M. Greif, D. Becker-Koch, J. Osterwalder, M. Hengsberger, M. Lucchini, L. Kasmi, R. Locher, L. Gallmann, U. Keller

“Origin of attosecond delays in photoemission from noble metal surfaces” - Talk

30<sup>th</sup> European Conference on Surface Science (ECOSS-30), Antalya, Turkey, 31. Aug. – 5. Sep. 2014

L. Castiglioni, M. Lucchini, M. Greif, R. Locher, L. Gallmann, J. Osterwalder, U. Keller, M. Hengsberger

“Attosecond interferometry for the determination of photoemission delays and ultrafast electron dynamics in solids”  
*International Workshop on Photoionization and Resonant Inelastic X-Ray Scattering (IWP & RIXS 2014)*, Erice, Sicily, Italy, 26. Aug. – 1. Sept. 2014

- \* M. Lucchini, R. Locher, L. Castiglioni, M. Greif, L. Gallmann, J. Osterwalder, M. Hengsberger, U. Keller  
“RABBITT from solid surfaces: extending the attosecond toolbox for condensed matter systems”  
*23rd General Congress of the International Commission for Optics (ICO-23)*, Santiago de Compostela, Spain, Aug. 26-29, 2014

B. W. Mayer, C. R. Phillips, L. Gallmann, U. Keller  
“Few-cycle mid-infrared pulses from achromatic QPM OPCPA” – Talk TuA-T1-O-02  
*Europhoton 2014, 6<sup>th</sup> EPS-QEOD Europhoton Conference*, Neuchatel, Switzerland, Aug. 24-29, 2014

M. Mangold, C. A. Zaugg, S. M. Link, A. Klenner, A. S. Mayer, M. Golling, B. W. Tilma, U. Keller  
“Recent advances in ultrafast MIXSELS” – Talk FrB-T1-O-01  
*Europhoton 2014, 6<sup>th</sup> EPS-QEOD Europhoton Conference*, Neuchatel, Switzerland, Aug. 24-29, 2014

C. A. Zaugg, A. Klenner, M. Mangold, A. S. Mayer, S. M. Link, F. Emaury, M. Golling, E. Gini, C. J. Saraceno, B. W. Tilma, U. Keller  
“Supercontinuum generation from a 1.75-GHz SESAM modelocked VECSEL and carrier envelope offset frequency detection” – Talk ThB-T1-O-04  
*Europhoton 2014, 6<sup>th</sup> EPS-QEOD Europhoton Conference*, Neuchatel, Switzerland, Aug. 24-29, 2014

A. Klenner, F. Emaury, A. Diebold, C. Schriber, C. J. Saraceno, S. Schilt, T. Südmeyer, U. Keller  
“Harnessing frequency combs pumped by multi-mode high-power diodes” – Poster ThP-T1-P19  
*Europhoton 2014, 6<sup>th</sup> EPS-QEOD Europhoton Conference*, Neuchatel, Switzerland, Aug. 24-29, 2014

A. Klenner, M. Golling, U. Keller  
“High-power 5-GHz Yb:CALGO with sub-100-fs pulses” – Talk WeA-T3-O-02  
*Europhoton 2014, 6<sup>th</sup> EPS-QEOD Europhoton Conference*, Neuchatel, Switzerland, Aug. 24-29, 2014

S. M. Link, A. Klenner, M. Mangold, C. A. Zaugg, A. S. Mayer, E. Gini, B. W. Tilma, U. Keller  
“Passive linewidth reduction of the carrier-envelope-offset frequency through high-brightness pumping” – Poster TuP-T1-P23  
*Europhoton 2014, 6<sup>th</sup> EPS-QEOD Europhoton Conference*, Neuchatel, Switzerland, Aug. 24-29, 2014

A. Diebold, F. Emaury, C. Schriber, C. J. Saraceno, T. Südmeyer, U. Keller

“Self-referenceable frequency comb with 140 W of average power” – Talk ThB-T1-O-03  
*Europhoton 2014, 6<sup>th</sup> EPS-QEOD Europhoton Conference*, Neuchatel, Switzerland, Aug. 24-29, 2014

F. Emaury, C. J. Saraceno, B. Debord, C. F. Dutin, F. Gerome, T. Südmeyer, F. Benabid, U. Keller

“Pulse compression at 100 W of average power using gas-filled Kagome-type HC-PCF” – Talk FrA-T2-O-04

*Europhoton 2014, 6<sup>th</sup> EPS-QEOD Europhoton Conference*, Neuchatel, Switzerland, Aug. 24-29, 2014

C. J. Saraceno, F. Emaury, C. Schriber, M. Hoffmann, A. Diebold, M. Golling, T. Südmeyer, U. Keller

“Toward millijoule-level modelocked laser oscillators” – Talk WeC-T1-O-05

*Europhoton 2014, 6<sup>th</sup> EPS-QEOD Europhoton Conference*, Neuchatel, Switzerland, Aug. 24-29, 2014

C. Schriber, F. Emaury, A. Diebold, M. Golling, K. Beil, C. Kränkel, C. J. Saraceno, T. Südmeyer, U. Keller

“SESAM-modelocked dual-gain thin-disk laser based on the sesquioxides Yb:Lu<sub>2</sub>O<sub>3</sub> and Yb:Sc<sub>2</sub>O<sub>3</sub>” – Talk WeC-T1-O-04

*Europhoton 2014, 6<sup>th</sup> EPS-QEOD Europhoton Conference*, Neuchatel, Switzerland, Aug. 24-29, 2014

\* C. J. Saraceno, C. Schriber, F. Emaury, A. Diebold, M. Golling, T. Südmeyer, U. Keller  
"Cutting-edge ultrafast oscillators"

*International Workshop on Nonlinear Raman Microscopy*, Ruprecht-Karls-Universität Heidelberg, Germany, Aug 8-9, 2014

\* U. Keller – **Keynote Talk**

“Attosecond ionization dynamics”

*International Conference on Atomic Physics (ICAP 2014)*, Washington D.C., USA, Aug. 3-8, 2014

J. Herrmann, M. Lucchini, S. Chen, M. Wu, A. Ludwig, L. Kasmi, K. Schafer, L. Gallmann, M. Gaarde, U. Keller

“Multiphoton transitions for robust delay-zero calibration in attosecond transient absorption” – Talk 08.Tue.A.6

*International Conference on Ultrafast Phenomena (UP 2014)*, Ginowan City, Okinawa, Japan, July 7-11, 2014

S. Heuser, M. Sabbar, R. Boge, C. Cirelli, U. Keller

“Photoionization time delay in molecular hydrogen” – Talk 09.Wed.C.7

*International Conference on Ultrafast Phenomena (UP 2014)*, Ginowan City, Okinawa, Japan, July 7-11, 2014

M. Lucchini, L. Castiglioni, R. Locher, M. Greif, L. Gallmann, J. Osterwalder, M. Hengsberger, U. Keller

“Accessing energy-dependent photoemission delays in solids” – Poster Session 2, 08.Tue.P2.40

*International Conference on Ultrafast Phenomena (UP 2014)*, Ginowan City, Okinawa, Japan, July 7-11, 2014

C. Hofmann, A. S. Landsman, C. Cirelli, U. Keller

“Non-adiabatic effects in electron momenta” – Poster Session 2, 08.Tue.P2.10

*International Conference on Ultrafast Phenomena (UP 2014)*, Ginowan City, Okinawa, Japan, July 7-11, 2014

C. R. Phillips, B. W. Mayer, L. Gallmann, M. M. Fejer, U. Keller

“Ultra-broadband mid-IR OPCPA schemes enabled by quasi-phase-matching” – Poster Session 2, 08.Tue.P2.56

*International Conference on Ultrafast Phenomena (UP 2014)*, Ginowan City, Okinawa, Japan, July 7-11, 2014

C. J. Saraceno, F. Emaury, C. Schriber, A. Diebold, M. Golling, T. Südmeyer, U. Keller

“Towards oscillator driven strong-field experiments using high-energy modelocked thin disk lasers” – Poster Session 3, 09.Wed.P3.59

*International Conference on Ultrafast Phenomena (UP 2014)*, Ginowan City, Okinawa, Japan, July 7-11, 2014

\* L. Gallmann. **Plenary Talk**

“Attosecond science of solids and solid interfaces”

*SPG Annual Meeting 2014*, June 30 – July 2, University of Fribourg, Switzerland

A. Klenner, S. Schilt, T. Südmeyer, U. Keller

“Compact frequency combs from Ytterbium-doped diode-pumped solid-state lasers”

*28<sup>th</sup> European Frequency and Time Forum (EFTF 2014)*, Neuchatel, Switzerland, June 23-26, 2014

F. Emaury, A. Klenner, A. Diebold, C. Schriber, C. J. Saraceno, S. Schilt, U. Keller, T. Südmeyer

“Thin disk lasers enable high-power frequency combs”

*28<sup>th</sup> European Frequency and Time Forum (EFTF 2014)*, Neuchatel, Switzerland, June 23-26, 2014

\* U. Keller

“Attoclock”

*28<sup>th</sup> European Frequency and Time Forum (EFTF 2014)*, Neuchatel, Switzerland, June 23-26, 2014

\* U. Keller

“Attosecond ionization dynamics”

*Mourou@70: From Ultrafast to Extreme Light*, International Symposium, University of Michigan, June 20-22, 2014

\* U. Keller

“Attosecond ionization dynamics”

*Multiphoton Processes, Gordon Research Conference, (GRC 2014) Strong Field Processes and Frequency / Time Domain Frontiers*, Bentley University, Altham, MA, June 15-20, 2014

J. Maurer, A. Ludwig, B. W. Mayer, C. R. Phillips, L. Gallmann, U. Keller  
“Breakdown of dipole approximation in strong field ionization” – Postdeadline Paper  
FTH5A.10

*CLEO USA 2014*, San Jose, USA, June 8-13, 2014

R. Boge, M. Sabbar, S. Heuser, C. Cirelli, L. Gallmann, U. Keller  
“Combining attosecond science with coincidence momentum spectroscopy” – Talk  
FM2B.6

*CLEO USA 2014*, San Jose, USA, June 8-13, 2014

A. Ludwig, J. Maurer, B. W. Mayer, C. R. Phillips, L. Gallmann, U. Keller  
“Exploring characteristics of strong-field ionization dynamics in the mid-infrared  
regime” – Poster JW2A.89

*CLEO USA 2014*, San Jose, USA, June 8-13, 2014

L. Gallmann, J. Herrmann, M. Lucchini, S. Chen, M. Wu, A. Ludwig, L. Kasmi, K.  
Schafer, M. Gaarde, U. Keller  
“Quarter-laser-cycle oscillations in attosecond transient absorption for robust delay zero  
calibration” – Poster JTh2A.86

*CLEO USA 2014*, San Jose, USA, June 8-13, 2014

L. Gallmann, M. Lucchini, L. Castiglioni, R. Locher, M. Greif, J. Osterwalder, M.  
Hengsberger, U. Keller  
“Following attosecond photoemission from solids using interferometry” – Talk FM2B.4

*CLEO USA 2014*, San Jose, USA, June 8-13, 2014

C. Hofmann, A. S. Landsman, R. Boge, S. Heuser, C. Cirelli, M. Weger, A. Ludwig, J.  
Maurer, L. Gallmann, U. Keller  
“Studying momentum distributions in all aspects reveals important insight” – Poster  
JTU4A.1

*CLEO USA 2014*, San Jose, USA, June 8-13, 2014

C. Schriber, F. Emaury, K. Beil, M. Golling, C. J. Saraceno, C. Kränkel, T. Südmeyer, U.  
Keller

“Dual-gain SESAM modelocked thin disk laser combining the emission spectra of  
Yb:Lu<sub>2</sub>O<sub>3</sub> with Yb:ScO<sub>3</sub> laser crystals” – Talk STU2E.2

*CLEO USA 2014*, San Jose, USA, June 8-13, 2014

F. Emaury, C. J. Saraceno, B. Debord, C. F. Dutin, F. Gerome, T. Südmeyer, F. Benabid,  
U. Keller

“Pulse compression of high-energy thin-disk laser at 100 W of average output power  
using an Ar-filled Kagome-type HC-PCF” – Talk JTh4J.1

*CLEO USA 2014*, San Jose, USA, June 8-13, 2014

F. Emaury, A. Klenner, A. Diebold, C. Schriber, C. J. Saraceno, S. Schilt, U. Keller, T.  
Südmeyer

“Carrier-envelope-offset frequency stabilization and noise analysis of a SESAM-  
modelocked thin disk laser” – Talk SW1O.3

*CLEO USA 2014*, San Jose, USA, June 8-13, 2014

C. J. Saraceno, F. Emaury, C. Schriber, M. Hoffmann, M. Golling, T. Südmeyer, U. Keller

“Pulse energy scaling of modelocked oscillators: moving from 80  $\mu\text{J}$  to  $>100 \mu\text{J}$  from SESAM-modelocked Yb:YAG thin-disk lasers” – Talk STu1O.5

*CLEO USA 2014*, San Jose, USA, June 8-13, 2014

A. Diebold, F. Emaury, C. Schriber, M. Golling, C. J. Saraceno, T. Südmeyer, U. Keller  
“62-fs pulse generation from a SESAM modelocked Yb:CALGO thin disk laser” – Talk STu2E.2

*CLEO USA 2014*, San Jose, USA, June 8-13, 2014

C. R. Phillips, A. S. Mayer, A. Klenner, U. Keller

“Modeling and design of a soliton modelocked Yb:CaGdAlO<sub>4</sub> laser in the normal dispersion regime” – Poster JW2A.67

*CLEO USA 2014*, San Jose, USA, June 8-13, 2014

A. S. Mayer, C. R. Phillips, A. Klenner, U. Keller

“Soliton modelocking via cascaded quadratic nonlinearities in a SESAM-modelocked Yb:CALGO laser” – Talk STu2E.3

*CLEO USA 2014*, San Jose, USA, June 8-13, 2014

B. W. Mayer, C. R. Phillips, L. Gallmann, U. Keller

“Ultra-broadband non-collinear quasi-phase-matching in a hybrid mid-infrared OPCPA system” – Poster JTU4A.88

*CLEO USA 2014*, San Jose, USA, June 8-13, 2014

B. W. Mayer, C. R. Phillips, L. Gallmann, M. M. Fejer, U. Keller

“Sub-4-cycle pulses directly from an all-collinear, high-repetition-rate, mid-IR OPCPA” – Talk STh4E.6

*CLEO USA 2014*, San Jose, USA, June 8-13, 2014

C. R. Phillips, B. W. Mayer, L. Gallmann, M. M. Fejer, U. Keller

“OPCPA systems based on chirped quasi-phase-matching gratings: physics and design constraints” – Talk SM3I.6

*CLEO USA 2014*, San Jose, USA, June 8-13, 2014

A. Klenner, M. Golling, U. Keller

“Gigahertz diode-pumped Yb:CALGO laser with 60-fs pulses and an average output power of 3.5 W” – Talk SM4F.6

*CLEO USA 2014*, San Jose, USA, June 8-13, 2014

M. Mangold, C. A. Zaugg, S. M. Link, A. Klenner, M. Golling, B. W. Tilma, U. Keller

“Recent advances in ultrafast MIXSELS” – Talk SF2G.3

*CLEO USA 2014*, San Jose, USA, June 8-13, 2014

C. A. Zaugg, S. Gronenborn, H. Moench, M. Mangold, M. Miller, U. Weichmann, W. P. Pallmann, M. Golling, B. W. Tilma, U. Keller

“SESAM and gain chip optimization leading to a record performance of an ultrafast electrically pumped VECSEL” – Talk SF2G.5

CLEO USA 2014, San Jose, USA, June 8-13, 2014

M. Lucchini, L. Castiglioni, R. Locher, M. Greif, L. Gallmann, J. Osterwalder, M. Hengsberger, U. Keller

“A novel technique to study energy-dependent photoemission delays in solids with attosecond resolution” – Talk HTh3B.5

*High-Intensity Lasers and High-Field Phenomena (HILAS 2014)*, Berlin, Germany, 18-20 March 2014

\* U. Keller, **Plenary Talk**

“The previously unbelievable performance of ultrafast thin disk lasers”

*SPIE Photonics West 2014*, OPTO, San Francisco, California, USA, Feb. 1-6, 2014

\* C.A. Zaugg, V.J. Wittwer, Z. Sun, D. Popa, S. Milana, T. Kulmala, R.S. Sundaram, M. Mangold, M. Golling, Y. Lee, J.H. Ahn, A.C. Ferrari, U. Keller

“Graphene modelocked VECSELS”

*SPIE Photonics West 2014*, LASE, Vertical External Surface Emitting Lasers

(VECSELS) IV, Conference LA116, San Francisco, California, USA, Feb. 1-6, 2014

V.J. Wittwer, C.A. Zaugg, , Z. Sun, D. Popa, S. Milana, T. Kulmala, R.S. Sundaram, M. Mangold, M. Golling, Y. Lee, J.H. Ahn, U. Keller, A.C. Ferrari

“Graphene saturable absorbers for VECSELS”, Poster requested

*SPIE Photonics West 2014*, LASE, Vertical External Surface Emitting Lasers

(VECSELS) IV, Conference LA116, San Francisco, California, USA, Feb. 1-6, 2014

\* M. Mangold, V. J. Wittwer, C. A. Zaugg, S. M. Link, M. Golling, B. W. Tilma, U. Keller  
“Femtosecond MIXSEL”

*SPIE Photonics West 2014*, LASE, Vertical External Surface Emitting Lasers

(VECSELS) IV, Conference LA116, San Francisco, California, USA, Feb. 1-6, 2014

M. Mangold, V. J. Wittwer, C. A. Zaugg, S. M. Link, M. Golling, B. W. Tilma, U. Keller  
“Picosecond MIXSEL for clocking applications”

*SPIE Photonics West 2014*, LASE, Vertical External Surface Emitting Lasers

(VECSELS) IV, Conference LA116, San Francisco, California, USA, Feb. 1-6, 2014

S. M. Link, M. Mangold, V. J. Wittwer, A. Klenner, M. Golling, B. W. Tilma, U. Keller  
“Record-low noise performance of high-power picosecond MIXSEL”

*SPIE Photonics West 2014*, LASE, Vertical External Surface Emitting Lasers

(VECSELS) IV, Conference LA116, San Francisco, California, USA, Feb. 1-6, 2014

C. A. Zaugg, W. P. Pallmann, M. Mangold, I. Dahhan, M. Golling, B. W. Tilma,  
B. Witzigmann and U. Keller

“SESAM-modelocked electrically pumped VECSEL emitting 6.3-ps pulses”

*SPIE Photonics West 2014*, LASE, Vertical External Surface Emitting Lasers

(VECSELS) IV, Conference LA116, San Francisco, California, USA, Feb. 1-6, 2014

\* U. Keller, **Tutorial (2.5 hours)**

“Short-pulsed solid-state lasers enable an exciting journey from ultrafast laser physics to frequency metrology and attosecond science”

*Dutch national physics meeting (Physics@FOM)*, Jan. 21-22, 2014

- \* U. Keller, **Plenary Talk**  
 “Attoclock: shining new light on old questions in quantum mechanics”  
*Dutch national physics meeting (Physics@FOM)*, Jan. 21-22, 2014

## 2013

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- \* A. S. Landsman  
 “Tunneling time and non-adiabatic effects in strong field ionization”  
*Conference on High Intensity Laser and attosecond science in Israel (CHILI 2013)*, Tel Aviv, Israel, Dec. 2-4, 2013
  - \* U. Keller, **Plenary Talk**  
 “High power ultrafast VECSELs and MIXSELs”  
*18<sup>th</sup> Annual Symposium of the IEEE Photonics Benelux Chapter*, Eindhoven, The Netherlands, 25.-26. Nov. 2013
  - \* A. Landsman  
 “A unified approach to probing Coulomb effects in tunnel ionization for any ellipticity of laser light”  
*Atomic Physics workshop at the Max Planck Institute for the Physics of Complex Systems (MPIPKS)*, Dresden, Germany, 25-29. Nov. 2013
- M. Mangold, C. A. Zaugg, V. J. Wittwer, S. M. Link, M. Golling, B. W. Tilma, U. Keller  
 “MIXSEL generates femtosecond pulses and tunable gigahertz pulse repetition rates from 5 to 100 GHz” – Postdeadline Paper accepted  
*Advanced Solid-State Lasers 2013 (ASSL 2013)*, Paris, France, 27. Oct. – 1. Nov. 2013
- \* A. Klenner, M. Golling, U. Keller  
 “Compact gigahertz frequency combs” – Invited talk ATh3A.1  
*Advanced Solid-State Lasers 2013 (ASSL 2013)*, Paris, France, 27. Oct. – 1. Nov. 2013
- A. Diebold, F. Emaury, C. J. Saraceno, C. Schriber, M. Golling, T. Südmeyer, U. Keller  
 “62-fs pulses from a SESAM modelocked Yb:CALGO thin disk laser” – Talk AF3A.2  
*Advanced Solid-State Lasers 2013 (ASSL 2013)*, Paris, France, 27. Oct. – 1. Nov. 2013
- F. Emaury, A. Klenner, A. Diebold, C. Schriber, C. J. Saraceno, S. Schilt, T. Südmeyer  
 U. Keller  
 “Characterization and stabilization of the carrier-envelope-offset frequency of a SESAM modelocked thin disk laser” – Poster JTh2A.8  
*Advanced Solid-State Lasers 2013 (ASSL 2013)*, Paris, France, 27. Oct. – 1. Nov. 2013
- C. J. Saraceno, F. Emaury, M. Hoffmann, C. Schriber, M. Golling, T. Südmeyer, U. Keller  
 “Pulse energy scaling of an Yb:YAG modelocked thin disk laser operated in a pressure controlled nitrogen environment” – Talk AF3A.3  
*Advanced Solid-State Lasers 2013 (ASSL 2013)*, Paris, France, 27. Oct. – 1. Nov. 2013
- M. Mangold, S. M. Link, V. J. Wittwer, A. Klenner, M. Golling, B. W. Tilma, U. Keller

“Record low timing jitter of a free-running high-power MIXSEL” – Poster ATu3A.57  
*Advanced Solid-State Lasers 2013 (ASSL 2013)*, Paris, France, 27. Oct. – 1. Nov. 2013

B. W. Tilma, W. P. Pallmann, C. A. Zaugg, M. Golling, U. Keller  
“Sub-10-picosecond pulses from a passively modelocked electrically pumped VECSEL”  
– Talk ATh3A.2  
*Advanced Solid-State Lasers 2013 (ASSL 2013)*, Paris, France, 27. Oct. – 1. Nov. 2013

B. W. Mayer, C. R. Phillips, L. Gallmann, M. M. Fejer, U. Keller  
“Sub-4-cycle laser pulses from a high-repetition-rate mid-infrared OPCPA at 3.4  $\mu\text{m}$ ” –  
Talk AF1A.6  
*Advanced Solid-State Lasers 2013 (ASSL 2013)*, Paris, France, 27. Oct. – 1. Nov. 2013

- \* U. Keller  
“Compact lasers for frequency comb generation”  
*6th International Symposium on Ultrafast Photonics Technologies 2013 (ISUPT 2013)*,  
Rochester, USA, Oct. 21-22, 2013
  
- \* C. A. Zaugg, M. Mangold, S. M. Link, V. J. Wittwer, A. Klenner, M. Golling, B. W.  
Tilma, U. Keller  
“Recent advances in ultrafast MIXSELS”  
*2<sup>nd</sup> European Workshop on VECSELS*, University of Montpellier, France, Oct. 15-17,  
2013
  
- \* C. J. Saraceno, F. Emaury, C. Schriber, A. Diebold, M. Golling, T. Südmeyer, U. Keller  
“High average power ultrafast thin-disk oscillators” – **Invited Tutorial**  
*2<sup>nd</sup> European Workshop on VECSELS*, University of Montpellier, France, Oct. 15-17,  
2013
  
- \* B. Resan, A. E. H. Oehler, Z. Y. Zhang, S. Kurmulis, L. Abrardi, K. J. Zhou, Q. Wang,  
M. Mangold, T. Südmeyer, U. Keller, R. A. Hogg, K. J. Weingarten  
“High pulse repetition rate lasers modelocked with quantum dot SESAMs” – Invited Talk  
FTu4A.1  
*Frontiers in Optics 2013, OSA’s 97<sup>th</sup> Annual Meeting*, Orlando, Florida, USA, 6-10 Oct.  
2013
  
- \* U. Keller  
“Attoclock reveals a real and not instantaneous electron tunneling time with a probability  
distribution” – Invited Talk LTu1I.5  
*Laser Science XXIX, APS/DLS 29<sup>th</sup> Annual Meeting*, Orlando, Florida, Oct. 6-10, 2013
  
- N. Bucalovic, S. Schilt, V. Dolgovskiy, G. Di Domenico, M. C. Stumpf, S. Pekarek, U.  
Keller, T. Südmeyer  
“Precision metrology with a diode-pumped solid-state laser optical frequency comb”  
*ÖPG/SPS Annual Meeting 2013*, Linz, Austria, Sept. 3-6, 2013
  
- L. Castiglioni, R. Locher, M. Lucchini, M. Greif, L. Gallmann, J. Osterwalder, U. Keller,  
M. Hengsberger  
“Novel insights into photoemission from solids”  
*ÖPG/SPS Annual Meeting 2013*, Linz, Austria, Sept. 3-6, 2013

- \* U. Keller, M. Mangold, V. J. Wittwer, C. A. Zaugg, S. M. Link, M. Golling, B. W. Tilma  
 “High power ultrafast VECSELs and MIXSELs” – Invited talk FA3  
*Fundamental optical processes in semiconductors (FOPS) 2013*, Kodiak Island, Alaska,  
 USA, Aug. 12-16, 2013
  
- \* U. Keller  
 “SESAM modelocked thin disk laser”  
*Workshop on “Modern Concepts of Continuous Wave and Pulsed High Power Lasers”*,  
 540th WE-Heraeus-Seminar, Physikzentrum Bad Honnef, 14-17 July 2013
  
- A. Diebold, F. Emaury, C. Schriber, A. Klenner, C.J. Saraceno, S. Schilt, T. Südmeyer,  
 and U. Keller  
 “62 fs pulses from a SESAM modelocked Yb:CALGO thin disk laser and CEO  
 frequency stabilization” – Poster  
*Workshop on “Modern Concepts of Continuous Wave and Pulsed High Power Lasers”*,  
 540th WE-Heraeus-Seminar, Physikzentrum Bad Honnef, 14-17 July 2013
  
- A. Ludwig, M. Weger, J. Maurer, R. Boge, S. Heuser, A. S. Landsman, C. Cirelli, L.  
 Gallmann, U. Keller  
 “VMIS attoclock measurements reveal real tunneling time in helium”  
*4<sup>th</sup> International Conference on Attosecond Physics (ATTO 2013)*, July 8-12, 2013
  
- L. Castiglioni, R. Locher, M. Lucchini, M. Greif, L. Gallmann, J. Osterwalder, M.  
 Hengsberger, U. Keller  
 “A novel route towards absolute photoemission delays from surfaces by sub-cycle-  
 resolved LAPE” – Poster  
*4<sup>th</sup> International Conference on Attosecond Physics (ATTO 2013)*, July 8-12, 2013
  
- S. Heuser, R. Boge, C. Cirelli, U. Keller  
 “Investigation of multi-electron effects in atoms using the attoclock” – Poster  
*4<sup>th</sup> International Conference on Attosecond Physics (ATTO 2013)*, July 8-12, 2013
  
- M. Lucchini, J. Herrmann, A. Ludwig, M. Sabbar, R. Locher, L. Gallmann, U. Keller  
 “Role of electron wave-packet interference in the optical response of helium” – Poster  
*4<sup>th</sup> International Conference on Attosecond Physics (ATTO 2013)*, July 8-12, 2013
  
- R. Boge, C. Cirelli, A. S. Landsman, S. Heuser, A. Ludwig, J. Maurer, M. Weger, L.  
 Gallmann, U. Keller  
 “Probing non-adiabatic effects in strong-field ionization” – Poster  
*4<sup>th</sup> International Conference on Attosecond Physics (ATTO 2013)*, July 8-12, 2013
  
- A. S. Landsman, J. Maurer, A. Ludwig, C. Cirelli, R. Boge, M. Weger, S. Heuser, L.  
 Gallmann, U. Keller  
 “Ultrafast resolution of tunneling time” – Poster  
*4<sup>th</sup> International Conference on Attosecond Physics (ATTO 2013)*, July 8-12, 2013
  
- C. Hofmann, A. S. Landsman, C. Cirelli, A. N. Pfeiffer, U. Keller  
 “Longitudinal momentum spread at tunnel exit”  
*4<sup>th</sup> International Conference on Attosecond Physics (ATTO 2013)*, July 8-12, 2013

J. Herrmann, M. Weger, R. Locher, M. Sabbar, P. Riviere, U. Saalman, J.-M. Rost, L. Gallmann, U. Keller – Poster

“Optical gain by interrupting the temporal evolution of a dipole”

*4<sup>th</sup> International Conference on Attosecond Physics (ATTO 2013)*, July 8-12, 2013

A. Klenner, M. Golling, U. Keller

“21.4 kW peak power from a gigahertz multimode-diode-pumped solid-state laser with carrier envelope offset frequency detection” – Talk CTh3H.4

*CLEO USA 2013*, San Jose, USA, June 9-14, 2013

C. A. Zaugg, Z. Sun, D. Popa, S. Milana, T. Kulmala, R. S. Sundaram, V. J. Wittwer, M. Mangold, M. Golling, O. D. Sieber, Y. Lee, J. H. Ahn, A. C. Ferrari, U. Keller

“Wavelength tunable graphene modelocked VECSEL” – Talk CW1G.4

*CLEO USA 2013*, San Jose, USA, June 9-14, 2013

C. A. Zaugg, A. Klenner, O. D. Sieber, M. Golling, B. W. Tilma, U. Keller

“Sub-100 MHz passively modelocked VECSEL” – Talk CW1G.6

*CLEO USA 2013*, San Jose, USA, June 9-14, 2013

C. J. Saraceno, F. Emaury, M. Hoffmann, C. Schriber, M. Golling, T. Südmeyer, U. Keller

“Pushing the limits of high-power modelocked thin disk lasers by operating in a vacuum environment” – Talk CTh1H.4

*CLEO USA 2013*, San Jose, USA, June 9-14, 2013

F. Emaury, C. J. Saraceno, C. F. Dutin, Y. Y. Wang, C. Schriber, F. Gerome, T. Südmeyer, F. Benabid, U. Keller

“Efficient femtosecond operation of a Kagome-type HC-PCF fiber at 75 W average power” – Talk Ctu3K.1

*CLEO USA 2013*, San Jose, USA, June 9-14, 2013

J. Herrmann, M. Lucchini, A. Ludwig, M. Sabbar, R. Locher, L. Gallmann, U. Keller

“Probing electron wave-packet interference” – Talk QF2C.2

*CLEO USA 2013*, San Jose, USA, June 9-14, 2013

J. Maurer, A. S. Landsman, M. Weger, R. Boge, A. Ludwig, S. Heuser, C. Cirelli, L. Gallmann, U. Keller

“Tunneling time in ultrafast science is real and probabilistic” – Talk QTh1D.3

*CLEO USA 2013*, San Jose, USA, June 9-14, 2013

J. Herrmann, M. Weger, R. Locher, M. Sabbar, P. Riviere, U. Saalman, J.-M. Rost, L. Gallmann, U. Keller

“Creation and optical gain and absorption via a virtual single-photon transition” – Poster JTh2A.08

*CLEO USA 2013*, San Jose, USA, June 9-14, 2013

- \* Clara J. Saraceno, Florian Emaury, Cinia Schriber, Martin Hoffmann, Matthias Golling, Thomas Südmeyer and Ursula Keller  
“High average power ultrafast lasers”

*Photonics North Conference 2013*, Ottawa, Canada, June 3-5, 2013

R. Locher, L. Castiglioni, M. Lucchini, M. Greif, L. Gallmann, J. Osterwalder, M. Hengsberger, U. Keller

“Surface RABBITT for determination of absolute ionization phase: A novel route towards absolute photoemission delays” – **Postdeadline Paper PD-A.1**

*CLEO EUROPE - IQEC 2013*, Munich, Germany, 12-16 May 2013

A. Klenner, M. Golling, U. Keller

“21.4 kW peak power from a gigahertz multimode-diode-pumped solid-state laser with carrier envelope offset frequency detection” – Talk CA-6.5

*CLEO EUROPE - IQEC 2013*, Munich, Germany, 12-16 May 2013

C. A. Zaugg, Z. Sun, D. Popa, S. Milana, T. Kulmala, R. S. Sundaram, V. J. Wittwer, M. Mangold, M. Golling, Y. Lee, J. H. Ahn, A. C. Ferrari, U. Keller

“Passively modelocked VECSEL using a single-layer graphene saturable absorber mirror” – Talk CB-4.6

*CLEO EUROPE - IQEC 2013*, Munich, Germany, 12-16 May 2013

C. Schriber, C. J. Saraceno, F. Emaury, M. Golling, K. Beil, C. Kränkel, T. Südmeyer, G. Huber, U. Keller

“Towards high average output power and short pulse duration of SESAM modelocked thin disk lasers” – Talk CA-5

*CLEO EUROPE - IQEC 2013*, Munich, Germany, 12-16 May 2013

L. Gallmann, A. S. Landsman, M. Weger, J. Maurer, R. Boge, A. Ludwig, S. Heuser, C. Cirelli, U. Keller

“Tunneling time in ultrafast science is real and probabilistic” – Talk CG-1.1

*CLEO EUROPE - IQEC 2013*, Munich, Germany, 12-16 May 2013

J. Herrmann, M. Weger, R. Locher, M. Sabbar, P. Riviere, U. Saalmann, J.-M. Rost, L. Gallmann, U. Keller

“Interrupted virtual single-photon transition” – Talk CG-7.3

*CLEO EUROPE - IQEC 2013*, Munich, Germany, 12-16 May 2013

J. Herrmann, M. Lucchini, R. Locher, M. Sabbar, L. Gallmann, U. Keller

“Electron wave-packet interference investigated with elliptically polarized light” – Talk CG-7.4

*CLEO EUROPE - IQEC 2013*, Munich, Germany, 12-16 May 2013

\* C. J. Saraceno, F. Emaury, C. Schriber, M. Hoffmann, M. Golling, T. Südmeyer, U. Keller

“High average power ultrafast thin disk lasers”

*2<sup>nd</sup> Advanced Lasers and Photon Sources Conference (ALPS '13)*, Pacifico Yokohama, Yokohama, Japan, April 23-25, 2013

\* A. S. Landsman

“Ultrafast resolution of tunnel time”

*Batsheva de Rothschild Seminar and ISF – Israel Science Foundation workshop on Light-matter Interaction: Focus on Novel Observable non-Hermitian Phenomena*, Kibbutz Ein-Gedi, Israel, April 21-26, 2013

- \* L. Gallmann, C. Heese, C. Phillips, B. W. Mayer, M. M. Fejer, U. Keller  
“Engineered QPM based OPCPA for few-cycle pulse compression in the mid-infrared”  
*Workshop on Fundamentals and Applications of Laser Filaments*, Institute of Molecular Sciences, Okazaki, Japan, 3-6 April, 2013
  
- \* U. Keller, F. Emaury, C. J. Saraceno, C. Schriber, F. Benabid, T. Südmeyer  
“High average power pulse compression into the few cycle regime – different options and trade-offs”  
*Workshop on Fundamentals and Applications of Laser Filaments*, Institute of Molecular Sciences, Okazaki, Japan, 3-6 April, 2013
  
- \* U. Keller – **Invited Tutorial (2.5 hours)**  
“SESAM modelocked solid-state lasers”  
*Ultrafast Optics 2013 (UFO IX)*, Davos Congress Centre, Switzerland, March 4-8, 2013
  
- \* C. R. Phillips, C. Langrock, Y. W. Lin, M. M. Fejer, C. Heese, B. W. Mayer, L. Gallmann, U. Keller, J. Jiang, I. Hartl, M. E. Fermann  
“Ultrafast light sources via high-gain and highly nonlinear quasi-phasematching devices” – Fr2.5  
*Ultrafast Optics 2013 (UFO IX)*, Davos Congress Centre, Switzerland, March 4-8, 2013
  
- C. A. Zaugg, Z. Sun, D. Popa, S. Milana, T. Kulmala, R. S. Sundaram, V. J. Wittwer, M. Mangold, O. D. Sieber, M. Golling, Y. Lee, J. H. Ahn, A. C. Ferrari, U. Keller  
“Graphene modelocked VECSEL with broad wavelength tuning” – **Postdeadline Paper PD3**  
*Ultrafast Optics 2013 (UFO IX)*, Davos Congress Centre, Switzerland, March 4-8, 2013
  
- O. D. Sieber, M. Mangold, V. J. Wittwer, M. Hoffmann, M. Golling, B. W. Tilman, U. Keller  
“Towards compact frequency combs from ultrafast VECSELs” – Poster MoP.5  
*Ultrafast Optics 2013 (UFO IX)*, Davos Congress Centre, Switzerland, March 4-8, 2013
  
- A. Klenner, M. Golling, U. Keller  
“21.4 kW peak power from a gigahertz multimode-diode-pumped solid-state laser with carrier envelope offset frequency detection” – Poster MoP.20  
*Ultrafast Optics 2013 (UFO IX)*, Davos Congress Centre, Switzerland, March 4-8, 2013
  
- N. Bucalovic, V. Dolgovskiy, S. Schilt, G. Di Domenico, M. C. Stumpf, U. Keller, T. Südmeyer  
“Near-infrared diode-pumped solid-state frequency comb for ultra-stable microwave generation” – Talk Mo4.2  
*Ultrafast Optics 2013 (UFO IX)*, Davos Congress Centre, Switzerland, March 4-8, 2013
  
- S. Schilt, N. Bucalovic, V. Dolgovskiy, G. Di Domenico, S. Grop, B. Dubois, V. Giordano, M. C. Stumpf, U. Keller, T. Südmeyer

- “Self-referencing of an optical frequency comb: importance of the laser dynamics” –  
Talk Tu2.3  
*Ultrafast Optics 2013 (UFO IX)*, Davos Congress Centre, Switzerland, March 4-8, 2013
- C. J. Saraceno, F. Emaury, O. H. Heckl, C. R. E. Baer, M. Hoffmann, C. Schriber, M. Golling, T. Südmeyer, U. Keller  
“275 W average power from an Yb:YAG modelocked thin disk laser operated in a vacuum environment” – Talk We2.2  
*Ultrafast Optics 2013 (UFO IX)*, Davos Congress Centre, Switzerland, March 4-8, 2013
- C. Schriber, C. J. Saraceno, F. Emaury, M. Golling, K. Beil, C. Kränkel, T. Südmeyer, G. Huber, U. Keller  
“Passively modelocked thin disk lasers in the short pulse duration regime” – Talk We2.3  
*Ultrafast Optics 2013 (UFO IX)*, Davos Congress Centre, Switzerland, March 4-8, 2013
- F. Emaury, C. F. Dutin, C. J. Saraceno, M. Trant, O. H. Heckl, Y. Wang, C. Schriber, F. Gerome, T. Südmeyer, F. Benabid, U. Keller  
“Beam delivery and pulse compression to sub-50 fs of a modelocked thin disk laser in a gas-filled Kagome-type HC-PCF fiber” – Talk We2.6  
*Ultrafast Optics 2013 (UFO IX)*, Davos Congress Centre, Switzerland, March 4-8, 2013
- \* M. Mangold, V. J. Wittwer, O. D. Sieber, M. Hoffmann, M. Golling, T. Südmeyer, U. Keller, **Invited**  
“Characterization of nonlinear gain parameters in VECSELs to optimize femtosecond high average power operation”  
*SPIE Photonics West 2013*, LASE, Vertical External Surface Emitting Lasers (VECSELs), Conference LA116, San Francisco, California, USA, Feb. 2-7, 2013
- W. P. Pallmann, C. A. Zaugg, M. Mangold, V. J. Wittwer, H. Moench, S. Gronenborn, M. Miller, B. W. Tilman, T. Südmeyer, U. Keller  
“Passively modelocked electrically pumped VECSELs”  
*SPIE Photonics West 2013*, LASE, Vertical External Surface Emitting Lasers (VECSELs), Conference LA116, San Francisco, California, USA, Feb. 2-7, 2013
- \* C. J. Saraceno, C. Schriber, M. Mangold, M. Hoffmann, O. H. Heckl, C. R. E. Baer, M. Golling, T. Südmeyer, U. Keller  
“SESAM designs for ultrafast lasers”  
*SPIE Photonics West 2013*, LASE, Fiber Lasers X: Technology, Systems, and Applications, Conference LA103, San Francisco, California, USA, Feb. 2-7, 2013
- \* A. S. Landsman, J. Maurer, M. Weger, R. Boge, A. Ludwig, S. Heuser, C. Cirelli, L. Gallman, U. Keller  
“Tunneling time is real in attosecond science”  
*523<sup>rd</sup> WE-Heraeus-Seminar on “High-Harmonic Spectroscopy”*, Physikzentrum Bad Honnef, Germany, Jan. 28 to Feb. 1, 2013
- \* U. Keller – **Plenary Talk**  
“The Hamburg-Zürich synergy: pushing the frontier in ultrafast solid-state lasers”  
*International scientific symposium, 65<sup>th</sup>-birthday Prof. Günter Huber*, 17. Jan. 2013

- \* U. Keller  
 "Attoclock seems to reveal a real tunneling delay time in strong field ionization of helium"  
*Conference on High Intensity Laser and attosecond science in Israel (CHILI 2012)*, Tel-Aviv, Israel Dec 3-5, 2012
  
- \* A. S. Landsman  
 "Distribution of tunneling times in strong field ionization"  
*High Intensity Laser and Attosecond phenomena*, TelAliv, Israel Dec 3-5, 2012
  
- J. Herrmann, M. Sabbar, R. Locher, M. Weger, P. Riviere, U. Sallmann, J.-M. Rost, L. Gallmann, U. Keller  
 "Absorption and optical gain via an interrupted virtual single-photon transition" - **Poster**  
*International Workshop on Atomic Physics*, Dresden, Germany, Nov. 26-30, 2012
  
- \* L. Gallmann et al.  
 "Attosecond transient absorption spectroscopy: shedding new light on fundamental light-matter interaction"  
*International Workshop on Atomic Physics*, Dresden, Germany, Nov. 26-30, 2012
  
- \* C. Cirelli, A. N. Pfeiffer, M. Smolarski, D. Dimitrovski, L. B. Madsen, R. Dörner, U. Keller  
 "Attoclock reveals new and surprising insight in attosecond ionization dynamics in helium and argon"  
*12<sup>th</sup> International Conference on Electronic Spectroscopy and Structure (ICESS 12)*, Saint-Malo, France, 16-21 Sep. 2012
  
- M. Durand, C. Heese, A. Houard, L. Gallmann, U. Keller, A. Mysyrowicz  
 "Spatiotemporal self-compression by laser filamentation at 3.4  $\mu\text{m}$  in BaF<sub>2</sub>"  
*4<sup>th</sup> International Symposium on Filamentation (COFIL 2012)*, 7-12. Oct. 2012, Tucson, Arizona, U.S.A
  
- M. Mangold, O. D. Sieber, V. J. Wittwer, M. Hoffmann, M. Golling, T. Südmeyer, U. Keller  
 "High-power optically pumped femtosecond VECSELs" – Poster presentation TuP25  
*IEEE International Semiconductor Laser Conference (ISLC 2012)*, Oct. 7-10, San Diego, USA
  
- W. P. Pallmann, M. Mangold, V. J. Wittwer, B. W. Tilma, T. Südmeyer, H. Moench, S. Gronenborn, M. Miller, T. Südmeyer, U. Keller  
 "Gain characterization of electrically-pumped VECSELs" – Poster presentation TuP33  
*IEEE International Semiconductor Laser Conference (ISLC 2012)*, Oct. 7-10, San Diego, USA
  
- \* U. Keller – **Plenary Talk**  
 "20 years of SESAM modelocked lasers – a success story"  
*International Conference on Advanced Laser Technologies (ALT2012)*, Thun Switzerland, Sep. 2-6, 2012

- \* T. Südmeyer  
 “Ultrafast solid-state laser oscillators”  
*International Conference on Advanced Laser Technologies (ALT2012)*, Thun  
 Switzerland, Sep. 2-6, 2012
- B. W. Mayer, C. Heese, C. R. Phillips, L. Gallmann, M. M. Fejer, U. Keller  
 “High-power femtosecond laser source in the mid-infrared based on parametric transfer”  
 – Talk  
*International Conference on Advanced Laser Technologies (ALT2012)*, Thun  
 Switzerland, Sep. 2-6, 2012
- C. Schriber, C. J. Saraceno, C. R. E. Baer, O. H. Heckl, C. Kränkel, T. Südmeyer, U.  
 Keller  
 “Yb-doped laser materials for high-power sub-100 femtosecond thin disk lasers” – Poster  
*International Conference on Advanced Laser Technologies (ALT2012)*, Thun  
 Switzerland, Sep. 2-6, 2012
- A. Klenner, S. Pekarek, T. Südmeyer, C. Fiebig, K. Paschke, G. Erbert, U. Keller  
 “Femtosecond gigahertz diode-pumped solid-state lasers for frequency comb generation”  
 – Talk  
*International Conference on Advanced Laser Technologies (ALT2012)*, Thun  
 Switzerland, Sep. 2-6, 2012
- F. Emaury, C. Fourcade Dutin, C. J. Saraceno, O. H. Heckl, Y. Y. Wang, C. Schriber, T.  
 Südmeyer, F. Benadid, U. Keller  
 “Sub-50 fs compression of  $\mu\text{J}$  thin disk laser in a gas filled Kagome-type hollow-core  
 PCF”  
*International Conference on Advanced Laser Technologies (ALT2012)*, Thun  
 Switzerland, Sep. 2-6, 2012
- C. J. Saraceno, F. Emaury, O. Heckl, C. Baer, M. Hoffmann, C. Schriber, M. Golling, T.  
 Südmeyer, U. Keller  
 “205 W average power from a femtosecond Yb:YAG thin disk laser” – Postdeadline  
 Paper  
*5<sup>th</sup> EPS-QEOD Europhoton Conference*, Stockholm, Sweden, 26-31. Aug. 2012
- V. Dolgovskiy, N. Bucalovic, S. Schilt, G. Di Domenico, P. Thomann, S. Grop, B.  
 Dubois, M. C. Stumpf, S. Pekarek, U. Keller, T. Südmeyer  
 “Comparison of low-noise microwave generation from ultrafast fiber and DPSSL  
 frequency combs” – Talk ThD.4  
*5<sup>th</sup> EPS-QEOD Europhoton Conference*, Stockholm, Sweden, 26-31. Aug. 2012
- B. W. Mayer, C. Heese, C. R. Phillips, L. Gallmann, M. M. Fejer, U. Keller  
 “Mid-infrared pulses with 115 MW peak power from an OPCPA based on apodized  
 APPLN” – Talk MoB.2  
*5<sup>th</sup> EPS-QEOD Europhoton Conference*, Stockholm, Sweden, 26-31. Aug. 2012
- F. Emaury, C. Fourcade Dutin, C. J. Saraceno, O. H. Heckl, Y. Y. Wang, C. Schriber, T.  
 Südmeyer, F. Benadid, U. Keller

“Pulse compression of a modelocked thin disk laser to 10 MW, sub-50 fs in a gas filled Kagome-type hollow-core PCF” – Talk ThC.2  
*5<sup>th</sup> EPS-QEOD Europhoton Conference*, Stockholm, Sweden, 26-31. Aug. 2012

C. J. Saraceno, C. Schriber, O. H. Heckl, C. R. E. Baer, M. Golling, K. Beil, C. Kränkel, T. Südmeyer, G. Huber, U. Keller  
“25 W, 185 fs pulses from an Yb:Lu<sub>2</sub>O<sub>3</sub> modelocked thin disk laser” – Talk WeD.2  
*5<sup>th</sup> EPS-QEOD Europhoton Conference*, Stockholm, Sweden, 26-31. Aug. 2012

C. A. Zaugg, M. Hoffmann, W. P. Pallmann, V. J. Wittwer, M. Golling, K. J. Weingarten, T. Südmeyer, U. Keller  
“250 MHz modelocked VECSEL: towards low repetition rates using an extendable multi-pass approach” – Talk WeD.4  
*5<sup>th</sup> EPS-QEOD Europhoton Conference*, Stockholm, Sweden, 26-31. Aug. 2012

O. D. Sieber, M. Mangold, V. J. Wittwer, M. Hoffmann, M. Golling, T. Südmeyer, U. Keller  
“Experimentally verified pulse formation model for high-power femtosecond vertical emitting semiconductor lasers” – Talk ThD.6  
*5<sup>th</sup> EPS-QEOD Europhoton Conference*, Stockholm, Sweden, 26-31. Aug. 2012

- \* A. S. Landsman and U. Keller  
“Dynamics of electron wavepacket following tunnel ionization”  
*23<sup>rd</sup> International Conference on Atomic Physics (ICAP 2012)*, Ecole Polytechnique, Palaiseau, Paris, 23-27 July 2012
- \* L. Gallmann, C. Heese, C. R. Phillips, B. W. Mayer, M. M. Fejer, U. Keller  
“Apodized APPLN based mid-infrared OPCPA system with 115 MW peak and 700 mW average power”  
*21<sup>th</sup> International Laser Physics Workshop (LPHYS'12)*, Modern Trends in Laser Physics (Seminar 1), Calgary, Canada, July 23-27, 2012

J. Herrmann, M. Weger, R. Locher, M. Sabbar, P. Riviere Herrera, U. Saalman, J.-M. Rost, L. Gallmann, U. Keller  
“Attosecond control of strong-field phenomena in helium” – Talk MON.2A.3  
*XVIII<sup>th</sup> International Conference on Ultrafast Phenomena (UP2012)*, Lausanne, Switzerland, 8-13 July, 2012

C. Cirelli, A. N. Pfeiffer, A. S. Landsman, M. Smolarski, D. Dimitrovski, L. B. Madsen, U. Keller  
“Probing the longitudinal momentum spread of the electron wave packet at the tunnel exit” – Poster TUE.PII.28  
*XVIII<sup>th</sup> International Conference on Ultrafast Phenomena (UP2012)*, Lausanne, Switzerland, 8-13 July, 2012

A. S. Landsman, A. N. Pfeiffer, M. Smolarski, C. Cirelli, U. Keller  
“Dependence of Rydberg yield on ellipticity in strong field ionization” – Poster MON.PI.22  
*XVIII<sup>th</sup> International Conference on Ultrafast Phenomena (UP2012)*, Lausanne, Switzerland, 8-13 July, 2012

C. J. Saraceno, S. Pekarek, O. H. Heckl, C. R. E. Baer, C. Schriber, M. Golling, K. Beil, C. Kränkel, G. Huber, T. Südmeyer, U. Keller  
“Ultrafast thin disk lasers: recent progress in short pulse generation (<100 fs) and carrier envelope offset phase detection” – Talk TUE.2B.4  
*XVIIIth International Conference on Ultrafast Phenomena (UP2012)*, Lausanne, Switzerland, 8-13 July, 2012

\* U. Keller

“Clocking attosecond ionization dynamics in helium and argon”  
*Ultrafast Imaging of Matter Conference 2012*, Banff, Alberta, Canada, 1-3 July 2012

A. Klenner, S. Pekarek, T. Südmeyer, C. Fiebig, K. Paschke, G. Erbert, U. Keller  
“Femtosecond gigahertz diode-pumped solid-state laser for frequency comb generation”  
– Poster ID286  
*Annual Meeting of the Swiss Physical Society (SPG Jahrestagung 2012)*, ETH Zurich, Switzerland, June 21-22, 2012

M. Mangold, V. J. Wittwer, O. D. Sieber, M. Hoffmann, B. W. Tilma, M. Golling, T. Südmeyer, U. Keller  
“Ultrafast optically pumped VECSELs and MIXSELs” – Poster ID287  
*Annual Meeting of the Swiss Physical Society (SPG Jahrestagung 2012)*, ETH Zurich, Switzerland, June 21-22, 2012

C. Heese, B. W. Mayer, C. R. Phillips, L. Gallmann, M. M. Fejer, and U. Keller  
“High-power mid-infrared femtosecond laser source based on parametric transfer”  
R. Boge, C. Cirelli, A. N. Pfeiffer, M. Smolarski, R. Dörner, U. Keller  
“Electron ionization times measured with the attoclock” – Poster ID742  
*Annual Meeting of the Swiss Physical Society (SPG Jahrestagung 2012)*, *NCCR MUST Symposium*, ETH Zurich, Switzerland, June 21-22, 2012

A. S. Landsman, C. Cirelli, A. N. Pfeiffer, M. Smolarski, D. Dimitrovski, L. B. Madsen, U. Keller  
“Probing the longitudinal momentum spread of the electron wave packet at the tunnel exit” – Poster ID746  
*Annual Meeting of the Swiss Physical Society (SPG Jahrestagung 2012)*, *NCCR MUST Symposium*, ETH Zurich, Switzerland, June 21-22, 2012

C. Schriber, C. J. Saraceno, S. Pekarek, O. H. Heckl, C. R. E. Baer, M. Golling, K. Beil, C. Kränkel, T. Südmeyer, G. Huber and U. Keller  
“High power SESAM modelocked thin disk lasers: access to sub-100 fs pulses and first CEO beat frequency detection” – Talk ID216  
*Annual Meeting of the Swiss Physical Society (SPG Jahrestagung 2012)*, *Applied Physics*, ETH Zurich, Switzerland, June 21-22, 2012

J. Herrmann, M. Sabbar, R. Locher, M. Weger, L. Gallmann, U. Keller  
“Attosecond Transient Absorption” – Talk ID703  
*Annual Meeting of the Swiss Physical Society (SPG Jahrestagung 2012)*, *NCCR MUST Symposium*, ETH Zurich, Switzerland, June 21-22, 2012

- B. Boge, C. Cirelli, A. N. Pfeiffer, M. Smolarski, R. Dörner, U. Keller  
 “Electron ionization times measured with the attoclock” – Talk ID702  
*Annual Meeting of the Swiss Physical Society (SPG Jahrestagung 2012), NCCR MUST Symposium, ETH Zurich, Switzerland, June 21-22, 2012*
- \* L. Gallmann, J. Herrmann, M. Sabbar, R. Locher, M. Weger, U. Keller  
 “All-optical ultrafast spectroscopy in the attosecond domain”  
*6<sup>th</sup> International Conference on Laser Probing (LAP 2012), Paris, France, 4-8 June 2012*
- \* C. Cirelli, A. N. Pfeiffer, M. Smolarski, R. Dörner, U. Keller  
 “Delay in tunnel ionization”  
*Gordon Research Conference on Multiphoton Processes, Mount Holyoke College, South Hadley, Massachusetts, USA, 3-8 June 2012*
- C. Cirelli, A. N. Pfeiffer, M. Smolarski, X. Wang, J. H. Eberly, R. Dörner, U. Keller  
 “Attoclock measurement of electron release times in double ionization” – Poster  
*Gordon Research Conference on Multiphoton Processes, Mount Holyoke College, South Hadley, Massachusetts, USA, 3-8 June 2012*
- A. S. Landsman, C. Cirelli, A. N. Pfeiffer, M. Smolarski, D. Dimitrovski, L. B. Madsen, U. Keller  
 “Probing the longitudinal momentum spread of the electron wave packet at the tunnel exit” – Poster  
*Gordon Research Conference on Multiphoton Processes, Mount Holyoke College, South Hadley, Massachusetts, USA, 3-8 June 2012*
- J. Herrmann, M. Weger, R. Locher, M. Sabbar, P. Rivière, U. Saalman, J.-M. Rost, L. Gallmann, U. Keller  
 “Time-gated XUV emission” – Poster  
*Gordon Research Conference on Multiphoton Processes, Mount Holyoke College, South Hadley, Massachusetts, USA, 3-8 June 2012*
- F. Emaury, C. Fourcade, C. J. Saraceno, O. H. Heckl, Y. Y. Wang, C. Schriber, C. R. E. Baer, T. Südmeyer, F. Benabid, U. Keller  
 “Sub-100-fs pulse compression in a hollow-core photonic crystal fiber (HC-PCF)” – Talk CTh4B.3  
*CLEO 2012, San Jose, CA, USA, 6-11 May 2012*
- \* C. J. Saraceno, S. Pekarek, O. H. Heckl, C. R. E. Baer, C. Schriber, M. Golling, K. Beil, C. Kränkel, G. Huber, U. Keller, T. Südmeyer  
 “Ultrafast thin disk lasers for intralaser extreme nonlinear optics” – Upgraded invited talk CM1D.6  
*CLEO 2012, San Jose, CA, USA, 6-11 May 2012*
- C. A. Zaugg, M. Hoffmann, W. P. Pallmann, O. D. Sieber, V. J. Wittwer, M. Mangold, M. Golling, K. J. Weingarten, B. W. Tilma, T. Südmeyer, U. Keller  
 “257 MHz pulse repetition rate from a modelocked VECSEL” – Talk CW1N.1  
*CLEO 2012, San Jose, CA, USA, 6-11 May 2012*

- V. J. Wittwer, O. D. Sieber, M. Mangold, M. Hoffmann, C. J. Saraceno, M. Golling, B. W. Tilma, T. Südmeyer, U. Keller  
 “First MIXSEL with a quantum well saturable absorber: shorter pulse durations and higher repetition rates” – Talk CW1N.2  
*CLEO 2012*, San Jose, CA, USA, 6-11 May 2012
- B. Resan, A. E. H. Oehler, Z. Y. Zhang, S. Kurmulis, K. J. Zhou, Q. Wang, M. Mangold, T. Südmeyer, U. Keller, R. A. Hogg, K. J. Weingarten  
 “10-GHz repetition rate ERGO laser modelocked by 1550 nm InAs/GaAs quantum-dot SESAM” – Poster JTh2A.23  
*CLEO 2012*, San Jose, CA, USA, 6-11 May 2012
- N. Bucalovic, V. Dolgovskiy, M.C. Stumpf, C. Schori, P. Thomann, G. Di Domenico, S. Pekarek, A. E. H. Oehler, T. Südmeyer, U. Keller, S. Schilt  
 “Importance of the Carrier-Envelope-Offset Dynamics in the Stabilization of an Optical Frequency Comb” – Talk #3148  
*European Frequency and Time Forum 2012 (EFTF-2012)*, Gothenburg, Sweden, April 23-27, 2012
- \* I. Dahhan, M. Hoffmann, W. P. Pallmann, C. A. Zaugg, M. Golling, K. J. Weingarten, T. Südmeyer, U. Keller, Bernd Witzigmann  
 “Current confinement in EP-VECSEL for high power single-mode operation suitable for passive modelocking”  
*SPIE Photonics Europe*, Brussels, Belgium, April 16-19, 2012
- \* V. J. Wittwer, O. D. Sieber, M. Mangold, M. Hoffmann, M. Golling, T. Südmeyer, U. Keller  
 “High-average power modelocked VECSELs and MIXSELs”  
*DYCE-Asia workshop*, Tokyo, Japan, April 23-24, 2012
- \* T. Südmeyer, V. J. Wittwer, O. D. Sieber, M. Mangold, M. Hoffmann, Y. Barbarin, M. Golling, U. Keller  
 “Recent advances in ultrafast VECSELs and MIXSELs”  
*DPG-Tagung*, Berlin, Germany, March 25-30, 2012
- \* U. Keller  
 “Attoclock reveals tunnel delay time and tunnel geometry in strong field ionization”  
*Gordon Research Conference on Photoions, Photoionization & Photodetachment*, Galveston, Texas, USA, 12-17. Feb. 2012
- O. D. Sieber, M. Mangold, V. J. Wittwer, M. Hoffmann, M. Golling, T. Südmeyer, U. Keller  
 “Recent advances in ultrafast VECSELs”  
*Advanced solid-state photonics (ASSP 2012)*, San Diego, California, USA, 29. Jan. – 1. Feb. 2012
- C. J. Saraceno, S. Pekarek, O. H. Heckl, C. R. E. Baer, C. Schriber, M. Golling, T. Südmeyer, K. Beil, C. Kränkel, G. Huber, U. Keller  
 “Self-referencable high-power frequency comb from a 7-W, 142-fs Yb:Lu<sub>2</sub>O<sub>3</sub> thin disk laser oscillator”

*Advanced solid-state photonics (ASSP 2012)*, San Diego, California, USA, 29. Jan. – 1. Feb. 2012

C. J. Saraceno, M. Hoffmann, C. Schriber, O. H. Heckl, C. R. E. Baer, M. Golling, T. Südmeyer, U. Keller  
“SESAMs for high-power femtosecond modelocking: influence of growth temperature on damage and nonsaturable losses” – Poster Session 1, Poster AM4A.13  
*Advanced solid-state photonics (ASSP 2012)*, San Diego, California, USA, 29. Jan. – 1. Feb. 2012

S. Pekarek, M. C. Stumpf, S. Lecomte, S. Kundermann, A. Klenner, T. Südmeyer, J. M. Dudley, U. Keller  
“Compact gigahertz frequency comb generation: how short do the pulses need to be?”  
*Advanced solid-state photonics (ASSP 2012)*, San Diego, California, USA, 29. Jan. – 1. Feb. 2012

C. Heese, N. Hartmann, L. Gallmann, U. Keller, C. R. Phillips, M. M. Fejer  
“High repetition rate, 93-MW mid-infrared optical parametric-chirped pulse amplifier based on apodized aperiodically poled Mg:LiNbO<sub>3</sub>”  
*Advanced solid-state photonics (ASSP 2012)*, San Diego, California, USA, 29. Jan. – 1. Feb. 2012

C. J. Saraceno, O. H. Heckl, C. R. E. Baer, M. Golling, T. Südmeyer, U. Keller, K. Beil, C. Kränkel, K. Petermann, G. Huber  
“Power scaling of an Yb:LuScO<sub>3</sub> thin disk laser to 23 W and 235 fs”  
*SPIE Photonics West 2011*, LASE, Solid-State Lasers: Technology and Devices, Conference LA101, San Francisco, California, USA, Jan. 21-26, 2012

Z. Y. Zhang, A. Oehler, B. Resan, K. J. Zhou, M. Mangold, T. Südmeyer, U. Keller, K. J. Weingarten, R. A. Hogg  
“1.55 μm InAs/GaAs quantum dot semiconductor saturable absorber mirror”  
*SPIE Photonics West 2012*, LASE, Vertical External Surface Emitting Lasers (VECSELs), Conference LA116, San Francisco, California, USA, Jan. 21-26, 2012

M. Golling, W. P. Pallmann, C. A. Zaugg, T. Südmeyer, U. Keller  
“MBE growth of electrically pumped VECSELs”  
*SPIE Photonics West 2012*, LASE, Vertical External Surface Emitting Lasers (VECSELs), Conference LA116, San Francisco, California, USA, Jan. 21-26, 2012

V. J. Wittwer, R. van der Linden, B. Resan, K. J. Weingarten, T. Südmeyer, U. Keller  
“Sub-80-fs timing jitter of a stabilized SESAM modelocked VECSEL”  
*SPIE Photonics West 2012*, LASE, Vertical External Surface Emitting Lasers (VECSELs), Conference LA116, San Francisco, California, USA, Jan. 21-26, 2012

O. D. Sieber, V. J. Wittwer, M. Hoffmann, M. Golling, T. Südmeyer, U. Keller  
“High-average power femtosecond VECSELs with tunable repetition rates up to 10 GHz”  
*SPIE Photonics West 2012*, LASE, Vertical External Surface Emitting Lasers (VECSELs), Conference LA116, San Francisco, California, USA, Jan. 21-26, 2012

- M. Mangold, V. J. Wittwer, O. D. Sieber, M. Hoffmann, M. Golling, T. Südmeyer, U. Keller  
 “Characterization of gain parameters in quantum-dot and quantum-well based VECSEL structures”  
*SPIE Photonics West 2012*, LASE, Vertical External Surface Emitting Lasers (VECSELS), Conference LA116, San Francisco, California, USA, Jan. 21-26, 2012
- \* J. R. Orchard, D. T. D. Childs, L. C. Lin, B. J. Stevens, D. M. Williams, R. A. Hogg, M. Butkus, E. U. Rafailov, S. Gronenborn, J. Kolb, H. Moench, M. Miller, M. Hoffmann, Y. Barbarin, W. P. Pallmann, M. Golling, T. Sudmeyer, U. Keller  
 “Development of EP-VECSEL for Mode Locking Applications”  
*SPIE Photonics West 2012*, LASE, Vertical External Surface Emitting Lasers (VECSELS), Conference LA116, San Francisco, California, USA, Jan. 21-26, 2012
- \* T. Südmeyer, V. J. Wittwer, S. Pekarek, M. Hoffmann, O. D. Sieber, M. Golling, U. Keller  
 “MIXSELS for frequency combs”  
*SPIE Photonics West 2012*, LASE, Vertical External Surface Emitting Lasers (VECSELS), Conference LA116, San Francisco, California, USA, Jan. 21-26, 2012
- \* U. Keller, **Invited Tutorial Review**  
 “High-average power modelocked VECSELS and MIXSELS”  
*SPIE Photonics West 2012*, LASE, Vertical External Surface Emitting Lasers (VECSELS), Conference LA116, San Francisco, California, USA, Jan. 21-26, 2012

## 2011

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- \* A. N. Pfeiffer, C. Cirelli, M. Smolarski, D. Dimitrovski, M. Abu-samha, L. B. Madsen, U. Keller  
 “Tunneling time and geometry of strong laser-field ionization”  
*International Symposium on Ultrafast Intense Laser Science 10 (ISUILS10)*, Wartburg, Eisenach, Germany, Oct. 16-21, 2011
- \* L. Gallmann, M. Holler, F. Schapper, U. Keller  
 “Transient absorption spectroscopy with attosecond pulse trains”  
*OSA Annual Meeting, Frontiers in Optics*, Symposium on attosecond science, San Jose, California, USA, Oct. 16-20, 2011
- \* L. Gallmann, M. Holler, F. Schapper, U. Keller  
 “All-optical spectroscopy for the attosecond domain”  
*Ultraintense Laser Interaction Science (ULIS2011)*, Lisbon, Portugal, Oct. 10-13, 2011
- \* T. Südmeyer, V. J. Wittwer, B. Rudin, D. J. H. C. Maas, M. Hoffmann, O. D. Sieber, Y. Barbarin, M. Golling, U. Keller  
 “Ultrafast VECSELS and MIXSELS: gigahertz semiconductor lasers with multiwatt average power”  
*IEEE Photonics 2011*, Arlington, Virginia, USA, 9-13 Oct. 2011
- \* C. Kränkel, C. J. Saraceno, O. H. Heckl, C. R. E. Baer, M. Golling, T. Südmeyer, K. Beil, K. Petermann, G. Huber and U. Keller

“Ultrafast and high power thin disk lasers”

*2<sup>nd</sup> EOS Topical Meeting on Lasers (ETML '11)*, Capri, Italy, 26. Sept. – 28. Sept. 2011

V. J. Wittwer, S. Pekarek, M. Hoffmann, O. D. Sieber, M. Golling, T. Südmeyer, U. Keller

“Towards compact frequency combs from ultrafast VECSELS and MIXSELS” – Talk G5  
*European Semiconductor Laser Workshop (ESLW 2011)*, EPFL, Lausanne, Switzerland, Sep. 23-24, 2011

O. D. Sieber, M. Hoffmann, V. J. Wittwer, I. L. Krestnikov, S. S. Mikhrin, D. A. Livshits, M. Golling, T. Südmeyer, U. Keller

“High-power femtosecond VECSELS with up to 1-W average output power” – Talk G1  
*European Semiconductor Laser Workshop (ESLW 2011)*, EPFL, Lausanne, Switzerland, Sep. 23-24, 2011

C. A. Zaugg, W. P. Pallmann, M. Hoffmann, Y. Barbarin, M. Golling, I. Dahhan, T. Südmeyer, B. Witzigmann, U. Keller

“Recent advances in electrically pumped VECSELS for modelocking” – Poster H7  
*European Semiconductor Laser Workshop (ESLW 2011)*, EPFL, Lausanne, Switzerland, Sep. 23-24, 2011

\* U. Keller, **Invited Keynote Talk**

“Ultrafast solid-state laser technology”

*Ultrafast Optics (UFO VIII)*, Monterey, USA, Sept. 26-30, 2011

S. Pekarek, C. J. Saraceno, O. H. Heckl, C. R. E. Baer, C. Schriber, M. Golling, T. Südmeyer, K. Beil, C. Kränkel, G. Huber, U. Keller

“Self-referencable high-power frequency comb from a 7-W, 142-fs Yb:Lu<sub>2</sub>O<sub>3</sub> thin disk laser oscillator” - Postdeadline Paper  
*Ultrafast Optics (UFO VIII)*, Monterey, USA, Sept. 26-30, 2011

\* Selina Pekarek, M. C. Stumpf, C. J. Saraceno, O. H. Heckl, C. R. E. Baer, M. Golling, T. Südmeyer, U. Keller, S. Schilt, V. Dolgovskiy, N. Bucalovic, C. Schori, L. Tombez, G. Di Domenico, P. Thomann, C. Fiebig, K. Paschke, G. Erbert, S. Lecomte, S. Kundermann, J. M. Dudley

“Recent advances in frequency combs from diode-pumped solid-state lasers”

*5th International Symposium on Ultrafast Photonic Technologies (ISUPT)*, 15.-16. Sept. 2011, MMI, Berlin

M. Smolarski, A. N. Pfeiffer, C. Cirelli, R. Dörner, U. Keller

“Breakdown of the independent electron approximation in sequential double ionization: parallel versus anti-parallel emission and timing of the release” – Poster  
*International symposium on attoscience and ultrafast quantum control (SASQC11)*, Imperial College, London, Sept. 7-9, 2011

\* U. Keller

“Introduction to ultrafast VECSELS and MIXSELS”

*Summer School FastDot*, Crete, Greek, 15. – 18. Sep. 2011

\* U. Keller

“Attoclock reveals tunnel delay time and tunnel geometry in strong field ionization“  
*Studying Quantum Mechanics in the Time Domain, Nordita Program* (Nordic Institute for Theoretical Physics), Stockholm, Sweden, Aug. 22-25, 2011

- \* A. N. Pfeiffer, C. Cirelli, M. Smolarski, D. Dimitrovski, M. Abu-samha, L. B. Madsen, U. Keller  
“Attoclock reveals new insights into tunnel ionization”  
*XXVII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC XXVII)*, Belfast, Northern Ireland, United Kingdom, 27 July - 2 August, 2011

S. Schilt, N. Bucalovic, V. Dolgovskiy, C. Schori, L. Tombez, G. Di Domenico, M. C. Stumpf, S. Pekarek, A. E. H. Oehler, T. Südmeyer, U. Keller, P. Thomann,  
“Noise properties of an optical frequency comb stabilized to the  $10^{-13}$  level” – Talk and Poster  
*8<sup>th</sup> International Conference on Tunable Diode Laser Spectroscopy (TDLS)*, Zermatt, Switzerland, July 11-15, 2011

- \* T. Südmeyer, S. Pekarek, M. C. Stumpf, A. E. H. Oehler, S. Schilt, V. Dolgovskiy, N. Bucalovic, C. Schori, L. Tombez, G. Di Domenico, C. Fiebig, K. Paschke, G. Ebert, P. Thomann, U. Keller  
“Compact frequency combs”  
*20<sup>th</sup> International Laser Physics Workshop (LPHYS'11)*, Modern Trends in Laser Physics, Sarajevo, Bosnia and Herzegovina, July 11-15, 2011

- \* O. D. Sieber, M. Hoffmann, V. J. Wittwer, W. P. Pallmann, I. L. Krestnikov, S. S. Mikhirin, D. A. Livshits, M. Golling, Y. Barbarin, T. Südmeyer, U. Keller  
“Novel femtosecond semiconductor laser with more than 1 W average power”  
*20<sup>th</sup> International Laser Physics Workshop (LPHYS'11)*, Modern Trends in Laser Physics, Sarajevo, Bosnia and Herzegovina, July 11-15, 2011

- \* T. Südmeyer, V. J. Wittwer, B. Rudin, D. J. H. C. Maas, M. Hoffmann, O. D. Sieber, Y. Barbarin, M. Golling, U. Keller – **Plenary Talk**  
“The MIXSEL: an integrated ultrafast gigahertz semiconductor laser with multiwatt average output power”  
*UK semiconductor conference*, Sheffield, UK, July 6-7, 2011

L. B. Madsen, A. N. Pfeiffer, C. Cirelli, M. Smolarski, D. Dimitrovski, M. Abu-samha, U. Keller  
“Attoclock elicits physics of laser-induced tunnel ionization” – Talk A2  
*3<sup>rd</sup> International Conference on Attosecond Physics (ATTO3)*, Hokkaido University, Sapporo, Japan, July 6-8, 2011

C. Cirelli, A. N. Pfeiffer, M. Smolarski, R. Dörner, U. Keller  
“Sequential double ionization: the timing of release” – Talk E5  
*3<sup>rd</sup> International Conference on Attosecond Physics (ATTO3)*, Hokkaido University, Sapporo, Japan, July 6-8, 2011

L. Gallmann, M. Holler, F. Schapper, U. Keller  
“Electron wavepacket interference observed by attosecond transient absorption spectroscopy” – Poster P46

*3<sup>rd</sup> International Conference on Attosecond Physics (ATTO3)*, Hokkaido University, Sapporo, Japan, July 6-8, 2011

C. Cirelli, A. N. Pfeiffer, M. Smolarski, Xu Wang, J. H. Eberly, R. Dörner, U. Keller  
“Breakdown of the independent electron approximation in sequential double ionization”  
– Poster P12

*The 12<sup>th</sup> International Conference on Multiphoton Processes (ICOMP12)*, Hokkaido University, Sapporo, Japan, July 3-6, 2011

- \* A. N. Pfeiffer, C. Cirelli, M. Smolarski, R. Dörner, U. Keller  
“Sequential double ionization: the timing of release”  
*American Physical Society DAMOP annual meeting*, “hot topics” session, Atlanta, USA, June 13-17, 2011

C. J. Saraceno, O. H. Heckl, C. R. E. Baer, M. Golling, T. Südmeyer, K. Beil, C. Kränkel, K. Petermann, G. Huber, U. Keller  
“High damage threshold SESAMs for high power femtosecond modelocking: 23 W, 235 fs Yb:LuScO<sub>3</sub> thin disk laser” – **Postdeadline Paper PDA.9**  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, 22-26 May 2011

- \* U. Keller – **Plenary Talk**  
“Attosecond science: shining new light on old questions in quantum mechanics” – Talk PL 1.1  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, 22-26 May 2011

L. Gallmann, M. Holler, F. Schapper, U. Keller  
“Direct optical observation of attosecond electron wavepacket interference” – Poster CG.P.15  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, 22-26 May 2011

Claudio Cirelli, Adrian N. Pfeiffer, Mathias Smolarski, Reinhard Dörner, Ursula Keller  
“Breakdown of the Independent Electron Approximation in Sequential Double Ionization” – Talk CG1.5  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, 22-26 May 2011

C. Heese, C. R. Phillips, L. Gallmann, M. M. Fejer and U. Keller  
“High-power mid-infrared optical parametric chirped-pulse amplifier based on aperiodically poled Mg:LiNbO<sub>3</sub>” – Talk CF6.1  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, 22-26 May 2011

- C. Heese, A. E. H. Oehler, L. Gallmann, and U. Keller  
“50-MW, 12-ps Nd:YVO<sub>4</sub> slab amplifier for OPCPA pumping” – Talk CF6.1  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, 22-26 May 2011

- C. R. E. Baer, C. J. Saraceno, O. H. Heckl, M. Golling, T. Südmeyer, K. Beil, C. Kränkel, K. Petermann, G. Huber and U. Keller  
 “CW and modelocked operation of an Yb:(ScYLu)<sub>2</sub>O<sub>3</sub> thin-disk laser” – Talk CA11.3  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, 22-26 May 2011
- C. J. Saraceno, O. H. Heckl, C. R. E. Baer, T. Südmeyer, Y. Cheng, Y. Y. Wang, F. Benadbid, U. Keller  
 “High average power temporal pulse compression in a Xe-filled Kagome-type hollow-core photonic crystal fiber (HC-PCF)” – Talk CD7.1  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, 22-26 May 2011
- O. H. Heckl, C. J. Saraceno, C. R. E. Baer, T. Südmeyer, U. Keller  
 “Active rod-type fiber compressor for high-power thin disk lasers” – Talk CJ4.4  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, 22-26 May 2011
- S. Pekarek, C. Fiebig, K. Paschke, G. Erbert, T. Südmeyer, and U. Keller  
 “Octave-spanning supercontinuum from an efficient gigahertz femtosecond Yb:KGW laser with 2.2-W average power” – Talk CA11.1  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, 22-26 May 2011
- M. Hoffmann, O. D. Sieber, V. J. Wittwer, W. P. Pallmann, I. L. Krestnikov, S. S. Mikhlin, D. A. Livshits, M. Golling, Y. Barbarin, T. Südmeyer and U. Keller  
 “Femtosecond VECSELs with up to 1-W average output power” – Talk CB10.2  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, 22-26 May 2011
- V. J. Wittwer, B. Rudin, D. J. H. C. Maas, M. Hoffmann, O. D. Sieber, Y. Barbarin, M. Golling, T. Südmeyer, U. Keller  
 “10-GHz MIXSEL: a high power integrated ultrafast semiconductor disk laser” – Talk CB10.4  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, 22-26 May 2011
- V. J. Wittwer, C. A. Zaugg, W. P. Pallmann, A. E. H. Oehler, B. Rudin, M. Hoffmann, M. Golling, Y. Barbarin, T. Südmeyer, U. Keller  
 “Free-running quantum dot SESAM modelocked VECSEL with record-low timing jitter” – Poster CB.P.29  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, 22-26 May 2011
- S. Schilt, V. Dolgovskiy, N. Bucalovic, L. Tombez, M. C. Stumpf, G. Di Domenico, C. Schori, S. Pekarek, A. E. H. Oehler, T. Südmeyer, U. Keller, and P. Thomann  
 “Low-noise near infrared optical frequency comb from a femtosecond diode-pumped solid-state laser” – Poster EG.P.5  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, 22-26 May 2011

- \* T. Südmeyer, V. J. Wittwer, B. Rudin, D. J. H. C. Maas, M. Hoffmann, O. D. Sieber, Y. Barbarin, M. Golling, U. Keller  
 “The MIXSEL: an integrated ultrafast gigahertz semiconductor laser with multiwatt average output power”  
*Photonics North 2011*, Optoelectronics and Integrated Devices and Networks Session, Ottawa, Canada, May 16-18, 2011
- O. H. Heckl, C. J. Saraceno, C. R. E. Baer, T. Südmeyer, Y. Chang, Y. Y. Wang, F. Benabid, U. Keller  
 “Temporal pulse compression in a Xe-filled Kagome-type hollow core photonic crystal fiber at high average power” – Talk CMJ1  
*CLEO 2011, Laser Science to Photonics Applications*, Baltimore, Maryland, USA, May 1-6, 2011
- C. J. Saraceno, O. H. Heckl, C. R. E. Baer, M. Golling, T. Südmeyer, K. Beil, C. Kränkel, K. Petermann, G. Huber and U. Keller  
 “CW and modelocked operation of an Yb:(ScYLu)<sub>2</sub>O<sub>3</sub> thin-disk laser” – Talk CWP1  
*CLEO 2011, Laser Science to Photonics Applications*, Baltimore, Maryland, USA, May 1-6, 2011
- C. J. Saraceno, C. Schriber, M. Mangold, O. H. Heckl, C. R. E. Baer, M. Golling, T. Südmeyer and U. Keller  
 “SESAMs for high power oscillators: damage thresholds and design guidelines” – Talk CFO1  
*CLEO 2011, Laser Science to Photonics Applications*, Baltimore, Maryland, USA, May 1-6, 2011
- O. D. Sieber, M. Hoffmann, V. J. Wittwer, W. P. Pallmann, I. L. Krestnikov, S. S. Mikhlin, D. A. Livshits, M. Golling, Y. Barbarin, T. Südmeyer and U. Keller  
 “Femtosecond VECSELs with up to 1-W average output power” – Talk CThG4  
*CLEO 2011, Laser Science to Photonics Applications*, Baltimore, Maryland, USA, May 1-6, 2011
- V. J. Wittwer, B. Rudin, D. J. H. C. Maas, M. Hoffmann, O. D. Sieber, Y. Barbarin, M. Golling, T. Südmeyer, U. Keller  
 “10-GHz MIXSEL: an integrated ultrafast semiconductor disk laser with 2.2-W average power” – Talk CThG5  
*CLEO 2011, Laser Science to Photonics Applications*, Baltimore, Maryland, USA, May 1-6, 2011
- S. Pekarek, C. Fiebig, K. Paschke, G. Erbert, T. Südmeyer, and U. Keller  
 “Efficient gigahertz femtosecond Yb:KGW laser with 2.2 W average power generates octave-spanning supercontinuum” – Talk CThBB6  
*CLEO 2011, Laser Science to Photonics Applications*, Baltimore, Maryland, USA, May 1-6, 2011
- Adrian N. Pfeiffer, Claudio Cirelli, Mathias Smolarski, Xu Wang, Joseph H. Eberly, Reinhard Dörner, Ursula Keller

“Breakdown of the Independent Electron Approximation in Sequential Double Ionization” – Talk QMF2  
*CLEO 2011, Laser Science to Photonics Applications*, Baltimore, Maryland, USA, May 1-6, 2011

C. Heese, A. E. H. Oehler, L. Gallmann, and U. Keller  
“50-MW, 12-ps Nd:YVO<sub>4</sub> slab amplifier for OPCPA pumping” – Talk CWG4  
*CLEO 2011, Laser Science to Photonics Applications*, Baltimore, Maryland, USA, May 1-6, 2011

C. Heese, L. Gallmann, and U. Keller, C. R. Phillips and M. M. Fejer  
“High-power mid-infrared optical parametric chirped-pulse amplifier based on aperiodically poled Mg:LiNbO<sub>3</sub>” – Talk CMR5  
*CLEO 2011, Laser Science to Photonics Applications*, Baltimore, Maryland, USA, May 1-6, 2011

S. Schilt, V. Dolgovskiy, N. Bucalovic, L. Tombez, M. C. Stumpf, G. Di Domenico, C. Schori, S. Pekarek, A. E. H. Oehler, T. Südmeyer, U. Keller, and P. Thomann  
“Optical frequency comb with sub-radian CEO phase noise from a SESAM-modelocked 1.5- $\mu$ m solid-state laser” – Talk CFK3  
*CLEO 2011, Laser Science to Photonics Applications*, Baltimore, Maryland, USA, May 1-6, 2011

S. Schilt, V. Dolgovskiy, N. Bucalovic, C. Schori, L. Tombez, G. Di Domenico, M. C. Stumpf, S. Pekarek, A. E. H. Oehler, T. Südmeyer, U. Keller, P. Thomann  
“Low-noise near-infrared optical frequency comb from a solid-state femtosecond laser” – Talk Paper Nr.  
*2011 Joint Conference of the IEEE International Frequency Control Symposium and European Frequency and Time Forum (IFCS/EFTF 2011)*, Hyatt Regency Hotel, San Francisco, CA, USA, May 1-5, 2011

M. Golling, B. Rudin, V. J. Wittwer, D. J. H. C. Maas, Y. Barbarin, M. Hoffmann, O. D. Sieber, T. Südmeyer, U. Keller  
“MBE growth of high power Modelocked Integrated External-Cavity Surface Emitting Laser (MIXSEL) with 6.4 W output power”  
*Euro-MBE 2011, 16<sup>th</sup> European Molecular Beam Epitaxy Workshop*, Alpe d’Huez, France, March 20-23, 2011

\* T. Südmeyer, C. R. E. Bär, C. Kränkel, C. J. Saraceno, O. H. Heckl, M. Golling, R. Peters, K. Petermann, G. Huber, U. Keller  
“Power scaling of femtosecond thin disk lasers”  
*Advanced Solid-State Photonics (ASSP’11)*, Istanbul, Turkey, Feb. 13-16, 2011

R. Aviles-Espinosa, G. Filippidis, C. Hamilton, G. Malcolm, T. Südmeyer, Y. Barbarin, U. Keller, D. Artigas, P. Loza-Alvarez  
“Compact ultrafast semiconductor disk laser for nonlinear imaging in living organisms”  
*SPIE Photonics West 2011, BiOS, Conference on Multiphoton Microscopy in the Biomedical Sciences XI*, San Francisco, California, USA, Jan 22-27, 2011

C. Fiebig, S. Pekarek, K. Paschke, M. Uebernickel, T. Südmeyer, U. Keller, G. Erbert

“High-brightness distributed-bragg-reflector tapered diode lasers: pushing your application to the next level”  
*SPIE Photonics West 2011*, LASE, High-Power Diode Laser Technology and Applications IX, Conference LA107, San Francisco, California, USA, Jan 22-27, 2011

M. Golling, Y. Barbarin, T. Südmeyer, U. Keller  
“MBE growth challenges of quantum dot saturable absorbers integration into a MIXSEL”  
*SPIE Photonics West 2011*, LASE, Vertical External Surface Emitting Lasers (VECSELS), Conference LA116, San Francisco, California, USA, Jan 22-27, 2011

M. Hoffmann, O. D. Sieber, W. P. Pallmann, V. J. Wittwer, Y. Barbarin, T. Südmeyer, U. Keller, I. L. Krestnikov, S. S. Mikhlin, D. A. Livshits, G. Malcolm, C. Hamilton  
“All quantum-dot based femtosecond VECSEL”  
*SPIE Photonics West 2011*, LASE, Vertical External Surface Emitting Lasers (VECSELS), Conference LA116, San Francisco, California, USA, Jan 22-27, 2011

O. D. Sieber, M. Hoffmann, V. J. Wittwer, W. P. Pallmann, Y. Barbarin, M. Golling, T. Südmeyer, U. Keller  
“Scaling high-power ultrafast VECSELS into the femtosecond regime”  
*SPIE Photonics West 2011*, LASE, Vertical External Surface Emitting Lasers (VECSELS), Conference LA116, San Francisco, California, USA, Jan 22-27, 2011

V. J. Wittwer, W. P. Pallmann, A. E. H. Oehler, B. Rudin, M. Golling, Y. Barbarin, T. Südmeyer, U. Keller  
“Timing jitter characterization of a quantum dot SESAM modelocked VECSEL”  
*SPIE Photonics West 2011*, LASE, Vertical External Surface Emitting Lasers (VECSELS), Conference LA116, San Francisco, California, USA, Jan 22-27, 2011

W.P. Pallmann, M. Hoffmann, M. Miller, J. Baier, H. Moench, I. Dahhan, B. Witzigmann, M. Golling, Y. Barbarin, T. Südmeyer and U. Keller  
“Beam quality optimization of electrically pumped VECSELS for passive modelocking”  
*SPIE Photonics West 2011*, LASE, Vertical External Surface Emitting Lasers (VECSELS), Conference LA116, San Francisco, California, USA, Jan 22-27, 2011

- \* T. Südmeyer  
“Power scaling of the MIXSEL: an integrated picosecond semiconductor laser with >6 W average power”  
*SPIE Photonics West 2011*, LASE, Vertical External Surface Emitting Lasers (VECSELS), Conference LA116, San Francisco, California, USA, Jan 22-27, 2011
- \* Y. Barbarin  
“Recent advances in electrically pumped VECSELS for modelocking”  
*SPIE Photonics West 2011*, LASE, Vertical External Surface Emitting Lasers (VECSELS), Conference LA116, San Francisco, California, USA, Jan 22-27, 2011
- \* T. Südmeyer, C.R.E. Baer, C. Kränkel, C.J. Saraceno, O.H. Heckl, M. Golling, R. Peters, K. Petermann, G. Huber, and U. Keller  
“Yb-doped ultrafast thin disk lasers”  
*SPIE Photonics West 2011*, LASE, Solid-State Lasers XX: Technology and Devices (Conference LA101), San Francisco, California, USA, Jan 22-27, 2011

S. Schilt, M. C. Stumpf, L. Tombez, N. Bucalovic, V. Dolgoviskiy, G. Di Domenico, D. Hofstetter, S. Pekarek, A. E. H. Oehler, T. Südmeyer, U. Keller, P. Thomann  
“Phase noise characterization of a near-infrared solid-state laser optical frequency comb for ultra-stable microwave generation”  
*Optical Clocks: a new frontier in high accuracy metrology (OC 2010)*, Torino, Italy, Dec. 1-3, 2010

\* U. Keller  
“Attoclock: a new technique to measure attosecond dynamics in strong field ionization”  
*2010 Symposium on chirped pulse amplification (CPA) to celebrate 50 years of laser and 25 years of CPA*, Laval University, Quebec City, Canada, Nov. 17-21, 2010

\* U. Keller  
“Progress and prospects of high-power ultrafast lasers at gigahertz repetition rates”  
*Ultrafast Optoelectronics: Past, Present & Future, A Celebration of David Auston’s 70<sup>th</sup>*, University of California Santa Barbara, USA, Nov. 11, 2010

\* U. Keller – **Keynote Talk**  
“MIXSEL: a novel ultrafast semiconductor laser with multi-Watt average output power”  
*HSSL - International Workshop on high speed semiconductor lasers*, Wroclaw, Poland, Oct. 7-8, 2010

\* B. Rudin, M. Hoffmann, V. J. Wittwer, W. P. Pallmann, M. Golling, Y. Barbarin, T. Südmeyer, U. Keller  
“Ultrafast semiconductor lasers in the thin disk geometry” – invited talk TuF2  
*Latin America Optics and Photonics Conference (LAOP 2010)*, Recife, Brazil, Sept. 27-30, 2010

Y. Barbarin, W. P. Pallmann, M. Hoffmann, I. Dahhan, P. Kreuter, M. Golling, T. Südmeyer, B. Witzigmann, U. Keller  
“Electrically-pumped VECSELs suitable for passive modelocking: design, simulation and characterization in continuous wave” – Talk WC7  
*International semiconductor laser conference 2010*, Kyoto, Japan, Sept. 26-30, 2010

\* U. Keller – **Keynote Talk**  
“Ultrafast high power laser oscillators in the thin disk geometry”  
*6<sup>th</sup> International Conference on Laser Assisted Net Shape Engineering (LANE 2010)*, Erlangen, Germany, Sept. 21-24, 2010

C. R. E. Baer, C. Kränkel, C. J. Saraceno, O. H. Heckl, M. Golling, T. Südmeyer, U. Keller, R. Peters, K. Petermann, G. Huber  
“Efficient femtosecond Yb:Lu<sub>2</sub>O<sub>3</sub> thin disk laser with an average power of 141 W”  
*6<sup>th</sup> International Conference on Laser Assisted Net Shape Engineering (LANE 2010)*, Erlangen, Germany, Sept. 21-24, 2010

V. J. Wittwer, B. Rudin, D. J. H. C. Maas, O. D. Sieber, M. Hoffmann, Y. Barbarin, M. Golling, T. Südmeyer, U. Keller  
“High power MIXSEL: picosecond pulses with 4 W average power from an integrated ultrafast semiconductor disk laser”  
*6<sup>th</sup> International Conference on Laser Assisted Net Shape Engineering (LANE 2010)*, Erlangen, Germany, Sept. 21-24, 2010

W. P. Pallmann, M. Hoffmann, V. J. Wittwer, B. Rudin, P. Kreuter, B. Witzigmann, M. Golling, Y. Barbarin, T. Südmeyer, U. Keller  
“Novel ultrafast vertically emitting semiconductor lasers” – Poster P2.10  
*36<sup>th</sup> European Conference on Optical Communication 2010 (ECOC 2010)*, Torino, Italy, Sept. 19-23, 2010

A. E. H. Oehler, T. Südmeyer, K. J. Weingarten, U. Keller  
“100-GHz, 1.1-ps pulse train at 1.5  $\mu\text{m}$  from a passively modelocked Er:Yb:glass laser” – Talk We.7.E.4  
*36<sup>th</sup> European Conference on Optical Communication 2010 (ECOC 2010)*, Torino, Italy, Sept. 19-23, 2010

\* T. Südmeyer, S. Pekarek, C. Fiebig, M. C. Stumpf, A. E. H. Oehler, K. Paschke, G. Erbert, and U. Keller,  
"Diode-pumped gigahertz femtosecond Yb:KGW laser"  
*European Workshop on Double Tungstate Lasers*, Hamburg, Germany, Sept  
Institute of Laser-Physics, University of Hamburg, Germany, September 3, 2010

M. Hoffmann, O. D. Sieber, W. P. Pallmann, V. J. Wittwer, Y. Barbarin, T. Südmeyer, U. Keller, I. L. Krestnikov, S. S. Mikhlin, D. A. Livshits, G. Malcolm, C. Hamilton  
“All quantum-dot based femtosecond VECSEL” – Postdeadline paper TuE3  
*4th EPS-QEOD Europhoton Conference*, Hamburg, Aug. 29 – Sept. 3, 2010

C. Kränkel, O. H. Heckl, R. Peters, C. R. E. Baer, C. J. Saraceno, K. Beil, T. Südmeyer, U. Keller, K. Petermann, G. Huber  
“High power Yb-doped thin disk lasers pumped with a volume Bragg grating stabilized laser diode at the zero-phonon line” - Poster  
*4th EPS-QEOD Europhoton Conference*, Hamburg, Aug. 29 – Sept. 3, 2010

V. J. Wittwer, B. Rudin, D. J. H. C. Maas, M. Hoffmann, O. D. Sieber, Y. Barbarin, M. Golling, T. Südmeyer, U. Keller  
“MIXSEL: an integrated passively modelocked external-cavity semiconductor laser with 6.4 W average power” – Talk ThD1  
*4th EPS-QEOD Europhoton Conference*, Hamburg, Aug. 29 – Sept. 3, 2010

C. R. E. Baer, C. Kränkel, O. H. Heckl, C. J. Saraceno, M. Golling, R. Peters, K. Petermann, T. Südmeyer, G. Huber, U. Keller  
“Modelocked Yb:Lu<sub>2</sub>O<sub>3</sub> thin disk laser with an average power of 140 W” – Talk TuA2  
*4th EPS-QEOD Europhoton Conference*, Hamburg, Aug. 29 – Sept. 3, 2010

C. J. Saraceno, C. Schriber, M. Mangold, M. Hoffmann, O. H. Heckl, C. R. E. Baer, M. Golling, T. Südmeyer, U. Keller

“Low-loss, high-damage threshold SESAMs for high pulse energy oscillators” – Talk TuC5  
*4th EPS-QEOD Europhoton Conference*, Hamburg, Aug. 29 – Sept. 3, 2010

- \* A. N. Pfeiffer, C. Cirelli, M. Smolarski, M. Abu-Samha, D. Dimitrovski, L. B. Madsen, U. Keller

“Attosecond dynamics and Coulomb corrections in strong laser field ionization”  
*Ultrafast Atomic Physics – Towards the Zeptosecond Regime*, 463. *WE-Heraeus-Seminar*, Physikzentrum Bad Honnef, near Bonn, Germany, Aug. 19-22, 2010

A. N. Pfeiffer, C. Cirelli, M. Smolarski, R. Dörner, U. Keller

“Electron release times in double ionization by elliptically polarized laser pulses” – Poster

*Ultrafast Atomic Physics – Towards the Zeptosecond Regime*, 463. *WE-Heraeus-Seminar*, Physikzentrum Bad Honnef, near Bonn, Germany, Aug. 19-22, 2010

- \* U. Keller

“Advances in Ultrafast Laser Sources” – 3 lectures

*International Summer School in Ultrafast Nonlinear Optics 2010 (SUSSP 66)*, Heriot-Watt University, Edinburgh, Scotland, 11-21 Aug. 2010

- \* P. Eckle, A. N. Pfeiffer, C. Cirelli, A. Staudte, R. Dörner, H. G. Müller, U. Keller  
“Attosecond angular streaking and tunneling delay time in strong laser field ionization” – Invited Talk FB1

*17<sup>th</sup> International Conference on Ultrafast Phenomena 2010 (UP 2010)*, Snowmass Village, Colorado, USA, July 18-23, 2010

F. Schapper, M. Holler, P. Riviere, L. Gallmann, U. Saalmann, J.-M. Rost, U. Keller

“Attosecond transient absorption around the ionization threshold of helium” – Talk ThA3

*17<sup>th</sup> International Conference on Ultrafast Phenomena 2010 (UP 2010)*, Snowmass Village, Colorado, USA, July 18-23, 2010

M. Holler, F. Schapper, T. Remetter, L. Gallmann, U. Keller

“Harmonic continua by chirp assisted polarization gating” – Poster ME29

*17<sup>th</sup> International Conference on Ultrafast Phenomena 2010 (UP 2010)*, Snowmass Village, Colorado, USA, July 18-23, 2010

A. N. Pfeiffer, C. Cirelli, M. Smolarski, U. Keller, R. Dörner

“Electron release times in double ionization by elliptically polarized laser pulses” – Poster ME36

*17<sup>th</sup> International Conference on Ultrafast Phenomena 2010 (UP 2010)*, Snowmass Village, Colorado, USA, July 18-23, 2010

C. Heese, C. R. Phillips, L. Gallmann, M. M. Fejer, U. Keller

“Ultrabroadband optical parametric chirped pulse amplifier in the mid-infrared using aperiodically poled Mg:LiNbO<sub>3</sub>” – Poster TuE27

*17<sup>th</sup> International Conference on Ultrafast Phenomena 2010 (UP 2010)*, Snowmass Village, Colorado, USA, July 18-23, 2010

- \* C. Kränkel, C. R. E. Baer, O. H. Heckl, C. J. Saraceno, K. Beil, M. Golling, K. Petermann, G. Huber, T. Südmeyer, U. Keller  
 “Record high output powers from modelocked and continuous wave Yb:Lu<sub>2</sub>O<sub>3</sub> thin disk lasers”  
*International Laser Physics Workshop 2010 (LPHYS'10), Seminar on Modern Trends in Laser Physics*, Foz do Iguacu, Brazil, July 5 - 9, 2010
  
- \* T. Südmeyer, V. J. Wittwer, B. Rudin, D. J. H. C. Maas, M. Hoffmann, O. D. Sieber, Y. Barbarin, M. Golling, U. Keller  
 “High power MIXSEL: 6.4 W average power from an ultrafast semiconductor laser”  
*International Laser Physics Workshop 2010 (LPHYS'10), Seminar on Modern Trends in Laser Physics*, Foz do Iguacu, Brazil, July 5 - 9, 2010
  
- \* L. Gallmann, F. Schapper, M. Holler, P. Riviere, U. Saalman, J. M. Rost, U. Keller  
 “Resolving attosecond dynamics around the ionization threshold of helium by XUV transient absorption”  
*International Laser Physics Workshop 2010 (LPHYS'10), Seminar on Nonlinear Optics and Spectroscopy*, Foz do Iguacu, Brazil, July 5 - 9, 2010
  
- C. Cirelli, A. N. Pfeiffer, M. Smolarski, U. Keller  
 “Breakdown of the semi-classical picture in strong-field ionization“ – Poster  
*10<sup>th</sup> European Conference on Atoms, Molecules and Photons (ECAMP)*, Salamanca, Spain, July 4-9, 2010
  
- P. Riviere, U. Saalman, J.-M. Rost, F. Schapper, M. Holler, L. Gallmann, U. Keller  
 “Attosecond transient absorption around the ionization threshold of Helium“  
*10<sup>th</sup> European Conference on Atoms, Molecules and Photons (ECAMP)*, Salamanca, Spain, July 4-9, 2010
  
- \* T. Südmeyer, C.R.E. Baer, C. Kränkel, C.J. Saraceno, O.H. Heckl, M. Golling, R. Peters, K. Petermann, G. Huber, and U. Keller,  
 "Recent advances in high power ultrafast thin disk laser oscillators",  
*14th International Conference "Laser Optics 2010"*, St.Petersburg, Russia, June 28 - July 02, 2010.
  
- \* U. Keller  
 “Attosecond ionization dynamics in high field laser physics”  
*CECAM conferenece on Advances in Strong-Field and Attosecond Physics*, University College London, London, June 23-25, 2010
  
- \* U. Keller – **Keynote Talk**  
 “High average power ultrafast diode-pumped solid-state laser oscillators: current status and future trends”  
*Stuttgarter Lasertage 2010 (SLT 2010)*, Stuttgart, Germany, June 8-10, 2010
  
- \* T. Südmeyer, C. R. E. Baer, C. Kränkel, C. J. Saraceno, O. H. Heckl, M. Golling, R. Peters, K. Petermann, G. Huber, U. Keller  
 “Recent advances in high power ultrafast thin disk laser oscillators”  
*Stuttgarter Lasertagen 2010 (SLT 2010)*, Stuttgart, Germany, June 8-10, 2010

C. Kränkel, R. Peters, O. H. Heckl, C. R. E. Baer, C. J. Saraceno, K. Beil, T. Südmeyer, K. Petermann, U. Keller, G. Huber  
“Yb-doped sesquioxide thin disk lasers exceeding 300 W of output power in continuous-wave operation” – Talk CTuQQ2 (Tuesday 5:45 pm)  
*Conference on Lasers and Electro-Optics (CLEO 2010)*, San Jose, USA, May 16 -21, 2010

C. J. Saraceno, C. R. E. Baer, C. Kränkel, O. H. Heckl, M. Golling, T. Südmeyer, U. Keller, R. Peters, K. Petermann, G. Huber  
“120 W average power from a modelocked Yb:Lu<sub>2</sub>O<sub>3</sub> thin disk laser” – Talk CThA4 (Thursday 9 am)  
*Conference on Lasers and Electro-Optics (CLEO 2010)*, San Jose, USA, May 16 -21, 2010

C. J. Saraceno, O. H. Heckl, C. R. E. Baer, C. Kränkel, T. Südmeyer, U. Keller  
“Pulse compression of a high power modelocked thin disk oscillator using a rod-type fiber amplifier” – Oral Talk CFD2 (Friday 8:15 am)  
*Conference on Lasers and Electro-Optics (CLEO 2010)*, San Jose, USA, May 16 -21, 2010

O. H. Heckl, C. R. Kränkel, C. R. E. Baer, C. J. Saraceno, T. Südmeyer, K. Petermann, G. Huber, U. Keller  
“Power scaling of an Yb:YCOB thin disk laser to 101 W cw and initial modelocking experiments” – Oral Talk CThA5 (Thursday 9:15 am)  
*Conference on Lasers and Electro-Optics (CLEO 2010)*, San Jose, USA, May 16 -21, 2010

B. Rudin, V. J. Wittwer, D. J. H. C. Maas, Y. Barbarin, M. Golling, T. Südmeyer, U. Keller  
“Modelocked integrated external-cavity surface emitting laser (MIXSEL) with output power up to 660 mW and repetition rate up to 10 GHz” – Oral Talk CMY6 (Monday 2:45 pm)  
*Conference on Lasers and Electro-Optics (CLEO 2010)*, San Jose, USA, May 16 -21, 2010

M. Hoffmann, Y. Barbarin, W. P. Pallmann, D. J. H. C. Maas, P. Kreuter, B. Witzigmann, M. Golling, T. Südmeyer, U. Keller  
“Simulation, design, and characterization of electrically pumped VECSELs for future passive modelocking” – Oral Talk CMY5 (Monday 2:30 pm)  
*Conference on Lasers and Electro-Optics (CLEO 2010)*, San Jose, USA, May 16 -21, 2010

M. C. Stumpf, S. Pekarek, A. E. H. Oehler, T. Südmeyer, J. M. Dudley, U. Keller  
“First fully stabilized frequency comb from a SESAM-modelocked 1.5- $\mu$ m solid-state oscillator” – Oral Talk CMX5 (Monday 2:30 pm)  
*Conference on Lasers and Electro-Optics (CLEO 2010)*, San Jose, USA, May 16 -21, 2010

S. Pekarek, C. Fiebig, M. C. Stumpf, A. E. H. Oehler, K. Paschke, G. Ebert, T. Südmeyer, U. Keller

“First SESAM-modelocked Yb:KGW femtosecond oscillator operating at 1 GHz repetition rate” – Oral Talk CThI1 (Thursday, 10:30 am)  
*Conference on Lasers and Electro-Optics (CLEO 2010)*, San Jose, USA, May 16 -21, 2010

- \* C. Heese, L. Gallmann, U. Keller, C. R. Phillips, M. M. Fejer  
“Ultra-broadband optical parametric chirped-pulse amplifier based on aperiodically poled Mg:LiNbO<sub>3</sub> in the mid-infrared” – upgraded to an invited talk CWH3 (Wednesday 2 pm)  
*Conference on Lasers and Electro-Optics (CLEO 2010)*, San Jose, USA, May 16 -21, 2010

C. R. Phillips, M. M. Fejer, C. Heese, L. Gallmann, U. Keller  
“Aperiodic quasi-phase-matched gratings for efficient and broadband optical parametric chirped pulse amplification” – Oral Talk CTuGG4  
*Conference on Lasers and Electro-Optics (CLEO 2010)*, San Jose, USA, May 16 -21, 2010

Y. Barbarin  
“Simulation, design, and characterization of electrically pumped VECSELs for future passive modelocking”  
*VCSEL day 2010*, IEIIT – CNR, Politecnico di Torino, 7. May, 2010

- \* M. C. Stumpf, S. Pekarek, A. E. H. Oehler, T. Südmeyer, J. M. Dudley, U. Keller  
“First fully stabilized frequency comb from a SESAM-modelocked 1.5- $\mu$ m solid-state oscillator”  
*24<sup>th</sup> European Frequency and Time Forum (EFTF 2010)*, ESA/ESTEC, Noordwijk, The Netherlands, April 13-16, 2010

- \* U. Keller – **Plenary Talk**  
“From picosecond to attosecond pulse generation”  
*SPIE Photonics Europe 2010 (EPE10)*, Advancing the Laser: 50 Years and into the Future, Brussels, Belgium, 12-16. April 2010

- \* U. Keller – **Luncheon Talk for SPIE Fellows**  
“The MIXSEL: a novel ultrafast semiconductor laser with multi-Watt average output power”  
*SPIE Photonics Europe 2010 (EPE10)*, Brussels, Belgium, 12-16. April 2010

- \* U. Keller  
“A new class of ultrafast semiconductor lasers for optical clocking applications”  
*Workshop on Development and Simulation of Advanced Laser Systems, The Erlangen Graduate School in Advanced Optical Technologies (SAOT)*, Erlangen, Germany, April 19-20, 2010

W. P. Pallmann, Y. Barbarin, M. Hoffmann, P. Kreuter, B. Witzigmann, M. Golling, T. Südmeyer, U. Keller  
“Design and continuous-wave characterization of electrically pumped VECSELs suitable for passive modelocking” – Poster presentation

15<sup>th</sup> European Conference on Integrated Optics (ECIO 2010) and 2nd European Photonic Integration Forum of the ePIXnet platform, Cambridge, United Kingdom, April 7-9, 2010

\* U. Keller – **Plenary Talk**

“Attosecond electron dynamics in high harmonic generation and laser induced tunneling ionization”

*Verhandlungen der Deutschen Physikalischen Gesellschaft (DPG-Tagung)*, Sektion AMOP der DPG, Hannover, March 8-12, 2010

T. Südmeyer, M. C. Stumpf, S. Pekarek, A. E. H. Oehler, C. Fiebig, K. Paschke, G. Erbert, J. M. Dudley and U. Keller

“Ultrafast solid-state lasers for frequency comb stabilization”

*Verhandlungen der Deutschen Physikalischen Gesellschaft (DPG-Tagung)*, Sektion AMOP der DPG, Hannover, March 8-12, 2010

T. Südmeyer, B. Rudin, V. J. Wittwer, D. J. H. C. Maas, Y. Barbarin, M. Golling, U. Keller

“Modelocked integrated external-cavity surface emitting laser (MIXSEL) with output power up to 660 mW and repetition rate up to 10 GHz”

*Verhandlungen der Deutschen Physikalischen Gesellschaft (DPG-Tagung)*, Sektion AMOP der DPG, Hannover, March 8-12, 2010

C. Kränkel, C. Bär, O. H. Heckl, C. J. Saraceno, K. Beil, R. Peters, M. Golling, T. Südmeyer, K. Petermann, G. Huber, U. Keller

“Yb:Lu<sub>2</sub>O<sub>3</sub>-Scheibenlaser mit 120 W in 800-fs Pulsen und 301 W im cw-Betrieb”

*Verhandlungen der Deutschen Physikalischen Gesellschaft (DPG-Tagung)*, Sektion AMOP der DPG, Hannover, March 8-12, 2010

C. Heese, L. Gallmann, U. Keller, C. R. Phillips, M. M. Fejer

“Ultra-broadband optical parametric chirped-pulse amplifier based on aperiodically poled Mg:LiNbO<sub>3</sub> in the mid-infrared at high repetition rates” – Talk AME4

*Advanced Solid-State Photonics (ASSP'10)*, San Diego, USA, Feb. 1-3, 2010

(\* C. R. E. Bär, C. Kränkel, C. J. Saraceno, O. H. Heckl, M. Golling, T. Südmeyer, U. Keller, R. Peters, K. Petermann, G. Huber – *upgraded to invited talk by joining two papers (rejected invitation to keep student participation possible)* – Talk AMD2

“Efficient modelocked Yb:Lu<sub>2</sub>O<sub>3</sub> thin disk laser with an average power of 103 W”

*Advanced Solid-State Photonics (ASSP'10)*, San Diego, USA, Feb. 1-3, 2010

O. H. Heckl, R. Peters, C. Kränkel, C. R. E. Baer, C. J. Saraceno, T. Südmeyer, K. Petermann, U. Keller, G. Huber

“Continuous-wave Yb-doped sesquioxide thin disk lasers with up to 300 W output power and 74% efficiency” – Talk AMD1

*Advanced Solid-State Photonics (ASSP'10)*, San Diego, USA, Feb. 1-3, 2010

V. J. Wittwer, B. Rudin, D. J. H. C. Maas, Y. Barbarin, M. Hoffmann, M. Golling, T. Südmeyer, U. Keller

“Modelocked integrated external-cavity surface emitting laser (MIXSEL) generates 660 mW average power in 23-ps pulses at 3 GHz repetition rate” – Talk ATuB7

*Advanced Solid-State Photonics (ASSP'10)*, San Diego, USA, Feb. 1-3, 2010

O. D. Sieber, M. Hoffmann, D. J. H. C. Maas, V. J. Wittwer, M. Golling, T. Südmeyer, U. Keller – Poster AMB26

“Experimental confirmation of quasi-soliton pulse formation in ultrafast VECSELs”  
*Advanced Solid-State Photonics (ASSP'10)*, San Diego, USA, Feb. 1-3, 2010

S. Pekarek, M. C. Stumpf, A. E. H. Oehler, T. Südmeyer, J. M. Dudley, U. Keller  
“First CEO frequency measurement of a SESAM-modelocked 1.5- $\mu\text{m}$  solid-state laser oscillator” – Talk AWC1

*Advanced Solid-State Photonics (ASSP'10)*, San Diego, USA, Feb. 1-3, 2010

## 2009

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- \* U. Keller  
“Attosecond dynamics in laser induced ionization”  
*LBNL workshop on the future of ultrafast soft-X-ray science*, Berkeley, USA, Dec. 1-3, 2009
  
- P. Riviere, U. Saalman, M. Holler, F. Schapper, L. Gallmann, U. Keller, J.-M. Rost  
“Transient absorption of high order harmonics from attosecond pulse trains” – Poster  
*International workshop on atomic physics: ultrafast dynamics in finite and molecular systems probed with novel light sources*, Dresden, Germany, Nov. 23-27, 2009  
<http://www.mpipks-dresden.mpg.de/~atom2009/>
  
- \* U. Keller – **Plenary Talk**  
“Laser induced electron tunnel ionization: instantaneous or invalid concept?”  
*DPG-Deutsche Physikerinnentagung 2009*, Frankfurt am Main, Deutschland, 5.-8. Nov. 2009
  
- \* U. Keller – **Plenary Talk**  
“From femtosecond to attosecond optics”  
*The 22nd Annual Meeting of The IEEE Lasers & Electro-Optics Society (IEEE LEOS 2009)*, Belek-Antalya, Turkey, 4 - 8 October 2009
  
- \* U. Keller  
“Ultrafast semiconductor thin disk lasers: power scaling, wafer integration concept and optical versus electrical pumping”  
*The 22nd Annual Meeting of The IEEE Lasers & Electro-Optics Society (IEEE LEOS 2009)*, Belek-Antalya, Turkey, 4 - 8 October 2009
  
- \* T. Südmeyer, C. R. E. Baer, C. Kränkel, O. H. Heckl, C. J. Saraceno, M. Golling, R. Peters, K. Petermann, G. Huber and U. Keller  
“High power femtosecond thin disk lasers”  
*17th International Conference on Advanced Laser Technologies (ALT-2009)*, Antalya, Turkey, Sept. 26-Oct. 1, 2009
  
- \* L. Gallmann, M. Holler, A. Zair, F. Schapper, T. Auguste, E. Cormier, A. Wyatt, A. Monmayrant, I. A. Walmsley, P. Salières, U. Keller

“Quantum path interferences in high harmonic generation: spatial structure and spectral signature of ionization effects”

*Ultrafast and Nonlinear Optics (UFNO'09)*, Sofia, Bulgaria, Sept. 14-18, 2009

\* U. Keller

“Modelocked integrated external-cavity surface emitting laser (MIXSEL) - a new class of ultrafast semiconductor lasers”

*Photonics Ireland 2009*, Kinsale, County Cork, Ireland, Sept. 14-16, 2009

\* U. Keller

“Attosecond dynamics in laser induced ionization”

*International Conference on Quantum, Atomic, Molecular and Plasma Physics (QuAMP09)*, Leeds, UK, Sept. 7-11, 2009

L. Gallmann, C. Erny, C. Heese, U. Keller

“High-repetition-rate optical parametric chirped pulse amplifier producing 1- $\mu$ J, sub-100-fs pulses in the mid-infrared”

*Ultrafast Optics and High Field Short Wavelength (UFO VII & HFSW XIII 2009)*, Arcachon, France, Aug. 31 – Sept. 4, 2009

E. Mansten, J. M. Dahlström, J. Mauritsson, T. Ruchon, A. L'Huillier, J. Tate, M. B. Gaarde, P. Eckle, A. Guandalini, M. Holler, F. Schapper, L. Gallmann, U. Keller

“Spectral signature of short attosecond pulse trains” - Poster

*Ultrafast Optics and High Field Short Wavelength (UFO VII & HFSW XIII 2009)*, Arcachon, France, Aug. 31 – Sept. 4, 2009

\* T. Südmeyer, C. R. E. Baer, C. Kränkel, O. H. Heckl, C. J. Saraceno, M. Golling, R. Peters, K. Petermann, G. Huber, U. Keller

“High power ultrafast laser oscillators”

*Ultrafast Optics and High Field Short Wavelength (UFO VII & HFSW XIII 2009)*, Arcachon, France, Aug. 31 – Sept. 4, 2009

\* T. Südmeyer, A. E. H. Oehler, D. J. H. C. Maas, B. Rudin, A. R. Bellancourt, M. Hoffmann, M. Golling, U. Keller

“Compact ultrafast gigahertz repetition rate lasers for frequency comb generation”

*SPIE Time and Frequency Metrology Conference 2009*, San Diego, USA, Aug. 2-6, 2009

\* U. Keller

“Laser induced tunneling in less than 12 attoseconds: instantaneous or invalid concept?”

*ATTO 09*, Kansas, USA, July 28 – Aug. 1, 2009

M. Holler, F. Schapper, J. Mauritsson, K. J. Schafer, L. Gallmann, U. Keller

“Attosecond transient absorption of high order harmonics in helium”

*ATTO 09*, Kansas, USA, July 28 – Aug. 1, 2009

F. Schapper, M. Holler, L. Gallmann, U. Keller

“Chirp-controlled polarization gating for isolated attosecond pulse generation”

*ATTO 09*, Kansas, USA, July 28 – Aug. 1, 2009

A. N. Pfeiffer, C. Cirelli, M. Smolarski, R. Dörner, U. Keller

“Electron release dynamics in double ionization of Ar and Ne by elliptically polarized laser pulses” – Poster presentation  
*ATTO 09*, Kansas, USA, July 28 – Aug. 1, 2009

- \* L. Gallmann, C. Heese, C. Erny, M. Haag, U. Keller  
“High repetition rate femtosecond optical parametric chirped-pulse amplification in the mid-infrared”  
*International Laser Physics Workshop 2009 (LPHYS'09), Seminar on Nonlinear Optics and Spectroscopy*, Barcelona, Spain, July 13-17, 2009
- \* T. Südmeyer, C. Kränkel, C. R. E. Baer, O. H. Heckl, C. J. Saraceno, M. Golling, R. Peters, K. Petermann, G. Huber, U. Keller  
“Shorter pulses from femtosecond thin disk lasers”  
*International Laser Physics Workshop 2009 (LPHYS'09), Seminar on Modern Trends in Laser Physics*, Barcelona, Spain, July 13-17, 2009
- \* U. Keller, **Plenary Talk**  
“Attosecond angular streaking and sub-100-attosecond tunneling ionization dynamics”  
*41<sup>th</sup> European Group of Atomis Spectroscopists (EGAS 2009)*, Gdansk, Poland, 8-11 July 2009

M. C. Stumpf, S. Pekarek, A. E. H. Oehler, T. Südmeyer, U. Keller  
“First CEO beat frequency directly from a 1.5- $\mu\text{m}$  Er:Yb:glass laser oscillator” –  
**Postdeadline paper PDA.3**  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, June 14-19, 2009

M. Hoffmann, D. J. H. C. Maas, O. Sieber, V. J. Wittwer, A. R. Bellancourt, B. Rudin, Y. Barbarin, M. Golling, T. Südmeyer, U. Keller  
“First experimental verification of soliton-like pulse-shaping mechanisms in passively modelocked VECSELs” – Talk CB14.2  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, June 14-19, 2009

M. Butkus, K. G. Wilcox, J. Rautiainen, O. G. Okhotnikov, S. S. Mikhlin, I. L. Krestnikov, A. R. Kovsh, M. Hoffmann, T. Südmeyer, U. Keller, E. U. Rafailov  
“High-power quantum dot based semiconductor disk laser” – Talk CB5.1  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, June 14-19, 2009

M. Hoffmann, Y. Barbarin, D. J. H. C. Maas, A. R. Bellancourt, M. Shafiei, M. Golling, T. Südmeyer, U. Keller, I. L. Krestnikov, S. S. Mikhlin, A. R. Kovsh  
“First modelocked vertical cavity surface emitting laser using quantum dot layers for gain and SESAM” – Talk CB5.2  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, June 14-19, 2009

M. Shafiei, Y. Barbarin, A. R. Bellancourt, D. J. H. C. Maas, M. Hoffmann, M. Golling, T. Südmeyer, U. Keller  
“Fast antiresonant quantum dot SESAMs for MIXSEL integration” – Talk CF1.6

*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, June 14-19, 2009

C. R. E. Baer, C. Kränkel, C. J. Saraceno, O. H. Heckl, M. Golling, T. Südmeyer, R. Peters, K. Petermann, G. Huber, U. Keller  
“63-W average power from femtosecond Yb:Lu<sub>2</sub>O<sub>3</sub> thin disk laser” – Talk CA2.3  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, June 14-19, 2009

C. Kränkel, C. R. E. Baer, O. H. Heckl, M. Golling, T. Südmeyer, R. Peters, K. Petermann, G. Huber, U. Keller  
“227-fs pulses from a modelocked Yb:LuScO<sub>3</sub> thin disk laser” – Talk CA2.1  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, June 14-19, 2009

O. H. Heckl, C. R. E. Baer, C. Kränkel, S. V. Marchese, F. Schapper, M. Holler, T. Südmeyer, J. S. Robinson, J. W. G. Tisch, F. Couny, P. Light, F. Benabid, P. St. J. Russell, U. Keller  
“High harmonic generation (HHG) in a Kagome-type hollow-core photonic crystal fiber (HC-PCF)” – Talk CK3.5  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, June 14-19, 2009

\* C. Cirelli, A. Pfeiffer, P. Eckle, A. Staudte, R. Dörner, H. G. Muller, U. Keller  
“Laser induced tunneling ionization in less than 12 attoseconds measured by attosecond angular streaking” – Invited Talk CG3.3  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, June 14-19, 2009

\* C. Erny, C. Heese, M. Maag, L. Gallmann, U. Keller  
“1- $\mu$ J, sub-100-fs pulses from a high repetition rate femtosecond optical parametric chirped-pulse amplifier in the mid-infrared” – Invited Talk CF4.1  
*Conference on Lasers and Electro-Optics – European Quantum Electronics Conference (CLEO Europe – EQEC 2009)*, Munich, Germany, June 14-19, 2009

A. E. H. Oehler, T. Südmeyer, U. Keller, K. J. Weingarten  
“100 GHz passively modelocked Er:Yb:glass laser at 1.5  $\mu$ m and identification of transverse cavity-mode degeneracies” – Talk CFO2  
*Conference on Lasers and Electro-Optics (CLEO '09)*, Baltimore, USA, May 31-June 5, 2009

M. Hoffmann, Y. Barbarin, D. J. H. C. Maas, M. Shafiei, M. Golling, T. Südmeyer, U. Keller, I. L. Krestnikov, S. S. Mikhlin, A. R. Kovsh  
“All quantum dot modelocked vertical external cavity surface emitting laser” – Poster JThE13  
*Conference on Lasers and Electro-Optics (CLEO '09)*, Baltimore, USA, May 31-June 5, 2009

Y. Barbarin, A. R. Bellancourt, D. J. H. C. Maas, M. Shafiei, M. Hoffmann, M. Golling, T. Südmeyer, U. Keller

“Low saturation fluence antiresonant quantum dot SESAMs for MIXSEL integration” –  
Talk CTh04  
*Conference on Lasers and Electro-Optics (CLEO '09)*, Baltimore, USA, May 31-June 5,  
2009

C. Kränkel, C. R. E. Baer, O. H. Heckl, M. Golling, T. Südmeyer, U. Keller, R. Peters, K.  
Petermann, G. Huber  
“Shortest pulses of modelocked thin disk lasers: ultrafast Yb:LuScO<sub>3</sub> laser generates 227-  
fs pulses” – Talk CMBB3  
*Conference on Lasers and Electro-Optics (CLEO '09)*, Baltimore, USA, May 31-June 5,  
2009

O. H. Heckl, C. R. E. Baer, C. Kränkel, S. V. Marchese, F. Schapper, M. Holler, T.  
Südmeyer, U. Keller, J. S. Robinson, J. W. G. Tisch, F. Couny, P. Light, F. Benabid, P.  
St. J. Russell  
“First demonstration of high harmonic generation in a hollow-core photonic crystal fiber”  
– Talk JThH1  
*Conference on Lasers and Electro-Optics (CLEO '09)*, Baltimore, USA, May 31-June 5,  
2009

C. Heese, C. Erny, M. Maag, L. Gallmann, U. Keller  
“1- $\mu$ J from a high repetition rate femtosecond optical parametric chirped-pulse amplifier  
in the mid-infrared” – Talk CWL6  
*Conference on Lasers and Electro-Optics (CLEO '09)*, Baltimore, USA, May 31-June 5,  
2009

L. Gallmann, M. Holler, A. Zair, F. Schapper, T. Auguste, E. Cormier, A. Wyatt, A.  
Monmayrant, I. A. Walmsley, P. Salieres, U. Keller  
“Quantum path interferences in high harmonic generation: ionization effects and spatial  
structure” – Talk JThH6  
*CLEO/IQEC 09*, Joint Symposium on High-Field Physics and High-Intensity Lasers,  
Baltimore, USA, May 31-June 5, 2009

\* A. Pfeiffer, P. Eckle, C. Cirelli, A. Staudte, R. Dörner, H. G. Muller, U. Keller  
“Laser induced tunneling in less than 12 attoseconds: instantaneous or invalid concept?”  
– invited talk JThB1  
*CLEO/IQEC 09*, Joint Symposium on High-Field Physics and High-Intensity Lasers,  
Baltimore, USA, May 31-June 5, 2009

\* U. Keller  
“Attosecond dynamics in laser induced ionization”  
*XI cross border workshop on laser science*, University of Ottawa, Ottawa, Canada, May  
28-30, 2009

\* U. Keller, **Plenary Talk**  
“Ultrafast laser oscillators in the thin disk geometry”  
*Photonics North*, Quebec City, Canada, May 24-27, 2009

P. Bakopoulos, E. Kehayas, A. E. H. Oehler, T. Südmeyer, K. J. Weingarten, K. P.  
Hansen, U. Keller, H. Avramopoulos

"An angle multi-wavelength optical source with configurable channel spacing and cw or pulsed operation for high-capacity WDM optical networks" – Talk OWB6  
*Optical Fiber Communication Conference (OFC 2009)*, San Diego, USA, March 22-26, 2009

- \* C. R. E. Baer, S. V. Marchese, O. H. Heckl, M. Golling, C. Kränkel, T. Südmeyer, U. Keller  
"Pulse energy scaling of femtosecond ultrafast thin-disk laser oscillators towards the 100- $\mu$ J level"  
*13<sup>th</sup> SSOM Engelberg Lectures on Optics 2009*, Engelberg, Switzerland, March 16-19, 2009

M. Golling, D. J. H. C. Maas, A. R. Bellancourt, M. Hoffmann, B. Rudin, T. Südmeyer, U. Keller  
"Recombination Dynamics in Quantum Dot Semiconductor Saturable Absorber Mirrors (QD-SESAMs)" – Talk WeA3  
*15<sup>th</sup> Euro-MBE Workshop*, Zakopane, Poland, March 8-11, 2009

Christian Kränkel, Cyrill R. E. Baer, Oliver H. Heckl, Matthias Golling, Thomas Südmeyer, Ursula Keller, Rigo Peters, Klaus Petermann, Günter Huber  
"227-fs-Pulse aus einem SESAM-modengekoppelten Yb:LuScO<sub>3</sub>-Scheibenlaser" – Talk Q 15.6 (i.e. Session Q15, 6. Talk)  
*Verhandlungen der Deutschen Physikalischen Gesellschaft (DPG-Tagung)*, Hamburg, March 2-6, 2009

T. Südmeyer, O. H. Heckl, C. R. E. Baer, C. Kränkel, S. V. Marchese, F. Schapper, M. Holler, U. Keller, J. S. Robinson, J. W. G. Tisch, F. Couny, P. Light, F. Benabid, and P. St. J. Russell  
"First Demonstration of High Harmonic Generation (HHG) in a Hollow-Core Photonic Crystal Fiber" – Talk Q49.5  
*Verhandlungen der Deutschen Physikalischen Gesellschaft (DPG-Tagung)*, Hamburg, March 2-6, 2009

T. Südmeyer, S.V. Marchese, C.R.E. Baer, S. Hashimoto, M. Golling, G. Gingras, B. Witzel, and U. Keller, "Femtosecond thin disk lasers with  $>10 \mu$  J pulse energy for high field physics at multi-megahertz repetition rates" – Talk Q49.8  
*Verhandlungen der Deutschen Physikalischen Gesellschaft (DPG-Tagung)*, Hamburg, March 2-6, 2009

T. Südmeyer, D.J.H.C. Maas, A.-R. Bellancourt, B. Rudin, M. Hoffmann, M. Golling, Y. Barbarin, U. Keller  
"Modelocked Integrated External-Cavity Surface Emitting Laser (MIXSEL)" – Talk Q15.8  
*Verhandlungen der Deutschen Physikalischen Gesellschaft (DPG-Tagung)*, Hamburg, March 2-6, 2009

- \* U. Keller  
"Novel ultrafast semiconductor lasers for compact frequency comb generation"  
*Workshop on Swiss priorities for optical atomic clocks for space and related technologies*, Bern, Feb. 13, 2009

C. R. E. Baer, O. H. Heckl, C. Kränkel, S. V. Marchese, F. Schapper, M. Holler, T. Südmeyer, U. Keller, J. S. Robinson, J. W. G. Tisch, F. Couny, P. Light, F. Benabid, P. St. J. Russell

“First high harmonic generation (HHG) in a photonic crystal fiber (PCF)” – Postdeadline Paper

*Advanced Solid-State Photonics (ASSP '09)*, Denver, Colorado, USA, Feb. 1-4, 2009

M. Hoffmann, Y. Barbarin, D. J. H. C. Maas, M. Golling, T. Südmeyer, U. Keller, I. L. Krestnikov, S. S. Mikhrin, A. R. Kovsh

“First modelocked quantum dot vertical external cavity surface emitting laser” – Talk ME5

*Advanced Solid-State Photonics (ASSP '09)*, Denver, Colorado, USA, Feb. 1-4, 2009

C. R. E. Baer, C. Kränkel, O. H. Heckl, A. G. Engqvist, M. Golling, T. Südmeyer, U. Keller, R. Peters, K. Petermann, G. Huber

“275-fs pulses from SESAM modelocked Yb:LuScO<sub>3</sub> thin disk laser” – Poster TuB17

*Advanced Solid-State Photonics (ASSP '09)*, Denver, Colorado, USA, Feb. 1-4, 2009

D. J. H. C. Maas, M. Hoffmann, A. R. Bellancourt, B. Rudin, Y. Barbarin, M. Golling, T. Südmeyer, U. Keller

“Growth parameter optimization for fast quantum dot semiconductor saturable absorber mirrors (QD-SESAMs)” – Poster TuB11

*Advanced Solid-State Photonics (ASSP '09)*, Denver, Colorado, USA, Feb. 1-4, 2009

B. Rudin, A. Rutz, D. J. H. C. Maas, A. R. Bellancourt, T. Südmeyer, U. Keller

“Efficient high-power VECSEL generates 20 W continuous-wave radiation in a fundamental transverse mode”

*Advanced Solid-State Photonics (ASSP '09)*, Denver, Colorado, USA, Feb. 1-4, 2009

A. E. H. Oehler, T. Südmeyer, U. Keller, K. J. Weingarten

“100 GHz passively mode-locked Er:Yb:glass laser at 1.5  $\mu\text{m}$  and experimental identification of transverse cavity-mode degeneries” – Talk MA4

*Advanced Solid-State Photonics (ASSP '09)*, Denver, Colorado, USA, Feb. 1-4, 2009

\* B. Rudin, D. J. H. C. Maas, A. R. Bellancourt, M. Golling, T. Südmeyer, U. Keller

“Novel ultrafast semiconductor lasers based on surface emitting lasers”

*Photonics West 2009, LASE conference, LA101 Solid State Lasers XVIII: Technology and Devices*, San Jose, California, USA, Jan. 24-29, 2008

## 2008

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\* U. Keller

“Pulse energy scaling of femtosecond ultrafast thin-disk laser oscillators towards the 100- $\mu\text{J}$  level”

*IEEE Photonics Global*, Singapore, Dec. 8-11, 2008

F. Schapper, M. Holler, T. Auguste, A. Zair, M. Weger, P. Salieres, L. Gallmann, U. Keller

- “Spatially resolved quantum path interferences in high order harmonic generation in argon”, Poster  
*11<sup>th</sup> International Conference on Multiphoton Processes (ICOMP 2008)*, Heidelberg, Germany, Sept. 18-23, 2008
- \* A. Pfeiffer, P. Eckle, C. Cirelli, A. Staudte, R. Dörner, H. G. Muller, M. Büttiker, U. Keller  
 “Attosecond ionization and tunneling delay time measurements”, **Hot Topics Talk**  
*11<sup>th</sup> International Conference on Multiphoton Processes (ICOMP 2008)*, Heidelberg, Germany, Sept. 18-23, 2008
- \* C. R. E. Baer, S. V. Marchese, A. G. Engqvist, D. J. H. C. Maas, M. Golling, T. Südmeyer, U. Keller, **Keynote Talk**  
 “High power ultrafast laser oscillators”  
*3<sup>rd</sup> EPS-QEOD Europhoton Conference on Solid-State and Fiber Coherent Light Sources (Europhoton 2008)*, Paris France, Aug. 31-Sept. 5, 2008
- A. R. Bellancourt, D. J. H. C. Maas, B. Rudin, M. Golling, T. Südmeyer, U. Keller  
 “Modelocked integrated external-cavity surface emitting laser (MIXSEL)” – Talk  
 WEoC.2  
*3<sup>rd</sup> EPS-QEOD Europhoton Conference on Solid-State and Fiber Coherent Light Sources (Europhoton 2008)*, Paris France, Aug. 31-Sept. 5, 2008
- B. Rudin, D. J. H. C. Maas, A. R. Bellancourt, E. Gini, T. Südmeyer, U. Keller  
 “Efficient high-power VECSEL generates 20 W continuous-wave radiation in a fundamental transverse mode”  
*3<sup>rd</sup> EPS-QEOD Europhoton Conference on Solid-State and Fiber Coherent Light Sources (Europhoton 2008)*, Paris France, Aug. 31-Sept. 5, 2008
- \* L. Gallmann, F. Schapper, A. Zaïr, A. Guandalini, M. Holler, A. Couairon, M. Franco, A. Mysyrowicz, and U. Keller  
 “Spatio-temporal effects in few-cycle filament compression”  
*Conference on filamentation*, Paris, France, 24-27 Sep. 2008
- \* U. Keller  
 “Novel ultrafast semiconductor lasers based on surface emitting lasers”  
*SIAM Conference on Nonlinear Waves and Coherent Structures (NW08)*, Rome, Italy, July 21-24, 2008
- \* U. Keller, **Plenary Talk**  
 “Ultrafast lasers: hitting harder, faster and broader”  
*International Commission for Optics (ICO-21 2008)*, Sydney, Australia, 7-10 July 2008
- \* A.-R. Bellancourt, B. Rudin, D. J. H. C. Maas, M. Golling, T. Südmeyer, U. Keller  
 “Modelocked integrated external-cavity surface emitting laser (MIXSEL) - a new class of ultrafast semiconductor lasers”  
*International Laser Physics Workshop 2008 (LPHYS'08), Seminar on Modern Trends in Laser Physics*, Trondheim, Norway, June 29 – July 4, 2008

- \* T. Südmeyer, S.V. Marchese, C.R.E. Baer, A. Engqvist, D.J.H.C. Maas, M. Golling, U. Keller  
 “Modelocked femtosecond thin disk lasers with >10  $\mu$ J pulse energy”  
*International Laser Physics Workshop 2008 (LPHYS'08), Seminar on Physics of Lasers*,  
 Trondheim, Norway, June 29 – July 4, 2008
  
- A. Zair, M. Holler, F. Schapper, L. Gallmann, U. Keller, A. S. Wyatt, A. Monmayrant, I. A. Walmsley, E. Cormier, T. Auguste, J. P. Caumes, P. Salières  
 “Study of higher-order quantum-paths interference in the high harmonics generation process” – Talk FRI2.5  
*Ultrafast Phenomena 2008 (UP 2008)*, Stresa (Lago Maggiore), Italy, June 9-13, 2008
  
- P. Eckle, A. Pfeiffer, C. Cirelli, U. Keller, R. Dörner, A. Staudte, H. G. Muller, M. Büttiker  
 “Attosecond angular streaking: an ideal technique to measure electron tunneling time?”  
 – Talk MON2a.1  
*Ultrafast Phenomena 2008 (UP 2008)*, Stresa (Lago Maggiore), Italy, June 9-13, 2008
  
- T. Südmeyer, S. V. Marchese, C. R. E. Baer, S. Hashimoto, M. Golling, A. G. Engqvist, D. J. H. C. Maas, U. Keller, G. Lepine, G. Gingras, B. Witzel  
 “Femtosecond thin disk lasers with >10  $\mu$ J pulse energy for high field physics at multi-megahertz repetition rates” – Talk MON4a.5  
*Ultrafast Phenomena 2008 (UP 2008)*, Stresa (Lago Maggiore), Italy, June 9-13, 2008
  
- T. Südmeyer, S. V. Marchese, C. R. E. Baer, S. Hashimoto, A. G. Engqvist, M. Golling, D. J. H. C. Maas, U. Keller  
 “Femtosecond thin disk lasers with >10  $\mu$ J pulse energy” – Talk CFP1  
*Conference on Lasers and Electro-Optics (CLEO '08)*, San Jose, USA, May 4-9, 2008
  
- D. J. H. C. Maas, A.-R. Bellancourt, M. Hoffmann, B. Rudin, M. Golling, T. Südmeyer, U. Keller  
 “Recombination dynamics in quantum dot semiconductor saturable absorber mirrors (QD-SESAMs)” – Talk CFU4  
*Conference on Lasers and Electro-Optics (CLEO '08)*, San Jose, USA, May 4-9, 2008
  
- D. J. H. C. Maas, B. Rudin, A.-R. Bellancourt, D. Iwaniuk, T. Südmeyer, U. Keller  
 “High precision optical characterization of semiconductor saturable absorber mirrors (SESAMs)” – Talk CThKK6  
*Conference on Lasers and Electro-Optics (CLEO '08)*, San Jose, USA, May 4-9, 2008
  
- C. R. E. Baer, S. V. Marchese, A. G. Engqvist, M. Golling, D. J. H. C. Maas, T. Südmeyer, U. Keller, R. Peters, C. Kränkel, K. Petermann, G. Huber,  
 “Efficient femtosecond high power Yb:Lu<sub>2</sub>O<sub>3</sub> thin disk laser” – Talk CFI1  
*Conference on Lasers and Electro-Optics (CLEO '08)*, San Jose, USA, May 4-9, 2008
  
- \* B. Rudin, D. J. H. C. Maas, A.-R. Bellancourt, M. Golling, T. Südmeyer, U. Keller  
 “Vertical integration of ultrafast semiconductor lasers” – Invited Talk JMC4  
*Conference on Lasers and Electro-Optics (CLEO '08)*, San Jose, USA, May 4-9, 2008
  
- \* C. Erny, K. Moutzouris, J. Biegert, D. Kühlke, F. Adler, A. Leitenstorfer, U. Keller

“Mid-infrared difference-frequency-generation of ultrashort pulses tunable between 3.2  $\mu\text{m}$  and 4.8  $\mu\text{m}$  from a compact fiber source” – Invited Talk ID 924  
*SPS Annual Meeting 2008*, Geneva, Switzerland, March 26-27, 2008

M. Holler, A. Zair, F. Schapper, T. Auguste, A. Guandalini, A. S. Wyatt, A. Monmayrant, L. Gallmann, I. A. Walmsley, E. Cormier, P. Salieres, U. Keller  
“Quantum-path interference in high harmonic generation” – Talk ID 912  
*SPS Annual Meeting 2008*, Geneva, Switzerland, March 26-27, 2008

\* P. Eckle, M. Smolarski, P. Schlup, J. Biegert, A. Staudte, M. Schöffler, H. G. Muller, R. Dörner and U. Keller  
“Attosecond angular streaking” – Invited Talk ID 921  
*SPS Annual Meeting 2008*, Geneva, Switzerland, March 26-27, 2008

\* U. Keller, **Plenary Talk**  
“Ultrafast lasers: hitting harder, faster and broader”  
*Laser Optics Berlin 2008*, Berlin, Germany, March 17-19, 2008

E. Mansten, J. M. Dahlström, P. Johnsson, M. Swoboda, T. Ruchon, A. L’Huillier, J. Mauritsson, J. Tate, M. Gaarde, P. Eckle, H. Holler, L. Gallmann, U. Keller  
“Controlling attosecond pulse generation by using a two-color driving field”  
*402<sup>nd</sup> Wilhelm and Else Heraeus-Seminar on Novel Light Sources and Applications*,  
Universitätszentrum Obergurgl, Austria, Feb. 3-9, 2008

A. R. Bellancourt, D. J. H. C. Maas, B. Rudin, M. Golling, T. Südmeyer, U. Keller  
“Modelocked integrated external-cavity surface emitting laser (MIXSEL)” – Talk ME7  
*Advanced Solid-State Photonics (ASSP '08)*, Nara, Japan, Jan. 27-30, 2008

S. V. Marchese, C. R. E. Baer, A. G. Engqvist, M. Golling, D. J. H. C. Maas, T. Südmeyer, U. Keller, R. Peters, C. Kränkel, K. Petermann, G. Huber  
“Efficient femtosecond Yb:Lu<sub>2</sub>O<sub>3</sub> thin disk laser” – Talk ME5  
*Advanced Solid-State Photonics (ASSP '08)*, Nara, Japan, Jan. 27-30, 2008

C. R. E. Baer, S. V. Marchese, S. Hashimoto, M. S. Ruosch, R. Grange, M. Golling, T. Südmeyer, U. Keller, G. Lépine, G. Gingras, B. Witzel  
“Femtosecond thin disk lasers exceed pulse energies of 10 microjoule and enable high field physics experiments” – Talk ME4  
*Advanced Solid-State Photonics (ASSP '08)*, Nara, Japan, Jan. 27-30, 2008

## 2007

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\* T. Südmeyer, D. J. H. C. Maas, A.-R. Bellancourt, B. Rudin, M. Golling, H. J. Unold, U. Keller  
“Moving from ultrafast VECSELs to MIXSELs – a new class of ultrafast semiconductor lasers”  
*SPIE Asia-Pacific Optical Communications Conference (APOC)*, Wuhan, China, Nov. 1-5, 2007

Paraskevas Bakopoulos, Efstratios Kehayas, Andreas Oehler, Thomas Südmeyer, Kurt Weingarten, Kim Hansen, Christos Bintjas, Ursula Keller and Hercules Avramopoulos  
“Agile and Upgradeable Multi-wavelength Source for Dense Wavelength Division Multiplexing Networks” – Talk ThX 2

*20<sup>th</sup> Annual Meeting of the IEEE Lasers and Electro-Optics Society (LEOS Annual 2007)*, Lake Buena Vista, Florida, USA, Oct. 21-25, 2007

A. Zair, M. Holler, A. Guandalini, F. Schapper, J. Biegert, U. Keller, P. Salieres, T. Auguste, E. Cormier, A. Wyatt, A. Monmayrant, I. Walmsley  
“Direct Observation of quantum-path interferences in high order harmonic generation”

*1<sup>st</sup> International Conference on Ultra-intense Laser Interaction Sciences (ULIS 2007)*, Bordeaux, France, Oct. 1-5, 2007

A. Rutz, V. Liverini, L. Li, P. Navaretti, D. J. H. C. Maas, A. Fiore, S. Schön, U. Keller  
"GaInNAs und InAs-QD SESAMs für modengekoppelte 1.3  $\mu\text{m}$  GaInNAs VECSELs"  
*Deutscher MBE-Workshop 2007*, Forschungszentrum Jülich, Germany, Oct. 1-2, 2007

D. J. H. C. Maas, A. R. Bellancourt, B. Rudin, M. Golling, H. J. Unold, T. Südmeyer, U. Keller

“MIXSELS – a new class of ultrafast semiconductor lasers” – Talk 8.1.3

*33<sup>rd</sup> European Conference on Optical Communication (ECOC 2007)*, Berlin Germany, Sept. 16-20, 2007

E. Cormier, M. Holler, A. Zair, A. Guandalini, F. Schapper, J. Biegert, T. Auguste, A. Wyatt, A. Monmayrant, I. Walmsley, P. Salieres, U. Keller

“Direct observation of quantum-path interferences in high order harmonic generation”

*Ultrafast Optics 2007 and High Field Short Wavelength 2007 (UFO/HFSW 2007)*, Bishop’s Lodge, Santa Fe, USA, Sep. 2-7, 2007

M. Holler, A. Zair, F. Schapper, T. Auguste, A. Guandalini, A. S. Wyatt, A. Monmayrant, L. Gallmann, I. A. Walmsley, E. Cormier, P. Salieres, U. Keller

“A comparison of quantum-path interferences in high order harmonic generation in Neon, Argon and Xenon” – Poster requested

*Ultrafast Optics 2007 and High Field Short Wavelength 2007 (UFO/HFSW 2007)*, Bishop’s Lodge, Santa Fe, USA, Sep. 2-7, 2007

F. Schapper, A. Courairon, A. Guandalini, A. Zair, M. Holler, M. Franco, A. Mysyrowicz, L. Gallmann, U. Keller

“Spatio-temporal structure and energy scaling of 4.9-fs pulses generated by filamentation”

*Ultrafast Optics 2007 and High Field Short Wavelength 2007 (UFO/HFSW 2007)*, Bishop’s Lodge, Santa Fe, USA, Sep. 2-7, 2007

P. Eckle, M. Smolarski, P. Schlup, J. Biegert, A. Staudte, M. Schöffler, H. G. Müller, R. Dörner, U. Keller

“Attosecond angular streaking”

*Ultrafast Optics 2007 and High Field Short Wavelength 2007 (UFO/HFSW 2007)*, Bishop’s Lodge, Santa Fe, USA, Sep. 2-7, 2007

- C. Cirelli, P. Eckle, M. Smolarski, A. Pfeiffer, P. Schlup, J. Biegert, A. Staudte, M. Schöffler, H. G. Müller, R. Dörner, U. Keller  
 “Attosecond angular streaking” – Hot topics talk  
*Attosecond Physics (Atto07), International Workshop and 391. WE-Heraeus-Seminar*, Aug. 1-5, 2007, Dresden, Germany, Aug. 1-5, 2007
- A. Zair, M. Holler, A. Guandalini, F. Schapper, J. Biegert, U. Keller, A. Wyatt, A. Monmayrant, I. Walmsley, E. Cormier, T. Auguste, P. Salieres  
 “Two-quantum-path interferences in high order harmonic generation” – Poster presentation  
*XXV International Conference on Photonics, Electronic and Atomic Collisions (ICPEAC 2007)*, Freiburg, Germany, July 25-31, 2007
- A. Zair, M. Holler, A. Guandalini, F. Schapper, J. Biegert, U. Keller, P. Salieres, T. Auguste, E. Cormier, A. Wyatt, A. Monmayrant, I. Walmsley  
 “Two-quantum-path interferences in high order harmonic generation” – Talk CG4-4-WED  
*CLEO Europe 2007*, Munich, Germany, June 17-22, 2007
- A. Zair, A. Guandalini, F. Schapper, M. Holler, J. Biegert, L. Gallmann, U. Keller, A. Couairon, M. Franco, A. Mysyrowicz  
 “Spatio-temporal characterization of sub-5-fs pulses obtained by filamentation” – Talk CG4-6-WED  
*CLEO Europe 2007*, Munich, Germany, June 17-22, 2007
- C. Erny, K. Moutzouris, J. Biegert, U. Keller, D. Kühlke, F. Adler, A. Leitenstorfer  
 “Femtosecond mid-infrared difference-frequency-generation tunable between 3.2  $\mu\text{m}$  and 4.8  $\mu\text{m}$  from a compact fiber source” – Talk CA9-1-THU  
*CLEO Europe 2007*, Munich, Germany, June 17-22, 2007
- S. V. Marchese, S. Hashimoto, C. R. E. Bär, M. S. Ruosch, R. Grange, M. Golling, T. Südmeyer, U. Keller, G. Lépine, G. Gingras, B. Witzel  
 “Passively modelocked thin disk laser reach 10  $\mu\text{J}$  pulse energy at megahertz repetition rate and drive high field physics experiments” – Talk CF3-2-MON  
*CLEO Europe 2007*, Munich, Germany, June 17-22, 2007
- A. E. H. Oehler, S. C. Zeller, T. Südmeyer, U. Keller, K. J. Weingarten  
 “Moving towards 100 GHz from a passively modelocked Er:Yb:glass laser at 1.5  $\mu\text{m}$ ” – Talk CI6-1-THU  
*CLEO Europe 2007*, Munich, Germany, June 17-22, 2007
- D. J. H. C. Maas, A. R. Bellancourt, B. Rudin, M. Golling, H. J. Unold, T. Südmeyer, U. Keller  
 “MIXSELS – a new class of ultrafast semiconductor lasers” – Talk CB13-1-THU  
*CLEO Europe 2007*, Munich, Germany, June 17-22, 2007
- A. Rutz, V. Liverini, L. Li, P. Navaretti, D. J. H. C. Maas, A. Fiore, S. Schön, U. Keller  
 “GaInNAs and InAs QD-SESAMs modelocking a 1.3- $\mu\text{m}$  GaInNAs VECSEL” – Talk E-MRS 2007, Spring Meeting, Strasbourg, May 28-June 1, 2007

- T. Südmeyer, S. V. Marchese, S. Hashimoto, U. Keller, G. Lepine, G. Gingras, B. Witzel  
 “High energy and high repetition rate diode-pumped solid-state oscillator enhances high-field physics measurements” – Talk CTuM1  
*Conference on Lasers and Electro-Optics (CLEO '07)*, Baltimore, USA, May 8-10, 2007
- \* A. R. Bellancourt, B. Rudin, D. J. H. C. Maas, M. Golling, H. J. Unold, T. Südmeyer, U. Keller  
 “First demonstration of a modelocked integrated external-cavity surface emitting laser (MIXSEL)” – upgraded to invited talk CWI1  
*Conference on Lasers and Electro-Optics (CLEO '07)*, Baltimore, USA, May 8-10, 2007
- M. C. Stumpf, S. C. Zeller, A. Schlatter, T. Südmeyer, U. Keller, T. Okuno  
 “Fiber-broadened passively modelocked Er:Yb:glass laser for high-resolution optical coherence tomography” – Talk CFL6  
*Conference on Lasers and Electro-Optics (CLEO '07)*, Baltimore, USA, May 8-10, 2007
- S. C. Zeller, T. Südmeyer, U. Keller, K. J. Weingarten  
 “77-GHz pulse train at 1.5  $\mu\text{m}$  directly generated by a passively mode-locked high repetition rate Er:Yb:glass laser” – Talk CTuC2  
*Conference on Lasers and Electro-Optics (CLEO '07)*, Baltimore, USA, May 8-10, 2007
- C. Erny, K. Moutzouris, J. Biegert, U. Keller, D. Kühlke, F. Adler, A. Leitentorfer  
 “Femtosecond mid-infrared difference-frequency-generation tunable between 3.2  $\mu\text{m}$  and 4.8  $\mu\text{m}$  from a compact fiber source” – CThL4  
*Conference on Lasers and Electro-Optics (CLEO '07)*, Baltimore, USA, May 8-10, 2007
- A. Guandalini, A. Zair, F. Schapper, M. Holler, L. Gallmann, J. Biegert, U. Keller  
 “Spatio-temporal and interferometric characterization of sub-5-fs pulses obtained by filamentation” – Talk CFO1  
*Conference on Lasers and Electro-Optics (CLEO '07)*, Baltimore, USA, May 8-10, 2007
- A. Zair, M. Holler, A. Guandalini, F. Schapper, J. Biegert, U. Keller, P. Salieres, T. Auguste, E. Cormier, A. Wyatt, A. Monmayrant, I. Walmsley  
 “Two-quantum-path interferences in high order harmonic generation” – Talk JFC6  
*Conference on Lasers and Electro-Optics (CLEO '07)*, Baltimore, USA, May 8-10, 2007
- D. J. H. C. Maas, A. R. Bellancourt, B. Rudin, M. Golling, H. J. Unold, U. Keller  
 “MIXSELS – a new class of ultrafast semiconductor lasers” – Talk WC1  
*13th European Conference on Integrated Optics (ECIO'2007)*, Copenhagen, Denmark, 25 - 27 April 2007
- P. Navaretti, A. Rutz, V. Liverini, D. J. H. C. Maas, B. Rudin, A. R. Bellancourt, S. Schön, U. Keller  
 “Modelocking of a GaInNAs VECSEL using a GaInNAs SESAM for 1.3  $\mu\text{m}$  applications” – Talk ThB3  
*13th European Conference on Integrated Optics (ECIO'2007)*, Copenhagen, Denmark, 25 - 27 April 2007
- \* U. Keller, **Keynote Speaker**

“The next generation of passively modelocked VECSELs – a new class of ultrafast semiconductor lasers”

*International Workshop on Physics and Applications of Semiconductor Lasers (PHASE 2007)*, Supélec, Campus de Metz, France, March 28-30, 2007

Paraskevas Bakopoulos, Efstratios Kehayas, Andreas E. H. Oehler, Thomas Sudmeyer, Kurt J. Weingarten, Kim P. Hansen, Christos Bintjas, Ursula Keller, Hercules Avramopoulos – Talk OWJ2 (Session broadband lasers)

“Multi-wavelength laser source for dense wavelength division multiplexing networks”

*Optical Fiber Communication Conference 2007 (OFC '07)*, Anaheim, California, USA, March 25-29, 2007

- \* L. Gallmann, T. Pfeifer, P. M. Nagel, M. J. Abel, D. M. Neumark, S. R. Leone, A. Zaïr, A. Guandalini, F. Schapper, M. Holler, U. Keller

"Few-cycle pulse generation through optical filamentation in rare gases and its spectral and spatio-temporal characterization"

*Nonlinear Effects in Photonic Materials*, Weierstrass Institute for Applied Analysis and Stochastics, Berlin, Germany, 12-14 March 2007

V. Liverini, L. Li, A. Rutz, P. Navaretti, D. J. H. C. Maas, A. Fiore, S. Schön, U. Keller

“InAs QD-SESAM modelocking a 1.3  $\mu\text{m}$  GaInNAs VECSEL”

*14<sup>th</sup> European Molecular Beam Epitaxy Workshop*, Sierra Nevada, Andalucia, Spain, March 5-7, 2007

B. Rudin, D. J. H. C. Maas, A.-R. Bellancourt, M. Golling, H. J. Unold, T. Südmeier, U. Keller

“First modelocked integrated external-cavity surface emitting laser (MIXSEL)” – Postdeadline Paper MF1

*Advanced Solid-State Photonics (ASSP '07)*, Vancouver, Canada, Jan. 28-31, 2007

## 2006

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- \* U. Keller

“Novel high repetition rate sources for telecom and clocking applications”

*Photonics 2006, Eighth International Conference on Optoelectronics, Fiber Optics and Photonics*, University of Hyderabad, India, Dec. 13-16, 2006

- \* U. Keller

“Passively modelocked VECSELs”

*EOS Annual Meeting, “Nonlinear Optics: from sources to guided waves”*, Paris, Oct. 16-19, 2006

A. Rutz, V. Liverini, E. Müller, S. Schön, U. Keller

"From passive to active: GaInNAs saturable absorber modelocking a GaInNAs surface emitting laser"

*MBE Workshop*, Hamburg, 26-27 Sept. 2006

- \* J. Biegert and U. Keller

“Phase-stable few-cycle pulse generation by filamentation - prospective“

*International Symposium on ultrafast intense laser filamentation 2006*, Université Laval, Quebec City, Canada, 27-30 Sept. 2006

S. C. Zeller, R. Grange, T. Südmeyer, U. Keller, K. J. Weingarten  
“77-GHz pulse train at 1.5  $\mu\text{m}$  directly generated by a passively mode-locked high repetition rate Er:Yb:glass laser” – Talk We2.6.6  
*European conference on optical communication (ECOC 2006)*, Cannes, France, Sept. 2-28, 2006

- \* U. Keller, S. V. Marchese, T. Südmeyer  
“Ultrafast solid-state lasers with pulse energies in the  $\mu\text{J}$ -regime”  
*XVI International Symposium on Gas Flow and Chemical Lasers & High Power Laser Conference (GCL-HPL) 2006*, Gmunden, Austria, September 4-8, 2006

A. Rutz, V. Liverini, E. Müller, S. Schön, U. Keller  
“All-GaInNAs ultrafast lasers: material development for emitters and absorbers”  
*14<sup>th</sup> International Conference on Molecular Beam Epitaxy (MBE 2006)*, Waseda University, Tokyo, Japan, Sept. 3-8, 2006

A. Rutz, V. Liverini, R. Grange, M. Haiml, S. Schön, U. Keller - Poster  
“Parameter tunable GaInNAs saturable absorbers for modelocking of solid-state lasers”  
*14<sup>th</sup> International Conference on Molecular Beam Epitaxy (MBE 2006)*, Waseda University, Tokyo, Japan, Sept. 3-8, 2006

V. Liverini, A. Rutz, U. Keller, S. Schön - Poster  
“Nitrogen-dependent effects on GaInNAs photoluminescence upon annealing”  
*14<sup>th</sup> International Conference on Molecular Beam Epitaxy (MBE 2006)*, Waseda University, Tokyo, Japan, Sept. 3-8, 2006

P. R. Eckle, P. Schlup, J. Biegert, M. P. Smolarski, A. Staudthe, M. Schöffler, O. Jagutzki, R. Dörner, U. Keller  
“Determination of the CEO phase – ionization of He with circularly polarized 5.5-fs pulses” – Talk WF2 (WF – AMO Physics)  
*15<sup>th</sup> International Conference on Ultrafast Phenomena*, Pacific Grove, California, USA, July 31- Aug. 4, 2006

A. Guandalini, P. R. Eckle, F. Schapper, A. Couairon, M. Franco, A. Mysyrowicz, J. Biegert, U. Keller  
“5.1-fs pulses by filamentation – prospective of self-compression to one optical cycle” – Talk MD9 (MD – Generation)  
*15<sup>th</sup> International Conference on Ultrafast Phenomena*, Pacific Grove, California, USA, July 31- Aug. 4, 2006

- \* J. Biegert, P. R. Eckle, A. Guandalini, U. Keller  
“CEO-controlled pulse generation and photoionization”  
*International Laser Physics Workshop (LPHYS’06)*, Seminar 1, Modern Trends in Laser Physics, Lausanne, Switzerland, July 24-28, 2006

- \* T. Südmeyer, S. V. Marchese, U. Keller

"Pulse energy scaling of passively modelocked solid-state lasers towards the 10- $\mu$ J regime"

*International Laser Physics Workshop (LPHYS'06)*, Seminar 4, Laser Physics, Lausanne, Switzerland, July 24-28, 2006

- \* U. Keller  
"High-power multi-10-GHz passively modelocked lasers" – Talk 5C3-1  
*Opto-Electronics and Communications Conference (OECC)*, Kaohsiung, Taiwan, July 3-7, 2006
  
- \* J. Biegert, P. Eckle, P. Schlup, M. Smolarski, A. Staudte, M. Schöffler, O. Jagutzki, R. Dörner, U. Keller  
"Subcycle spatial mapping of ionization dynamics in He"  
*Super Intense Laser Atome Physics (SILAP 2006)*, Salamanca, Spain, June 19-23, 2006  
([www.usal.es/silap](http://www.usal.es/silap))
  
- \* U. Keller  
"CEO-controlled pulse generation and photoionization"  
*2006 Gordon Research Conference on Multiphoton Processes*, The Tilton School, Tilton, NH, USA, June 11-16, 2006
  
- \* U. Keller, **Invited 2006 Angström lecturer**  
"Ultrafast solid-state lasers and their applications: hitting harder and faster"  
*The Angström lecture 2006*, Royal Swedish Academy of Sciences, Uppsala University, Sweden, May 8, 2006
  
- A. Rutz, V. Liverini, S. Schön, U. Keller  
"First passively modelocked GaInNAs VECSEL" – Postdeadline Paper CPDB1  
*Conference on Lasers and Electro-Optics (CLEO '06)*, Long Beach, California, USA, May 21-26, 2006
  
- P. Schlup, P. R. Eckle, A. Aghajani-Talesh, J. Biegert, M. P. Smolarski, A. Staudte, M. Schöffler, O. Jagutzki, R. Dörner, U. Keller  
"Ionization of Ar with Circularly Polarized 5.5-fs Pulses for the Determination of CEO Phase" – Talk JFA5  
*Conference on Lasers and Electro-Optics (CLEO '06)*, Long Beach, California, USA, May 21-26, 2006
  
- A. Schlatter, R. Paschotta, S. C. Zeller, S. Pawlik, U. Keller  
"Simultaneous Measurement of the Optical Phase Noise of All Modes of a Mode-Locked Laser" – Talk CTuP6  
*Conference on Lasers and Electro-Optics (CLEO '06)*, Long Beach, California, USA, May 21-26, 2006
  
- S. C. Zeller, A. Schlatter, L. Krainer, G. J. Spühler, T. Südmeyer, U. Keller, T. Okuno  
"Octave spanning supercontinuum from compact passively mode-locked Er:Yb:glass laser" – Talk CThEE1  
*Conference on Lasers and Electro-Optics (CLEO '06)*, Long Beach, California, USA, May 21-26, 2006

- S. V. Marchese, T. Südmeyer, M. Golling, R. Grange, and U. Keller  
 “5- $\mu$ J pulses at 12 MHz from a femtosecond passively mode-locked thin disk laser” –  
 Talk CWF5  
*Conference on Lasers and Electro-Optics (CLEO '06)*, Long Beach, California, USA,  
 May 21-26, 2006
- B. Rudin, D. J. H. C. Maas, D. Lorensen, A.-R. Bellancourt, H. J. Unold, U. Keller, E.  
 Gini and D. Ebling  
 “High-Performance Mode-Locking with up to 50 GHz Repetition Rate from Integrable  
 VECSELs” – Talk CThM2  
*Conference on Lasers and Electro-Optics (CLEO '06)*, Long Beach, California, USA,  
 May 21-26, 2006
- K. H. Fong, K. Kikuchi, C. S. Goh, S. Y. Set, R. Grange, M. Haiml, U. Keller  
 “Single wall carbon nanotube for modelocking solid-state Er:Yb:glass laser” – Talk  
 CMQ4  
*Conference on Lasers and Electro-Optics (CLEO '06)*, Long Beach, California, USA,  
 May 21-26, 2006
- A. Guandalini, P. Eckle, M. Anscombe, P. Schlup, J. Biegert and U. Keller  
 „Intense CEO phase stabilized ultra-short pulses approaching the single cycle limit” –  
 Talk CWC4  
*Conference on Lasers and Electro-Optics (CLEO '06)*, Long Beach, California, USA,  
 May 21-26, 2006
- A. Couairon, M. Franco, A. Mysyrowicz, J. Biegert, U. Keller, H. Chakraborty, M. B.  
 Gaarde  
 “Single-cycle pulse generation by filamentation in noble gases” – Talk JThE6  
*Quantum Electronics and Laser Science Conference 2006 (QELS '06)*, Long Beach,  
 California, USA, May 21-26, 2006
- M. P. Smolarski, A. Staudte, M. Schöffler, O. Jagutzki, R. Dörner, P. Schlup, P. Eckle.  
 A. Aghajani-Talesh, J. Biegert, U. Keller  
 “Ionisation von Edelgasen mit ultrakurzen zirkular polarisierten Laserpulsen” – Talk  
 A18.5  
*Deutsche Physikalische Gesellschaft (DPG) Frühjahrstagung*, Frankfurt, Germany, 13.-  
 16. March, 2006
- J. Biegert, A. Guandalini, P. Eckle, U. Keller, A. Couairon, M. Franco, A. Mysyrowicz  
 “Filamentation zur Erzeugung ultrakurzer Lichtfelder” – Talk Q27.6  
*Deutsche Physikalische Gesellschaft (DPG) Frühjahrstagung*, Frankfurt, Germany, 13.-  
 16. March, 2006
- S. V. Marchese, T. Südmeyer, M. Golling, R. Grange, and U. Keller  
 “5- $\mu$ J pulses at 63 W average power from a femtosecond passively mode-locked thin disk  
 laser” – Postdeadline Paper  
*Advanced Solid-State Photonics (ASSP '06)*, Lake Tahoe, Incline Village, Nevada, USA,  
 Jan. 29-Feb. 1, 2006

Hannah D. Foreman, Keith G. Wilcox, Anne C. Tropper, Pascal Dupriez, Andrew Malinowski, Jayanta K. Sahu, Johan Nilsson, David J. Richardson, Francois Morier-Genoud, Ursula Keller, John S. Roberts

“High Power Femtosecond Source Based on Passively Mode-Locked 1055-nm VECSEL and Yb-Fibre Power Amplifier” – Talk WC5

*Advanced Solid-State Photonics (ASSP '06)*, Lake Tahoe, Incline Village, Nevada, USA, Jan. 29-Feb. 1, 2006

A. Guandalini, P. Eckle, M. Anscombe, P. Schlup, J. Biegert and U. Keller (Talk will be given by U. Keller)

“Intense 5.1-fs carrier-envelope-phase controlled pulse generation through filamentation” – Talk WC1

*Advanced Solid-State Photonics (ASSP '06)*, Lake Tahoe, Incline Village, Nevada, USA, Jan. 29-Feb. 1, 2006

S. C. Zeller, R. Grange, S. Schön, M. Haiml, U. Keller, O. Ostinelli, M. Ebnöther and E. Gini

“Antimonide semiconductor saturable absorber for passive mode locking of a 1.5- $\mu\text{m}$  Er:Yb:glass laser at 10 GHz” – Talk TuA7

*Advanced Solid-State Photonics (ASSP '06)*, Lake Tahoe, Incline Village, Nevada, USA, Jan. 29-Feb. 1, 2006

S. C. Zeller, R. Grange, V. Liverini, A. Rutz, S. Schön, M. Haiml, U. Keller, S. Pawlik and B. Schmidt

“A low-loss buried resonant GaInNAs SESAM for 1.3- $\mu\text{m}$  Nd:YLF laser at 1.4 GHz” – Talk TuA6

*Advanced Solid-State Photonics (ASSP '06)*, Lake Tahoe, Incline Village, Nevada, USA, Jan. 29-Feb. 1, 2006

U. Keller, R. Grange, M. Haiml, G. J. Spühler, L. Krainer, O. Ostinelli, M. Golling, K. J. Weingarten

“Pushing the high-pulse-repetition-rate frontier using a new regime of inverse saturable absorption and novel low saturation fluence SESAMs” – Talk TuA3

*Advanced Solid-State Photonics (ASSP '06)*, Lake Tahoe, Incline Village, Nevada, USA, Jan. 29-Feb. 1, 2006

H. J. Unold, D. Lorenser, D. J. H. C. Maas, B. Rudin, A.-R. Bellancourt, U. Keller, E. Gini and D. Ebling

“50-GHz modelocked VECSELs: an integrable alternative to high-repetition-rate solid-state lasers” – Talk TuA2

*Advanced Solid-State Photonics (ASSP '06)*, Lake Tahoe, Incline Village, Nevada, USA, Jan. 29-Feb. 1, 2006

\* J. Biegert et al.

“Coherent control ATP etc.”

PQE, Snowbird, Jan. 2-8, 2006

**2005**

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- A. Guandalini, P. Eckle, M. Anscombe, P. Schlup, J. Biegert, U. Keller  
 “5.1-fs pulses generated by filamentation and carrier envelope phase stability analysis”  
*ICOMB 2005 – 10<sup>th</sup> International Conference on Multiphoton Processes*, Quebec, Canada, Oct. 9-14, 2005
- A. Heinrich, C. P. Hauri, W. Kornelis, P. Schlup, M. P. Anscombe, J. Biegert, U. Keller  
 “Enhanced VUV-assisted high harmonic generation” – Poster  
*ICOMB 2005 – 10<sup>th</sup> International Conference on Multiphoton Processes*, Quebec, Canada, Oct. 9-14, 2005
- \* U. Keller  
 “High intensity pulse generation in the few-optical-cycle regime”  
*Third International Conference on Superstrong Fields in Plasmas*, Villa Monastero, Varenna, Italy, Sept. 19-24, 2005
- \* U. Keller, **Plenary Talk**  
 “Compact ultrafast lasers”  
*International Conference on Advanced Laser Technologies (ALT’05)*, Tianjin, P. R. China, Sept. 3-6, 2005
- B. Schäfer, K. Mann, G. Marowsky, C. Hauri, J. Biegert, U. Keller  
 “Characterization, wavefront reconstruction and propagation of ultra-broadband laser pulses from Hartmann-Shack measurements”  
*Optics and Photonics*, SPIE Meeting, San Diego, USA, July 31 – Aug 4, 2005
- \* U. Keller  
 “High power modelocked lasers”  
*IQEC and CLEO Pacific Rim 2005*, Tokyo, Japan, July 11-15, 2005
- \* U. Keller, A. Heinrich, C. P. Hauri, W. Kornelis, P. Schlup, M. P. Anscombe, J. Biegert, K. J. Schafer, M. B. Gaarde  
 “Control of high-order harmonic generation using attosecond pulse trains”  
*14<sup>th</sup> International Laser Physics Workshop (LPHYS’05)*, Kyoto, Japan, July 4-8, 2005
- \* U. Keller  
 “High repetition rate passively modelocked solid-state and surface-emitting semiconductor lasers”  
*14<sup>th</sup> International Laser Physics Workshop (LPHYS’05)*, Kyoto, Japan, July 4-8, 2005
- \* U. Keller  
 “Intense CEO-controlled few-cycle optical pulse generation”  
*14<sup>th</sup> International Laser Physics Workshop (LPHYS’05)*, Kyoto, Japan, July 4-8, 2005
- C. P. Hauri, W. Kornelis, A. Heinrich, J. Biegert, U. Keller, A. Couairon, A. Mysyrowicz  
 “Production of selective high-order harmonics by filamentation in various gases” – Poster  
 in CLEO CG (High field laser physics and applications)  
*CLEO Europe 2005*, Munich, Germany, June 12-17, 2005
- C. P. Hauri, W. Kornelis, J. Biegert, U. Keller, A. Couairon, A. Mysyrowicz

“Intense CEO-phase-stabilized few-cycle pulses generated by filamentation” – Talk  
JS12-3-THU  
*CLEO Europe 2005*, Munich, Germany, June 12-17, 2005

A. Heinrich, C. P. Hauri, W. Kornelis, P. Schlup, M. P. Anscombe, J. Biegert, U. Keller  
“Control of high-order harmonic generation using attosecond pulse trains” – Talk CG2-4-  
MON  
*CLEO Europe 2005*, Munich, Germany, June 12-17, 2005

W. Kornelis, C. P. Hauri, A. Heinrich, F. W. Helbing, M. P. Anscombe, P. Schlup, J. W.  
G. Tisch, J. Biegert and U. Keller  
”Frequency-sheared, time-delayed XUV pulses by high harmonic generation ” – Talk  
CG2-3-MON  
*CLEO Europe 2005*, Munich, Germany, June 12-17, 2005

M. P. Anscombe, C. P. Hauri, J. Biegert, U. Keller, R. J. Jones  
“CEO fringe stability measurement from ultra-broadband pulses produced by  
filamentation” – Poster in CLEO CG (High field laser physics and applications)  
*CLEO Europe 2005*, Munich, Germany, June 12-17, 2005

A. Gosteva, M. Haiml, U. Keller  
“Novel interferometric technique for measuring the spectrally resolved phase difference  
between orthogonal optical modes” – Talk CH4-4-FRI  
*CLEO Europe 2005*, Munich, Germany, June 12-17, 2005

A. Gosteva, M. Haiml, R. Paschotta, U. Keller  
“Noise as a resolution limiting factor in group delay dispersion measurements with  
spectrally integrated white light interferometers” – Talk CF5-6-FRI  
*CLEO Europe 2005*, Munich, Germany, June 12-17, 2005

A. Schlatter, B. Rudin, S. C. Zeller, R. Paschotta, G. J. Spühler, L. Krainer, U. Keller, N.  
Haverkamp, H. R. Telle  
“Nearly quantum noise limited timing jitter from miniature Er:Yb:glass lasers” – Talk  
CF4-2-THU  
*CLEO Europe 2005*, Munich, Germany, June 12-17, 2005

R. Paschotta, A. Gosteva, U. Keller, J. Dudley  
“Noise in carrier-envelope offset frequency signals obtained from supercontinua” – Talk  
CF6-3-FRI  
*CLEO Europe 2005*, Munich, Germany, June 12-17, 2005

R. Grange, A. Rutz, V. Liverini, M. Haiml, S. Schön, U. Keller  
“Saturation fluence and modulation depth of GaInNAs SESAM around its band edge for  
optimal mode locking” – Talk CE7-2-THU  
*CLEO Europe 2005*, Munich, Germany, June 12-17, 2005

D. J. H. C. Maas, D. Lorensen, H. J. Unold, U. Keller, E. Gini, D. Ebling  
“Towards wafer-scale integration of high-repetition-rate passively modelocked surface-  
emitting semiconductor lasers” – Talk CB7-3-THU  
*CLEO Europe 2005*, Munich, Germany, June 12-17, 2005

S. C. Zeller, G. J. Spühler, L. Krainer, R. Paschotta, U. Keller, K. P. Hansen  
“Frequency comb generation with 50-GHz channel spacing in the telecom C-band” –  
Talk CD5-2-THU  
*CLEO Europe 2005*, Munich, Germany, June 12-17, 2005

S. V. Marchese, E. Innerhofer, R. Paschotta, U. Keller, S. Kurimura, K. Kitamura, G.  
Arisholm  
“Room temperature high power femtosecond optical parametric generator based on  
MgO-doped stoichiometric LiTaO<sub>3</sub>” – Talk CD3-3-WED  
*CLEO Europe 2005*, Munich, Germany, June 12-17, 2005

\* U. Keller, **Tutorial**

“Production of high power femtosecond laser pulses”  
XTRA Summer School *Ultrashort XUV pulses for time-resolved and nonlinear  
applications*, Porquerolles Island, France, May 24-29, 2005

E. Benkler, N. Haverkamp, H. R. Telle, R. Paschotta, B. Rudin, A. Schlatter, S. C. Zeller,  
G. J. Spühler, L. Krainer, U. Keller  
“Nearly quantum-limited noise performance of passively modelocked 10-GHz  
Er:Yb:glass lasers” – Talk CThF6  
*Conference on Lasers and Electro-Optics (CLEO '05)*, Baltimore, Maryland USA, May  
23-27, 2005

L. Krainer, G. J. Spühler, V. Liverini, S. Schön, R. Grange, M. Haiml, A. Schlatter, R.  
Paschotta, U. Keller, S. Pawlik, B. Schmidt  
“Passively modelocked multi-GHz 1.3- $\mu$ m Nd:vanadate lasers with low timing jitter” –  
Talk CThN1  
*Conference on Lasers and Electro-Optics (CLEO '05)*, Baltimore, Maryland USA, May  
23-27, 2005

H. J. Unold, D. Lorenser, D. J. H. C. Maas, R. Grange, R. Paschotta, U. Keller, E. Gini,  
D. Ebling  
“Towards wafer-scale integration of high repetition rate passively modelocked surface-  
emitting semiconductor lasers” – Talk CWI7  
*Conference on Lasers and Electro-Optics (CLEO '05)*, Baltimore, Maryland USA, May  
23-27, 2005

R. Grange, M. Haiml, R. Paschotta, G. J. Spühler, L. Krainer, U. Keller, O. Ostinelli  
“Novel inverse saturable absorption for improved passive modelocking” – Talk CFB5  
*Conference on Lasers and Electro-Optics (CLEO '05)*, Baltimore, Maryland USA, May  
23-27, 2005

R. Grange, M. Haiml, L. Krainer, G. J. Spühler, S. Schön, U. Keller, O. Ostinelli, M.  
Ebnöther, E. Gini  
“Antimonide semiconductor saturable absorber for passive mode locking of a 1.5- $\mu$ m  
Er:Yb:glass laser” – CFE3  
*Conference on Lasers and Electro-Optics (CLEO '05)*, Baltimore, Maryland USA, May  
23-27, 2005

A. Heinrich, C. P. Hauri, W. Kornelis, M. P. Anscombe, C. Erny, F. W. Helbing, P. Schlup, J. W. G. Tisch, J. Biegert, U. Keller  
“Generation of a nearly isolated high harmonic from a long fibers” – Poster JThE9  
*Conference on Lasers and Electro-Optics (CLEO '05)*, Baltimore, Maryland USA, May 23-27, 2005

W. Kornelis, A. Heinrich, C. P. Hauri, F. W. Helbing, M. P. Anscombe, P. Schlup, J. W. G. Tisch, J. Biegert, U. Keller  
“Generation of frequency-sheared XUV radiation by high harmonic generation” – Talk JThH1  
*Conference on Lasers and Electro-Optics (CLEO '05)*, Baltimore, Maryland USA, May 23-27, 2005

C. P. Hauri, W. Kornelis, F. W. Helbing, A. Heinrich, M. P. Anscombe, P. Schlup, A. Couairon, A. Mysyrowicz, J. Biegert, U. Keller  
“CEO-phase-locked 5.7-fs pulses through filamentation” – Talk JTuD2  
*Conference on Lasers and Electro-Optics (CLEO '05)*, Baltimore, Maryland USA, May 23-27, 2005

C. P. Hauri, A. Heinrich, W. Kornelis, M. P. Anscombe, P. Schlup, A. Couairon, A. Mysyrowicz, J. Biegert, U. Keller  
“Selective high-order harmonic generation by filamentation in various gases” – Talk JThG6  
*Conference on Lasers and Electro-Optics (CLEO '05)*, Baltimore, Maryland USA, May 23-27, 2005

B. Schaefer, K. Mann, G. Marowski, C.P. Hauri, J. Biegert, U. Keller  
“Characterisation, wavefront reconstruction and propagation of ultra-broadband laser pulses from Hartmann-Shack measurements,” – Talk A19  
*106. Jahrestagung der Deutschen Gesellschaft fuer angewandte Optik (DGAO)*, Wroclaw, Poland, May 17-21, 2005

\* U. Keller  
“Intense few-cycle optical pulse generation” – Talk LWG1  
*ICONO/LAT 2005*, St.-Petersburg, May 11-15, 2005

V. E. Kisel, A. E. Troshin, V. G. Shcherbitsky, N. V. Kuleshov, V. N. Matrosov, T. A. Matrosova, M. I. Kupchenko, F. Brunner, R. Paschotta, F. Morier-Genoud, U. Keller  
“Femtosecond Yb<sup>3+</sup>:YVO<sub>4</sub> laser” – Talk LWD4  
*ICONO/LAT 2005*, St.-Petersburg, May 11-15, 2005

O. Ostinelli, G. Almuneau, M. Ebnöther, E. Gini, M. Haiml, R. Grange, U. Keller, W. Bächtold  
“Metal-organic vapor-phase epitaxy of antimonide for application to 1.55 μm VCSELs on InP substrates” - Talk ThA-1-5  
*The 17th Indium Phosphide and Related Materials Conference (IPRM 2005)*, Glasgow, Scotland UK, May 8-12, 2005

A. Rutz, V. Liverini, S. Schön

"Absorption edge and defect states analysis in GaInNAs by diffuse reflection spectroscopy" - Poster  
*13. European Molecular Beam Epitaxy Workshop (Euro-MBE)*, Grindelwald, Switzerland, March 7-9, 2005

A. Rutz, R. Grange, V. Liverini, M. Haiml, S. Schön, U. Keller  
"1.5- $\mu\text{m}$  GaInNAs SESAM passively mode-locking a solid-state laser"  
*13. European Molecular Beam Epitaxy Workshop (Euro-MBE)*, Grindelwald, Switzerland, March 7-9, 2005

S. Lecomte, R. Paschotta, U. Keller, S. Pawlik, B. Schmidt, K. Furusawa, A. Malinowski, D. J. Richardson  
"Broadly tunable optical parametric oscillators with up to 82-GHz pulse repetition rate and very high output power" – Talk OFE5  
*Optical Fiber Communication Conference (OFC'2005)*, Los Angeles, USA, March 6-11, 2005

L. Krainer, G. J. Spühler, V. Liverini, S. Schön, R. Grange, M. Haiml, U. Keller, B. Graf, H. P. Gauggel, S. Pawlik, B. Schmidt – Poster  
"Passively modelocked 10-GHz 1.3- $\mu\text{m}$  Nd:vanadate laser for RZ pulse generation"  
*Optical Fiber Communication Conference (OFC'2005)*, Los Angeles, USA, March 6-11, 2005

R. Paschotta, B. Rudin, A. Schlatter, S. C. Zeller, G. J. Spühler, L. Krainer, U. Keller, N. Haverkamp, H. R. Telle – Talk OFE6  
"Nearly quantum-limited timing jitter of passively modelocked 10-GHz diode-pumped Er:Yb:glass lasers"  
*Optical Fiber Communication Conference (OFC'2005)*, Los Angeles, USA, March 6-11, 2005

- \*\* U. Keller, **zwei öffentliche Abendvorträge**  
"Ultrakurze Lichtpulse: Wie und wofür"  
*68. Jahrestagung der Deutschen Physikalischen Gesellschaft (DPG)*, Berlin, Germany, 4.-9. March 2005
- \* J. Biegert, A. Heinrich, C. P. Hauri, W. Kornelis, P. Schlup, M. Anscombe, M. Gaarde, K. J. Schafer, and U. Keller, Hauptvortrag  
"Quantum path control using attosecond pulse trains"  
*68. Jahrestagung der Deutschen Physikalischen Gesellschaft (DPG)*, Berlin, Germany, 4.-9. March 2005
- \* U. Keller, **Keynote**  
"Entwicklungstrends bei Ultrakurzpulslaser"  
Laser in Elektronik und Feinwerktechnik, Erlangen, Germany, 28. Feb. 2005
- \* U. Keller, **Keynote**  
"Photonics activity in Switzerland"  
*1<sup>st</sup> UK-Swiss Applied Photonics Partnering Workshop*, Bern, Switzerland, 22-23. Feb. 2005

S. Lecomte, R. Paschotta, U. Keller, S. Pawlik, B. Schmidt, K. Furusawa, A. Malinowski, D. J. Richardson  
“Broadly tunable optical parametric oscillators with up to 82-GHz pulse repetition rate and very high output power” – Talk TuA5  
*Advanced Solid-State Photonics (ASSP '05)*, Vienna, Austria, Feb. 6-9, 2005

R. Paschotta, B. Schenkel, U. Keller  
“Femtosecond pulse compression with supercontinuum generation in microstructure fiber” – Talk WD3  
*Advanced Solid-State Photonics (ASSP '05)*, Vienna, Austria, Feb. 6-9, 2005

R. Paschotta, B. Rudin, A. Schlatter, S. C. Zeller, G. J. Spühler, L. Krainer, U. Keller, N. Haverkamp, H. R. Telle – Poster TuB3  
“Novel technique for highly sensitive timing jitter measurements”  
*Advanced Solid-State Photonics (ASSP '05)*, Vienna, Austria, Feb. 6-9, 2005

E. Innerhofer, B. Brunner, S. V. Marchese, R. Paschotta, U. Keller, K. Furusawa, J. C. Baggett, T. M. Monro, D. J. Richardson  
“32 W of average power in 24-fs pulses from a passively modelocked thin disk laser with nonlinear fiber compression” – Talk TuA3  
*Advanced Solid-State Photonics (ASSP '05)*, Vienna, Austria, Feb. 6-9, 2005

D. Lorensen, A. Aschwanden, H. J. Unold, D. J. H. C. Maas, R. Paschotta, U. Keller, E. Gini, D. Ebling  
“Passively modelocked surface emitting semiconductor lasers with high repetition rates of up to 30 GHz” – Talk WC4  
*Advanced Solid-State Photonics (ASSP '05)*, Vienna, Austria, Feb. 6-9, 2005

A. Couairon, J. Biegert, C.P. Hauri, U. Keller, A. Mysyrowicz  
“Self-generation of near single-cycle pulses through filamentary propagation” Poster  
*340<sup>th</sup> Wilhelm und Else Heraeus-Seminar, High-Field Attosecond Physics*, Obergurgl, Austria, Jan. 9-15, 2005

\* J. Biegert, A. Heinrich, C. P. Hauri, W. Kornelis, P. Schlup, M. Anscombe, M. Gaarde, K. J. Schafer, and U. Keller  
”Quantum path control using attosecond pulse trains”  
*340<sup>th</sup> Wilhelm und Else Heraeus-Seminar, High-Field Attosecond Physics*, Obergurgl, Austria, Jan. 9-15, 2005

\* K. J. Schafer, J. Mauritsson, M. B. Gaarde, A. Heinrich, J. Biegert, U. Keller  
”Theory of attosecond pulse train control of strong field processes”  
*340<sup>th</sup> Wilhelm und Else Heraeus-Seminar, High-Field Attosecond Physics*, Obergurgl, Austria, Jan. 9-15, 2005

## 2004

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M. Anscombe, C. P. Hauri, A. Heinrich, W. Kornelis, P. Schlup, A. Couairon, A. Mysyrowicz, J. Biegert, U. Keller,

- “Intense CEO-stabilized few-cycle laser pulses from supercontinuum generation in filaments”  
*EU XTRA Network Meeting, Santorini, Greece, Oct. 15-17, 2004*
- Mette B. Gaarde, Kenneth J. Schafer, Arne Heinrich, Jens Biegert, Ursula Keller  
 “Application of attosecond pulse train to quantum path control” – Talk LTuI3  
*88<sup>th</sup> OSA Annual Meeting, Frontiers in Optics, Rochester, USA, Oct. 10-14, 2004*
- \* J. Biegert, C. P. Hauri, P. Schlup, G. Arisholm, U. Keller  
 “Phase-locked 17.3-fs pulses through chirped pulse optical parametric amplification” –  
 Invited Talk LThD2  
*88<sup>th</sup> OSA Annual Meeting, Frontiers in Optics, Rochester, USA, Oct. 10-14, 2004*
- C. P. Hauri, W. Kornelis, A. Heinrich, A. Couairon, A. Mysyrowicz, J. Biegert, U. Keller  
 “Generation of intense few-cycle laser pulses through cascaded self-filamentation” –Talk  
 LMI7  
*88<sup>th</sup> OSA Annual Meeting, Frontiers in Optics, Rochester, USA, Oct. 10-14, 2004*
- \* J. Biegert, P. Schlup, C. P. Hauri, W. Kornelis, F. W Helbing, G. Arisholm, U. Keller,  
 “CEO phase preserved chirped-pulse optical parametric amplification of 17.3-fs pulses”–  
 Invited Talk MoC1  
*Int. Workshop on Parametric Processes and Periodical Structures, Vilnius, Lithuania,  
 Sept. 26-29, 2004*
- \* U. Keller, **Plenary Talk**  
 “From attoseconds to RGB to telecom - the wide world of ultrafast lasers”  
*54. Jahrestagung der Österreichischen Physikalischen Gesellschaft (ÖPG), Johannes  
 Kepler Universität Linz, Austria, Sep. 27-30, 2004*
- C. Erny, G. J. Spühler, L. Krainer, R. Paschotta, K. J. Weingarten, U. Keller  
 “Picosecond pulse-generating laser with turn-key repetition rate tuning from 8.8 to 13.3  
 GHz” – Talk Th3.4.2  
*30<sup>th</sup> European Conference on Optical Communication (ECOC '04), Stockholm, Sweden,  
 Sept. 5-9, 2004*
- L. Krainer, G. J. Spühler, V. Liverini, S. Schön, R. Grange, M. Haiml, S. Pawlik, B.  
 Schmidt, U. Keller – Poster We4.P.060  
 “Novel multi-gigahertz 1.3- $\mu$ m Nd:vanadate laser for data transmission applications”  
*30<sup>th</sup> European Conference on Optical Communication (ECOC '04), Stockholm, Sweden,  
 Sept. 5-9, 2004*
- S. C. Zeller, L. Krainer, G. J. Spühler, R. Paschotta, M. Golling, D. Ebling, K. J.  
 Weingarten, U. Keller  
 “Passively mode-locked 50-GHz Er:Yb:glass laser” – Talk Th.3.4.3  
*30<sup>th</sup> European Conference on Optical Communication (ECOC '04), Stockholm, Sweden,  
 Sept. 5-9, 2004*
- \* U. Keller, **Tutorial** (2x 45 Min.)  
 "Ultrashort-Pulse Lasers and Their Applications"

*EPS Europhoton Conference on Solid-State and Fiber Coherent Light Sources*, Lausanne at Lake Geneva, Switzerland, Aug 29 - Sept 3, 2004

V. E. Kisel, A. E. Troshin, V. G. Shcherbitsky, N. V. Kuleshov, V. N. Matrosov, T. A. Matrosova, M. I Kupchenko, F. Brunner, R. Paschotta, F. Morier-Genoud, U. Keller, Postdeadline Paper PD2

“Laser performance of Yb<sup>3+</sup>:YVO<sub>4</sub> crystal”

*EPS-QEOD Europhoton Conference on Solid-State and Fiber Coherent Light Sources*, Lausanne at Lake Geneva, Switzerland, Aug 29 - Sept 3, 2004

S. V. Marchese, E. Innerhofer, F. Brunner, T. Südmeyer, R. Paschotta, U. Keller, T. Usami, H. Ito, M. Nakamura, K. Kitamura

“Powerful RGB laser source based on a passively mode-locked thin-disk laser” – Talk TuD2

*EPS-QEOD Europhoton Conference on Solid-State and Fiber Coherent Light Sources*, Lausanne at Lake Geneva, Switzerland, Aug 29 - Sept 3, 2004

R. Paschotta

“Numerical simulation of the timing jitter of passively mode-locked laser” – Talk WeD3

*EPS-QEOD Europhoton Conference on Solid-State and Fiber Coherent Light Sources*, Lausanne at Lake Geneva, Switzerland, Aug 29 - Sept 3, 2004

D. Lorensen, A. Aschwanden, R. Paschotta, E. Gini, U. Keller

“Passively mode-locked surface-emitting semiconductor laser with up to 1.9 W average output power” – Talk ThB2

*EPS-QEOD Europhoton Conference on Solid-State and Fiber Coherent Light Sources*, Lausanne at Lake Geneva, Switzerland, Aug 29 - Sept 3, 2004

S. Schön, A. Rutz, V. Liverini, R. Grange, M. Haiml, S. C. Zeller, U. Keller

“Dilute nitride absorbers in passive devices for modelocking of solid-state lasers” – Talk TuC2.4

*International Conference on Molecular Beam Epitaxy*, Edinburgh, Scotland, Aug. 22-27, 2004

J. Biegert, C. P. Hauri, W. Kornelis, A. Heinrich, F. W. Helbing, A. Couairon, A. Mysyrowicz, U. Keller, Postdeadline Paper – PD1

“Intense CEO-stabilized few-cycle laser pulses from supercontinuum generation in filaments”

*13<sup>th</sup> International Conference of Ultrafast Phenomena*, Niigata, Japan, July 25-30, 2004

J. Biegert, M. Bruck, C. P. Hauri, A. Heinrich, F. W. Helbing, W. Kornelis, P. Schlup, U. Keller, R. Lopez-Martens, J. Mauritsson, P. Johnsson, K. Varju, A. L’Huillier, M. Gaarde, K. J. Schafer

“Control of the frequency chirp rate of high harmonics” – Poster ME62

*13<sup>th</sup> International Conference of Ultrafast Phenomena*, Niigata, Japan, July 25-30, 2004

J. Biegert, P. Schlup, C. P. Hauri, W. Kornelis, F. W. Helbing, U. Keller, G. Arisholm  
“CEO phase preservation in chirped-pulse optical parametric amplification of 17.3-fs pulses” – Talk MA5

*13<sup>th</sup> International Conference of Ultrafast Phenomena*, Niigata, Japan, July 25-30, 2004

- \* J. Biegert, C. P. Hauri, P. Schlup, G. Arisholm, U. Keller  
 “CEO-stabilized 17.3-fs pulses through chirped pulse optical parametric amplification”  
 Invited Talk at the seminar Nonlinear Optics and Spectroscopy  
*13th International Laser Physics Workshop (LPHYS '04)*, Trieste, Italy, July 12-16,  
 2004
  
- \* U. Keller  
 “Multilayer coatings for ultrafast lasers”  
*9th Topical Meeting on Optical Interference Coatings (OIC'2004)*, Tucson, Arizona ,  
 June 27- July 2, 2004
  
- M. Gaarde, K. Schafer, A. Heinrich, J. Biegert, U. Keller  
 “Quantum path selection using attosecond pulse trains”  
 APS DAMOP meeting, Tucson, AZ this May 2003
  
- V. Liverini, S. Schön, R. Grange, M. Haiml, S. C. Zeller, U. Keller  
 “GaInNAs SESAMs passively mode-locking 1.3  $\mu\text{m}$  solid-state lasers” – Talk M-V.04  
*E-MRS 2004 Spring Meeting*, Strasbourg, France, May 24-28, 2004
  
- P. Schlup, C. P. Hauri, G. Arisholm, J. Biegert, U. Keller Postdeadline Paper CPDC3  
 “Chirped pulse optical parametric amplification of 17.3-fs, CEO-stabilized pulses”  
*Conference on Lasers and Electro-Optics (CLEO '04)*, San Francisco, USA, May 16-21,  
 2004
  
- A. Aschwanden, D. Lorensen, H. Unold, R. Paschotta, U. Keller, E. Gini, Postdeadline Paper CPDB8  
 “10-GHz passively mode-locked surface-emitting semiconductor laser with 1.4 W output power”  
*Conference on Lasers and Electro-Optics (CLEO '04)*, San Francisco, USA, May 16-21,  
 2004
  
- A. Heinrich, M. Bruck, C. P. Hauri, W. Kornelis, J. W. G. Tisch, J. Biegert, U. Keller  
 “Gas target for efficient high harmonic generation” – Poster ItuI42  
*International Quantum Electronics Conference 2004 (IQEC '04)*, San Francisco, USA,  
 May 16-21, 2004
  
- C. P. Hauri, M. Bruck, J. Biegert, U. Keller, B. Schäfer, K. Mann, G. Marowsky  
 “Wavefront measurements of ultra-broadband laser pulses – wavelength dependence and implications” – Poster ItuI38  
*International Quantum Electronics Conference 2004 (IQEC '04)*, San Francisco, USA,  
 May 16-21, 2004
  
- A. Aschwanden, D. Lorensen, R. Paschotta, U. Keller, E. Gini  
 “Passively modelocked surface-emitting semiconductor laser with 1.7 W output power in 5.9-ps pulses” – Talk CTuY4  
*Conference on Lasers and Electro-Optics (CLEO '04)*, San Francisco, USA, May 16-21,  
 2004

- \* E. Innerhofer, F. Brunner, T. Südmeyer, S. V. Marchese, R. Paschotta, U. Keller, T. Usami, H. Ito, S. Kurimura, K. Kitamura  
 “Powerful RGB laser source for projection displays based on a passively mode-locked thin disk laser” – Invited talk CMU1  
*Conference on Lasers and Electro-Optics (CLEO '04)*, San Francisco, USA, May 16-21, 2004
- C. P. Hauri, P. Schlup, G. Arisholm, J. Biegert, U. Keller  
 “Ultrabroadband chirped pulse optical parametric amplification of 12 fs pulses from a Ti:sapphire oscillator” – Talk CMU6  
*Conference on Lasers and Electro-Optics (CLEO '04)*, San Francisco, USA, May 16-21, 2004
- G. J. Spühler, L. Krainer, R. Paschotta, U. Keller, K. J. Weingarten  
 “Soliton modelocked femtosecond Er:Yb:glass laser” – Talk CTuL2  
*Conference on Lasers and Electro-Optics (CLEO '04)*, San Francisco, USA, May 16-21, 2004
- D. Nodop, L. Krainer, G. J. Spühler, S. Lecomte, M. Golling, R. Paschotta, U. Keller, D. Ebling, T. Ohgoh, T. Hayakawa, K. J. Weingarten  
 “Compact 10-GHz Nd:GdVO<sub>4</sub> laser with 0.5 W average output power and 125 fs rms timing jitter” – Talk CTuCC5  
*Conference on Lasers and Electro-Optics (CLEO '04)*, San Francisco, USA, May 16-21, 2004
- S. Lecomte, R. Paschotta, M. Golling, U. Keller, D. Ebeling, T. Ohgoh, T. Hayakawa  
 “Diode-pumped 40-GHz passively modelocked Nd:YVO<sub>4</sub> laser with 288-mW average output power” – Talk CWF1  
*Conference on Lasers and Electro-Optics (CLEO '04)*, San Francisco, USA, May 16-21, 2004
- C. P. Hauri, M. Bruck, W. Kornelis, J. Biegert, U. Keller  
 “Ultrabroadband dispersive amplification of laser and hollow fiber pulses” – Talk JTUG7  
*Conference on Lasers and Electro-Optics (CLEO '04)*, San Francisco, USA, May 16-21, 2004
- S. C. Zeller, L. Krainer, G. J. Spühler, R. Paschotta, M. Golling, U. Keller, D. Ebling, K. J. Weingarten  
 “Passively modelocked 50-GHz Er:Yb:glass laser” – Talk CFC1  
*Conference on Lasers and Electro-Optics (CLEO '04)*, San Francisco, USA, May 16-21, 2004
- V. Liverini, S. Schön, R. Grange, M. Haiml, S. C. Zeller, U. Keller  
 “A low-loss GaInNAs SESAM modelocking a 1.3- $\mu$ m solid-state laser” – Talk CthV7  
*Conference on Lasers and Electro-Optics (CLEO '04)*, San Francisco, USA, May 16-21, 2004
- G. Arisholm, J. Biegert, P. Schlup, C. P. Hauri, U. Keller  
 “Ultra-broadband chirped-pulse optical parametric amplifier with angularly dispersed beams”

*Norwegian Optics Meeting, May 2-4, 2004*

J. Biegert, C. P. Hauri, A. Heinrich, F. W. Helbing, W. Kornelis, P. Schlup, U. Keller  
“High field physics at ETH”

*EU XTRA Network Meeting, Ringberg, Germany, April 4-7, 2004*

J. Biegert, C. P. Hauri, P. Schlup, U. Keller

“Phase-locked chirped pulse optical parametric amplification of 12-fs pulses from a Ti:sapphire oscillator”

*Spring-Meeting of the German Physical Society, München, Germany, March 22-26, 2004*

\* J. Biegert, M. Bruck, W. Kornelis, F. Helbing, C. Hauri, U. Keller

“Single-shot dynamics of pulses from a gas-filled hollow fiber”

*Spring-Meeting of the German Physical Society, München, Germany, March 22-26, 2004*

J. Biegert, C.P. Hauri, A. Heinrich, F.W. Helbing, W. Kornelis, P. Schlup, U. Keller

“High field physics at ETH”

*EU XTRA Network Meeting, Ringberg, Germany, March 4-7, 2004*

\* S. Schön, V. Liverini, R. Grange, M. Haiml, S. C. Zeller, U. Keller

"Long-wavelength Semiconductor Saturable Absorber Mirrors for passively mode-locked solid-state lasers"

*SPS Spring Meeting, Neuchatel, 3-4 March, 2004*

V. Liverini, S. Schön, R. Grange, M. Haiml, S. C. Zeller, U. Keller

"A low-loss GaInNAs SESAM mode-locking a 1.3- $\mu\text{m}$  solid-state laser" - Poster

*SPS Spring Meeting, Neuchatel, 3-4 March, 2004*

W. Kornelis, Mathis Bruck, C. P. Hauri, A. Heinrich, F. Helbing, J. Biegert, U. Keller, R. Lopez-Martens, J. Mauritsson, P. Johnsson, K. Varju, A. L’Huillier, M. Gaarde, K. Schafer

“Time-frequency characterization of high-order harmonic emission”

*SPS Spring Meeting, Neuchatel, 3-4 March, 2004*

J. Biegert, C. P. Hauri, P. Schlup, U. Keller

“Chirped pulse optical parametric amplification of phase-locked 12-fs pulses from a Ti:sapphire oscillator”

*SPS Spring Meeting, Neuchatel, 3-4 March, 2004*

M. Bruck, W. Kornelis, C. P. Hauri, A. Heinrich, F. Helbing, J. Biegert, U. Keller, Poster  
“Single-shot dynamics of hollow-fiber-compressed pulses”

*SPS Spring Meeting, Neuchatel, 3-4 March, 2004*

L. Krainer, S. C. Zeller, G. J. Spühler, R. Paschotta, U. Keller, K. J. Weingarten

“Passively modelocked 25-GHz and 40-GHz Er:Yb:glass lasers”

*Optical Fiber Communication Conference (OFC’2004), Los Angeles, USA, Feb. 22-27, 2004*

F. Brunner, E. Innerhofer, T. Südmeyer, R. Paschotta, U. Keller, T. Usami, H. Ito, M. Nakamura, K. Kitamura

“Two-stage optical parametric generator with multi-Watt outputs in ultrashort pulses around 800 nm and 1450 nm” – Talk TuC1

*Advanced Solid-State Photonics (ASSP '04)*, Santa Fe, USA, Feb. 1-4, 2004

R. Grange, S. Schön, V. Liverini, S. C. Zeller, M. Haiml, U. Keller

“A low-loss and low-saturation-fluence GaInNAs SESAM for ultrafast 1.3- $\mu$ m solid-state lasers”- Talk WE3

*Advanced Solid-State Photonics (ASSP '04)*, Santa Fe, USA, Feb. 1-4, 2004

A. Schlatter, S. C. Zeller, R. Grange, R. Paschotta, and U. Keller

“Pulse energy dynamics of passively mode-locked solid-state lasers above the Q-switching threshold” – Poster TuB18

*Advanced Solid-State Photonics (ASSP '04)*, Santa Fe, USA, Feb. 1-4, 2004

\* K. J. Weingarten, L. Krainer, S. C. Zeller, G. J. Spühler, R. Paschotta, U. Keller

“High repetition rate lasers”

*Advanced Solid-State Photonics (ASSP '04)*, Santa Fe, USA, Feb. 1-4, 2004

## 2003

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V. Liverini, S. Schoen, R. Grange, M. Haiml, S. Zeller, M. Golling, U. Keller

“1.3- $\mu$ m GaInNAs saturable absorber passively mode locking a solid state laser”

*German MBE workshop*, Munich, October 16-17, 2003

R. Lopez-Martens, J. Mauritsson, P. Johnsson, A. Johansson, A. L’Huillier, W. Kornelis, J. Biegert, U. Keller, O. Tcherbackof, A. Zair, E. Mevel, E. Constant, M. B. Gaarde, K. J. Schafer

“Time-Frequency Characterization of High Harmonic Emission”

*Application of High Field and Short Wavelength Sources X*, Biarritz, France, Oct. 12-15, 2003

\* R. Paschotta, S. C. Zeller, S. Lecomte, U. Keller, L. Krainer, G. J. Spühler, K. J. Weingarten

“Pulse generating lasers for telecom applications”

*OSA Annual Meeting “2003 Frontiers in Optics”*, Tuscon, Arizona USA, October 5-9, 2003

\* R. Paschotta, A. Aschwanden, D. Lorensen, E. Gini, and U. Keller

“High power passively mode-locked semiconductor lasers”

*OSA Annual Meeting “2003 Frontiers in Optics”*, Tuscon, Arizona USA, October 5-9, 2003

\* R. Paschotta, T. Südmeyer, F. Brunner, E. Innerhofer, and U. Keller

“Mode-locked high-power lasers and nonlinear optics - a powerful combination “

*12th International Laser Physics Workshop (LPHYS 2003)*, Hamburg, Germany, August 25-29, 2003

- \* U. Keller, R. Paschotta, A. Aschwanden, D. Lorenser, E. Gini, **Plenary Talk**  
 “Passively modelocked VECSELS”  
*20<sup>th</sup> Nordic Semiconductor Meeting*, Tampere, Finland, Aug. 25-27, 2003
  
- \* K. J. Weingarten, G.J. Spühler, L. Krainer, I. Kilburn, U. Keller  
 “Timing jitter in high repetition-rate solid-state lasers”, Paper MC3.1  
*LEOS Summer Topical meeting on Photonic Time/Frequency Metrology and Control (PTFMC)*, Vancouver, Canada, July 14-16, 2003
  
- \* G. Steinmeyer, F. W. Helbing, U. Keller  
 “Physics and stabilization of the carrier-envelope phase of few-cycle lasers”, Paper MC2.4  
*LEOS Summer Topical meeting on Photonic Time/Frequency Metrology and Control (PTFMC)*, Vancouver, Canada, July 14-16, 2003
  
- \* F. Brunner, T. Südmeyer, E. Innerhofer, R. Paschotta, and U. Keller  
 ”Passively mode-locked high-power lasers and femtosecond high-power nonlinear frequency conversion”  
*11<sup>th</sup> International Conference Laser Optics 2003*, St. Petersburg, Russia, June 30-July 3, 2003
  
- G. Steinmeyer, F. W. Helbing, U. Keller  
 “Frontiers of carrier-envelope stabilization schemes for femtosecond oscillators,”  
*4<sup>th</sup> International Ultrafast Optics Conference*, Vienna, June 29-July 3, 2003
  
- J. Biegert, B. Schenkel, U. Keller, M. Nisoli, G. Sanone, S. Stagira, C. Vozzi, S. De Silvestri, O. Svelto  
 “Generation of 3.8 fs pulses through adaptive cascaded hollow fiber compression”  
*4<sup>th</sup> International Ultrafast Optics Conference*, Vienna, June 29-July 3, 2003
  
- G. Sansone, S. Stagira, M. Nisoli, S. De Silvestri, C. Vozzi, B. Schenkel, J. Biegert, U. Keller, K. Starke, D. Ristau, G. Steinmeyer  
 “4.6 fs pulses by mirror-only dispersion control of a hollow fiber supercontinuum”  
*4<sup>th</sup> International Ultrafast Optics Conference*, Vienna, June 29-July 3, 2003
  
- C. P. Hauri, M. Bruck, W. Kornelis, J. Biegert, U. Keller, Poster  
 “Generation of 14.8 fs pulses in a spatially dispersive amplifier”  
*4<sup>th</sup> International Ultrafast Optics Conference*, Vienna, June 29-July 3, 2003
  
- \* U. Keller, S. C. Zeller, S. Lecomte, R. Paschotta, L. Krainer, G. J. Spühler, K. J. Weingarten  
 “Novel 10 and 40 GHz telecom pulse generating sources with high average power”  
*4<sup>th</sup> International Ultrafast Optics Conference*, Vienna, June 29-July 3, 2003
  
- \* T. Südmeyer, F. Brunner, E. Innerhofer, R. Paschotta, U. Keller, T. Usami, H. Ito, M. Nakamura, K. Kitamura, K. Furusawa, J. C. Baggett, T. M. Monroe, D. J. Richardson – CLEO CA, Solid-state lasers  
 “High-power femtosecond nonlinear devices pumped with a modelocked thin disk laser”

*CLEO Europe and EQEC 2003*, Munich, June 23-27, 2003

F. Helbing, G. Steinmeyer, U. Keller

“Characterization of carrier-envelope offset phase noise generated by supercontinuum generation in microstructured fibers” – CLEO CH, Ultrafast Optics

*CLEO Europe and EQEC 2003*, Munich, June 23-27, 2003

M. Nisoli, G. Sansone, S. Stagira, C. Vozzi, S. DeSilvestri, O. Svelto, B. Schenkel, J. Biegert, U. Keller

“3.7 fs pulses from adaptive pulse compression of a cascaded hollow fiber supercontinuum” – CLEO CH, Ultrafast Optics

*CLEO Europe and EQEC 2003*, Munich, June 23-27, 2003

R. Paschotta, S. Lecomte, U. Keller, L. Krainer, G. J. Spühler, K. J. Weingarten

“Picosecond pulse sources in the 1.5- $\mu$ m region with multi-GHz repetition rates” – CLEO CJ, Optical Technologies for Communication

*CLEO Europe and EQEC 2003*, Munich, June 23-27, 2003

\* A. Aschwanden, D. Lorensen, R. Häring, R. Paschotta, E. Gini, U. Keller

“Modelocked high-power surface-emitting semiconductor laser” – CLEO CC, Semiconductor Lasers

*CLEO Europe and EQEC 2003*, Munich, June 23-27, 2003

R. Paschotta, R. Häring, U. Keller, A. Garnache, S. Hoogland, A. C. Tropper

“Soliton-like pulse shaping mechanism in passively modelocked surface-emitting semiconductor lasers”

*CLEO Europe and EQEC 2003*, Munich, June 23-27, 2003

B. Schenkel, J. Biegert, U. Keller, M. Nisoli, G. Sansone, S. Stagira, C. Vozzi, S. De Silvestri, O. Svelto

“Adaptive pulse compression to 3.7 fs of a cascaded hollow fiber supercontinuum” – CLEO #8, Ultrafast Optics

*Conference on Lasers and Electro-Optics 2003 (CLEO 2003)*, Baltimore, USA, June 1-6, 2003

S. Hoogland, A. C. Tropper, A. Garnache, I. Sagnes, B. Paldus, K. J. Weingarten, R. Grange, M. Haiml, R. Paschotta, U. Keller

“Picosecond operation of a 1518-nm passively modelocked surface-emitting laser” – CLEO #3, Semiconductor Lasers and LEDs

*Conference on Lasers and Electro-Optics 2003 (CLEO 2003)*, Baltimore, USA, June 1-6, 2003

D. Lorensen, A. Aschwanden, R. Häring, R. Paschotta, E. Gini, U. Keller

“Modelocked high-power surface-emitting semiconductor laser” – CLEO #3, Semiconductor Lasers and LEDs

*Conference on Lasers and Electro-Optics 2003 (CLEO 2003)*, Baltimore, USA, June 1-6, 2003

L. Krainer, G. J. Spühler, I. J. Kilburn, P. S. Golding, P. A. Crosby, M. Brownell, K. J. Weingarten, R. Paschotta, U. Keller

“C-band tunable 25-GHz passively modelocked Er:Yb:glass laser” – CLEO #8, Ultrafast Optics  
*Conference on Lasers and Electro-Optics 2003 (CLEO 2003)*, Baltimore, USA, June 1-6, 2003

S. Lecomte, R. Paschotta, L. Krainer, K. J. Weingarten, U. Keller  
“Tunable optical parametric oscillator generating picosecond pulses around 1.55  $\mu\text{m}$  with 10-GHz repetition rate” – CLEO #4, Application of nonlinear Optics  
*Conference on Lasers and Electro-Optics 2003 (CLEO 2003)*, Baltimore, USA, June 1-6, 2003

F. Brunner, T. Südmeyer, E. Innerhofer, R. Paschotta, U. Keller, K. Furusawa, J. C. Baggett, T. M. Monro, D. J. Richardson  
“Sub-40-fs pulses with 18-W average power from a passively modelocked thin disk Yb:YAG laser with nonlinear fiber compression” – CLEO #8, Ultrafast Optics  
*Conference on Lasers and Electro-Optics 2003 (CLEO 2003)*, Baltimore, USA, June 1-6, 2003

\* U. Keller, F. Helbing, G. Steinmeyer  
“Carrier-envelope control of femtosecond lasers with attosecond timing jitter”  
Joint CLEO/QELS Symposium on Attosecond Stabilization and Metrology  
*Conference on Lasers and Electro-Optics 2003 (CLEO 2003)*, Baltimore, USA, June 1-6, 2003

G. J. Spühler, L. Krainer, I. Kilburn, M. Dymott, K. J. Weingarten, R. Paschotta, U. Keller  
“Picosecond pulse-generating laser with repetition rate of 10 GHz and rms jitter < 100 fs fully tunable over C-band”, paper TuL  
*Optical Fiber Communication Conference (OFC'2003)*, Atlanta, Georgia, USA, March 23-28, 2003

F. Brunner, T. Südmeyer, E. Innerhofer, R. Paschotta, U. Keller, K. Furusawa, J. C. Baggett, T. M. Monro, D. J. Richardson  
“Sub-50-fs pulses with 24-W average power from a passively mode-locked thin disk Yb:YAG laser with nonlinear fiber compression”  
*Advanced Solid-State Photonics (ASSP '03)*, San Antonio, Texas, USA, Feb. 2-5, 2003

T. Südmeyer, E. Innerhofer, F. Brunner, R. Paschotta, U. Keller, T. Usami, H. Ito, M. Nakamura, K. Kitamura, D. C. Hanna  
“Femtosecond fiber-feedback OPO with 18 W average power based on periodically poled stoichiometric LiTaO<sub>3</sub>”  
*Advanced Solid-State Photonics (ASSP '03)*, San Antonio, Texas, USA, Feb. 2-5, 2003

E. Innerhofer, T. Südmeyer, F. Brunner, R. Häring, A. Aschwanden, R. Paschotta, C. Hönninger, M. Kumkar, U. Keller  
“Thin disk Yb:YAG lasers generating 60 W average power in picosecond or femtosecond pulses”  
*Advanced Solid-State Photonics (ASSP '03)*, San Antonio, Texas, USA, Feb. 2-5, 2003

S. Lecomte, L. Krainer, G. J. Spühler, K. J. Weingarten, R. Paschotta, U. Keller

“Tunable pulse-generating sources at 1.5  $\mu\text{m}$  with 10 - 160 GHz repetition rate”  
*Advanced Solid-State Photonics (ASSP '03)*, San Antonio, Texas, USA, Feb. 2-5, 2003

## 2002

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S. Schön, T. Fritz, G. Wrigge, U. Keller, Poster Presentation  
“Interface formation and surface morphology of GaAs saturable absorber layers grown on insulator”  
*MRS Fall Meeting 2002*, Boston, USA, Dec. 2-6, 2002 (abstract book p. 507)

\* G. Steinmeyer  
“The role of microstructuring for dispersion compensation in femtosecond optics”  
*MRS Fall Meeting 2002*, Boston, USA, Dec. 2-6, 2002 (abstract book p. 749)

\* U. Keller, R. Paschotta, S. Lecomte, R. Häring, L. Krainer, G. J. Spühler, K. J. Weingarten  
“Novel high-performance pulse generating lasers from 10 GHz to 160 GHz”  
*Annual Meeting of the IEEE Lasers and Electro-Optics Society (LEOS 2002)*, Glasgow, Scotland, Nov. 10-14, 2002

A. Aschwanden, D. Lorenser, R. Häring, R. Paschotta, E. Gini, F. Morier-Genoud, U. Keller, Poster Presentation  
“Passively modelocked surface-emitting semiconductor laser with nearly 1 W average power”  
*29<sup>th</sup> International Symposium on Compound Semiconductors*, Lausanne, Switzerland, Oct. 7-10, 2002

R. Paschotta, R. Häring, A. Garnache, S. Hoogland, A. C. Tropper, U. Keller, Poster Presentation  
“Soliton-like pulse shaping mechanism in passively modelocked surface-emitting semiconductor lasers”  
*29<sup>th</sup> International Symposium on Compound Semiconductors*, Lausanne, Switzerland, Oct. 7-10, 2002

S. Schön, T. Fritz, E. Müller, G. Wrigge, U. Keller, Poster Presentation  
“Interface and defect formation in GaAs saturable absorber layers grown on insulator”  
*29<sup>th</sup> International Symposium on Compound Semiconductors*, Lausanne, Switzerland, Oct. 7-10, 2002

\* U. Keller, **Tutorial** (1 hour)  
“Current status and future perspective of passively modelocked diode-pumped solid-state lasers”  
*OSA Annual Meeting 2002*, Orlando, Florida USA from 29 Sept. - 3. Oct. 2002

\* T. Südmeyer, F. Brunner, E. Innerhofer, R. Paschotta, U. Keller  
“Novel ultrafast parametric systems based on passively mode-locked thin disk lasers with high average power,”

*Stanford Photonics Research Center (SPRC) Annual Meeting*, Stanford, Sept. 16-18, 2002

- \* K. J. Weingarten, **Panel Talk**  
“Pulsed Lasers for High-Speed Transmission”  
*The WDM Solutions 40 Gbit/s Forum*, Dallas, TX, USA, Sept. 15, 2002  
  
K. J. Weingarten, G. J. Spühler, M. Dymott, I. Klimov, G. Luntz, L. Baraldi, I. Kilburn, P. Crosby, S. Thomas, O. Zehnder, C. Y. Teisset, M. Brownell, R. Dangel, B. J. Offrein, G. L. Bona, O. Buccafusca, Y. Kaneko, L. Krainer, R. Paschotta, U. Keller  
“40 GHz pulse generating source with sub-picosecond timing jitter”  
*28<sup>th</sup> European Conference on Optical Communication (ECOC '02)*, Copenhagen, Denmark, Sept. 8-12, 2002
- \* G. Steinmeyer, F. Helbing, U. Keller  
“Carrier-envelope control of femtosecond lasers with attosecond timing jitter”  
*11th International Laser Physics Workshop (LPHYS '2002)*, Bratislava, Slovak Republic, July 1 - 5, 2002.
- \* R. Paschotta, F. Brunner, E. Innerhofer, T. Südmeyer and U. Keller  
“Ultrashort pulses with high average power”  
*International Quantum Electronics Conference 2002 (IQEC 2002)*, Moscow, Russia, June 22-28, 2002  
  
W. Kornelis, J. Biegert, J. W. G. Tisch, U. Keller, M. Nisoli, G. Sansone, S. Stagira, C. Vozzi, S. DeSilvestri, Postdeadline Paper  
“Single-shot, kHz SPIDER measurements of 3-cycle laser pulses”  
*Conference on Lasers and Electro-Optics 2002 (CLEO 2002)*, Long Beach, USA, May 19-24, 2002  
  
B. Agate, A. J. Kemp, C. T. A. Brown, W. Sibbett, U. Keller, Poster presentation  
“Efficient, high-repetition-rate, blue source using a compact Cr:LiSAF laser” – poster CWA36  
*Conference on Lasers and Electro-Optics 2002 (CLEO 2002)*, Long Beach, USA, May 19-24, 2002  
  
F. W. Helbing, G. Steinmeyer, L. Gallmann, U. Keller, R. S. Windeler  
“Carrier-envelope offset dynamics and stabilization of femtosecond lasers” – talk CThT3  
*Conference on Lasers and Electro-Optics 2002 (CLEO 2002)*, Long Beach, USA, May 19-24, 2002  
  
U. Siegner, M. Haiml, J. Kunde, U. Keller, Poster presentation  
“Two-photon-absorption signals from semiconductors for adaptive pulse compression” – poster CWA49  
*Conference on Lasers and Electro-Optics 2002 (CLEO 2002)*, Long Beach, USA, May 19-24, 2002  
  
S. Lecomte, L. Krainer, R. Paschotta, U. Keller, M. J. P. Dymott, K. J. Weingarten

“Parametric oscillator generating 6-ps pulses at 1.56  $\mu\text{m}$  with 10 GHz repetition rate” – talk CThK2  
*Conference on Lasers and Electro-Optics 2002 (CLEO 2002)*, Long Beach, USA, May 19-24, 2002

A. Aschwanden, R. Häring, R. Paschotta, E. Gini, U. Keller  
“Passively modelocked surface-emitting semiconductor laser with nearly 1 W average power” – talk CThY2  
*Conference on Lasers and Electro-Optics 2002 (CLEO 2002)*, Long Beach, USA, May 19-24, 2002

L. Krainer, P. M. Maletinsky, M. Moser, R. Paschotta, U. Keller, Poster presentation  
“Mode-locked Nd:YVO<sub>4</sub> laser with 157 GHz repetition rate” – poster CWA41  
*Conference on Lasers and Electro-Optics 2002 (CLEO 2002)*, Long Beach, USA, May 19-24, 2002

L. Krainer, G. J. Spühler, I. Klimov, C. Y. Teisset, K. J. Weingarten, R. Paschotta, U. Keller  
“Tunable picosecond Er:Yb:glass laser with 10 GHz repetition rate” – talk CML2  
*Conference on Lasers and Electro-Optics 2002 (CLEO 2002)*, Long Beach, USA, May 19-24, 2002

T. Südmeyer, F. Brunner, R. Paschotta, T. Usami, H. Ito, M. Nakamura, K. Kitamura, U. Keller  
“Femtosecond optical parametric generation (OPG) in periodically poled stoichiometric LiTaO<sub>3</sub> with >1W average power” – talk CTuO4  
*Conference on Lasers and Electro-Optics 2002 (CLEO 2002)*, Long Beach, USA, May 19-24, 2002

E. Innerhofer, T. Südmeyer, F. Brunner, R. Häring, A. Aschwanden, R. Paschotta, U. Keller, C. Hönniger, M. Kumkar  
“60 W average power in picosecond pulses from a passively modelocked Yb:YAG thin-disk laser” – talk CTuD4  
*Conference on Lasers and Electro-Optics 2002 (CLEO 2002)*, Long Beach, USA, May 19-24, 2002

F. Brunner, T. Südmeyer, E. Innerhofer, R. Paschotta, F. Morier-Genoud, U. Keller, J. Gao, K. Contag, A. Giesen, V. E. Kisel, V. G. Shcherbitsky, N. V. Kuleshov  
“240-fs pulses with 22-W average power from a passively mode-locked thin-disk Yb:KY(WO<sub>4</sub>)<sub>2</sub> laser” – talk CME3  
*Conference on Lasers and Electro-Optics 2002 (CLEO 2002)*, Long Beach, USA, May 19-24, 2002

J. Biegert, W. Kornelis, G. Steinmeyer, J. W. G. Tisch, U. Keller, M. Nisoli, G. Sansone, S. Stagria, C. Vozzi, S. De Silvestri, Postdeadline Paper PD1  
“Jitter of 3-cycle laser pulses from a gas-filled capillary – Single shot SPIDER pulse characterization at 1 kHz”  
*Ultrafast Phenomena XIII*, Vancouver, May 12-17, 2002

F. W. Helbing, G. Steinmeyer, U. Keller

“Carrier-envelope offset dynamics and stabilization of femtosecond lasers and amplifiers”– Paper MA2  
*Ultrafast Phenomena XIII*, Vancouver, May 12-17, 2002

G. J. Spühler, I. Klimov, C. Teisset, K. J. Weingarten, L. Krainer, R. Paschotta, U. Keller  
“Tunable picosecond pulse-generating laser with a repetition rate exceeding 10 GHz”  
*Optical Fiber Communication Conference (OFC'2002)*, Anaheim, California, March 17-22, 2002 – accepted for oral presentation

- \* G. L. Duveneck, M. A. Bopp, M. Ehrat, L. P. Balet, M. Haiml, U. Keller, G. Marowsky, S. Soria, **Keynote presentation**  
“Two-photon fluorescence excitation of macroscopic areas on planar waveguides  
*Biosensors 2002 - The Seventh World Congress on Biosensors*, Kyoto, Japan, May 15-17, 2002
- \* U. Keller  
“Ultrafast laser oscillators: perspectives from past to future”  
*SPS Spring Meeting*, Lausanne, Feb. 28 – March 1, 2002
- \* R. Paschotta, F. Brunner, E. Innerhofer, T. Südmeyer, U. Keller,  
“High average power femtosecond and picosecond lasers”  
*Advanced Solid-State Lasers (ASSL '02)*, Quebec, Canada, Feb. 3-6, 2002

## 2001

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- \* U. Siegner, J. Kunde, M. Haiml, U. Keller  
“Adaptive control of ultrafast nonlinearities in semiconductors”  
*II. International Workshop on Optimal Control of Quantum Dynamics: Theory and Experiment*, Ringberg Castle, Tegernsee, Germany, 9.-12. Dec. 2001  
  
S. Schön, L. Gallmann, M. Haiml, U. Keller  
“Novel AlGaAs/CaF<sub>2</sub> SESAM Device for Ultrashort Pulse Generation”  
MRS Fall Meeting, Boston, USA, Nov. 2001  
*Mat. Res. Soc. Symp. Proc.*, vol. 696, 2002  
  
T. Fritz, M. Haiml, S. Schön, U. Keller  
“GaAs Heteroepitaxy on fluoride by electron beam induced surface modification”  
MRS Fall Meeting, Boston, USA, Nov. 2001  
*Mat. Res. Soc. Symp. Proc.*, vol. 696, pp. 69-74, 2002
- \* U. Siegner, M. Haiml, J. Kunde, U. Keller  
“Adaptive control of ultrafast semiconductor nonlinearities”  
*OSA Annual Meeting*, Long Beach, CA, USA, October 14-19, 2001
- \* G. Steinmeyer, L. Gallmann, U. Keller  
“Ultrashort pulse generation in the 5-fs regime”  
*OSA Annual Meeting*, Long Beach, CA, USA, October 14-19, 2001

- T. Fritz, S. Schön, U. Keller  
 “Präzises Schichtdickenwachstum epitaktischer Multischichtsysteme durch eine spektrale in situ Kontrolle“  
*MBE workshop*, Berlin, Germany, September 2001
- \* M. Achermann, U. Siegner and U. Keller,  
 “Ultrafast goes Local”  
*11<sup>th</sup> International Symposium on Ultrafast Phenomena in Semiconductors (11-UFPS)*, Vilnius, Lithuania, Aug. 26-29, 2001
- \* U. Keller  
*NKT Advanced Photonics Summer School*, Royal Academy of Science, Copenhagen, Aug. 19-26, 2001
- L. Gallmann, G. Steinmeyer, G. Imeshev, M. M. Fejer, J.-P. Meyn, U. Keller  
 “Sub-6-fs blue pulses generated by second-harmonic generation pulse compression,”  
*Ultrafast Optics '01*, Chateau Montabello, Ontario, Canada, July 23-26, 2001
- G. Cerullo, M. Zavelani-Rossi, S. De Silvestri, L. Gallmann, G. Steinmeyer, U. Keller  
 “Few-optical-cycle laser pulses by OPA: Broadband chirped mirror compression and SPIDER characterization”  
*Ultrafast Optics '01*, Chateau Montabello, Ontario, Canada, July 23-26, 2001
- P. Baum, S. Lochbrunner, E. Riedle, L. Gallmann, G. Steinmeyer, U. Keller  
 “Optimal and flexible compression of tunable visible pulses”  
*Ultrafast Optics '01*, Chateau Montabello, Ontario, Canada, July 23-26, 2001
- C. P. Hauri, B. Schenkel, T. Rupp, G. Steinmeyer, U. Keller  
 “Novel adaptive scheme for acousto-optic gain equalization and ultrabroadband amplification”  
*Ultrafast Optics '01*, Chateau Montabello, Ontario, Canada, July 23-26, 2001
- \* G. Steinmeyer, F. W. Helbing, U. Keller, J. Stenger, H. R. Telle  
 “Carrier-envelope measurements and their applications: nonlinear optics with sub-cycle sensitivity,”  
*Ultrafast Optics '01*, Chateau Montabello, Ontario, Canada, July 23-26, 2001
- M. Achermann, U. Siegner, L.-E. Wernerson, U. Keller  
 “Nano-scale Schottky contacts: Ultrafast drift-diffusion dynamics studied in the optical near-field,”  
*10<sup>th</sup> Int. Conf. on Modulated Semiconductor Structures (MSS'10)*, Linz, Austria, July 23-27, 2001
- \* U. Keller, **Plenary Talk**  
 “New frontiers in ultrashort pulse generation,”  
*10<sup>th</sup> Annual International Laser Physics Workshop (LPHYS'01)*, Moscow, July 3-7, 2001
- \* R. Paschotta, F. Brunner, T. Südmeyer and U. Keller, **Keynote Speaker**  
 “Picosecond and femtosecond all-solid-state lasers with high average output power”

*CLEO/Europe Focus Meeting 2001*, Munich, June 18-22, 2001

M. Achermann, U. Siegner, L.-E. Wernerson, U. Keller

“Carrier dynamics around nano-scale Schottky contacts: a femtosecond near-field study“  
*ICFSI-8, 8th International Conference on the Formation of Semiconductor Interfaces*,  
Hokkaido University Conference Hall, Sapporo, JAPAN, 10-15 June, 2001

- \* G. Steinmeyer, L. Gallmann, U. Keller, G. Imeshev, M. M. Fejer, J.-P. Meyn  
“Ultrakurze blaue Pulse durch quasiphasenangepasste Frequenzverdopplung in  
Lithiumtantalat“  
*DGaO-Jahrestagung 2001*, Göttingen, 8. June 2001

B. Agate, A. J. Kemp, J. M. Hopkins, W. Sibbett, J. F. Allen, U. Keller, D. Burns

“Highly-compact, femtosecond Cr:LiSAF lasers,“ – paper CMF2  
*Conference on Lasers and Electro-Optics 2001 (CLEO 2001)*, Baltimore, USA, May 6-  
11, 2001

J. H. V. Price, L. Lefort, D. J. Richardson, G. J. Spühler, R. Paschotta, U. Keller, C.  
Barty, A. Fry, J. Weston

“A practical, low-noise, stretched pulse Yb doped fiber laser” – paper CTuQ6  
*Conference on Lasers and Electro-Optics 2001 (CLEO 2001)*, Baltimore, USA, May 6-  
11, 2001

L. Krainer, R. Paschotta, M. Moser, U. Keller

“77 GHz repetition rate from a soliton modelocked Nd:YVO4 laser” – paper CMF4  
*Conference on Lasers and Electro-Optics 2001 (CLEO 2001)*, Baltimore, USA, May 6-  
11, 2001

S. Schön, L. Gallmann, M. Haiml, U. Keller,

”Fluoride SESAM for ultrabroadband pulse generation” – paper CWB2  
*Conference on Lasers and Electro-Optics 2001 (CLEO 2001)*, Baltimore, USA, May 6-  
11, 2001

M. Zavelani-Rossi, G. Cerullo, S. de Silvestri, L. Gallmann, G. Steinmeyer, U. Keller

“SPIDER characterization of sub-6-fs pulses in the visible” – paper CTuN5  
*Conference on Lasers and Electro-Optics 2001 (CLEO 2001)*, Baltimore, USA, May 6-  
11, 2001

L. Gallmann, G. Steinmeyer, U. Keller, G. Imeshev, M. M. Fejer, J.-P. Meyn

“Generation of sub-6-fs blue pulses by QPM-SHG pulse compression” – paper CMK1  
*Conference on Lasers and Electro-Optics 2001 (CLEO 2001)*, Baltimore, USA, May 6-  
11, 2001

G. Steinmeyer, L. Gallmann, N. Matuschek, D. H. Sutter, U. Keller

“Back-side coated chirped mirrors for dispersion compensation over one octave” – paper  
CWB1  
*Conference on Lasers and Electro-Optics 2001 (CLEO 2001)*, Baltimore, USA, May 6-  
11, 2001

- F. W. Helbing, G. Steinmeyer, L. Gallmann, U. Keller, J. Stenger, H. R. Telle, R. S. Windeler  
 “Carrier-envelope offset frequency dynamics of a modelocked Ti:sapphire laser,” – paper CTuG3  
*Conference on Lasers and Electro-Optics 2001 (CLEO 2001)*, Baltimore, USA, May 6-11, 2001
- T. Rupp, B. Schenkel, C. P. Hauri, G. Steinmeyer, U. Keller  
 “Novel adaptive scheme for acousto-optic gain equalization and ultrabroadband amplification” – paper CMP2  
*Conference on Lasers and Electro-Optics 2001 (CLEO 2001)*, Baltimore, USA, May 6-11, 2001
- \* F. Brunner, R. Paschotta, G. J. Spühler, J. Aus der Au, F. Morier-Genoud, U. Keller, R. Hövel, M. Moser, S. Erhard, M. Karszewski, A. Giesen  
 “Widely tunable pulse durations from a passively modelocked thin disk Yb:YAG laser” – paper CWF1  
*Conference on Lasers and Electro-Optics 2001 (CLEO 2001)*, Baltimore, USA, May 6-11, 2001
- S. Erhard, J. Gao, A. Giesen, K. Contag, A. A. Lagatsky, A. Abdolvand, N. V. Kuleshov, J. Aus der Au, G. J. Spühler, F. Brunner, R. Paschotta, U. Keller,  
 “High-Power Yb:KGW and Yb:KYW Thin Disk Laser Operation” – paper CWF2  
*Conference on Lasers and Electro-Optics 2001 (CLEO 2001)*, Baltimore, USA, May 6-11, 2001
- \* T. Südmeyer, J. Aus der Au, R. Paschotta, U. Keller, P. G. R. Smith, D. J. Richardson, G. W. Ross, D. C. Hanna,  
 “Femtosecond and picosecond fiber-feedback OPO” – paper CThJ1  
*Conference on Lasers and Electro-Optics 2001 (CLEO 2001)*, Baltimore, USA, May 6-11, 2001
- R. Häring, R. Paschotta, E. Gini, F. Morier-Genoud, H. Melchior, U. Keller, D. Martin  
 “Passively modelocked surface-emitting semiconductor laser with >200 mW average output power” – paper CMB1  
*Conference on Lasers and Electro-Optics 2001 (CLEO 2001)*, Baltimore, USA, May 6-11, 2001
- M. Achermann, U. Keller, U. Siegner, L.-E. Wernerson, Poster  
 “Carrier dynamics around nano-scale Schottky contacts studied by femtosecond near-field optics,” – Poster QTuE4  
*Quantum Electronics and Laser Science Conference 2001 (QELS 2001)*, Baltimore, USA, May 6-11, 2001
- J. Kunde, B. Baumann, S. Arlt, F. Morier-Genoud, U. Keller, U. Siegner  
 “Efficient adaptive feedback control of ultrafast semiconductor nonlinearities,” – paper QTuG4  
*Quantum Electronics and Laser Science Conference 2001 (QELS 2001)*, Baltimore, USA, May 6-11, 2001

H. R. Telle, J. Stenger, T. Binnewies, G. Wilpers, U. Sterr, Chr. Tamm, F. Riehle, G. Steinmeyer, U. Keller, R. S. Windeler  
“Phase-coherent frequency measurements of the Calcium- and Ytterbium-optical frequency standards with a Kerr-lens modelocked femtosecond laser“ – paper CTuG4  
*Quantum Electronics and Laser Science Conference 2001 (QELS 2001)*, Baltimore, USA, May 6-11, 2001

G. Steinmeyer, N. Matuschek, L. Gallmann, D. Sutter, U. Keller  
“Eine neue Generation von gechirpten Spiegeln zur Dispersionskompensation über mehr als eine optische Oktave”  
*Frühjahrstagung der Deutschen Physikalischen Gesellschaft*, Berlin, April 2-6, 2001

\* G. Steinmeyer, L. Gallmann, U. Keller, G. Imeshev, M. M. Fejer, J.-P. Meyn  
“Erzeugung von blauen sub-6-fs Pulsen durch quasiphasenangepasste Frequenzverdopplung”  
*Frühjahrstagung der Deutschen Physikalischen Gesellschaft*, Berlin, April 2-6, 2001

S. Schön, L. Gallmann, M. Haiml, U. Keller  
“Growth and optical properties of semiconductor saturable absorber grown on ultrabroadband high-reflection mirrors for sub-10-fs pulse generation”  
*Euro-MBE 2001*, Hinterzarten, Black Forest, Germany, Feb. 4-7, 2001

R. Paschotta, F. Brunner, J. Aus der Au, G. J. Spühler, S. Erhard, A. Giesen, U. Keller  
“Passive modelocking of thin-disk lasers: effects of spatial hole burning”  
*Advanced Solid-State Lasers (ASSL '01)*, Seattle, USA, Jan. 28-31, 2001

T. Südmeyer, J. Aus der Au, R. Paschotta, U. Keller, P. G. R. Smith, G. W. Roos, D. C. Hanna  
“Femtosecond fiber feedback OPO”  
*Advanced Solid-State Lasers (ASSL '01)*, Seattle, USA, Jan. 28-31, 2001

L. Krainer, R. Paschotta, M. Moser, U. Keller  
“Soliton modelocked miniature Nd:YVO<sub>4</sub> laser with 77 GHz repetition rate”  
*Advanced Solid-State Lasers (ASSL '01)*, Seattle, USA, Jan. 28-31, 2001

M. Larionov, J. Gao, S. Erhard, A. Giesen, K. Contag, V. Peters, E. Mix, L. Fornasiero, K. Petermann, G. Huber, J. Aus der Au, G. J. Spühler, F. Brunner, R. Paschotta, U. Keller, A. A. Lagatsky, A. Abdolvand, N. V. Kuleshov  
“Thin disk laser operation and spectroscopy characterization of Yb-doped Sesquioxides and Potassium Tungstates”  
*Advanced Solid-State Lasers (ASSL '01)*, Seattle, USA, Jan. 28-31, 2001

## 2000

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\* S. Schön, M. Haiml, L. Gallmann, U. Keller  
“Novel semiconductor materials and saturable absorber mirrors for sub-10-femtosecond pulse generation”  
*2000 Conference on Optoelectronic and Microelectronic Materials and Devices (COMMAD 2000)*, Melbourne, Australia, Dec. 6-8, 2000

- \* U. Keller, **Plenary Talk**  
 “New frontiers in all-solid-state ultrafast lasers,”  
*5<sup>th</sup> Annual Symposium of the IEEE/LEOS Benelux Chapter*, Technical University Delft,  
 Netherlands, Oct. 30, 2000
- T. Südmeyer, J. Aus der Au, R. Paschotta, U. Keller, P. G. R. Smith, G. W. Ross and D. C. Hanna, Postdeadline Paper PD6  
 “Femtosecond fiber feedback OPO”  
*OSA Annual Meeting 2000*, Rhode Island, USA, Oct. 22-26, 2000
- J. Kunde, B. Baumann, S. Arlt, F. Morier-Genoud, U. Keller, U. Siegner,  
 “Teaching lasers to control ultrafast semiconductor nonlinearities”  
*OSA Annual Meeting 2000*, Rhode Island, USA, Oct. 22-26, 2000
- S. Schön, M. Haiml, L. Gallmann, U. Keller  
 “GaAs absorber layer growth for broadband AlGaAs/Fluoride SESAMs”  
*XI. International Conference on Molecular Beam Epitaxy*, Beijing, China, Sept. 10-15,  
 2000
- J. Stenger, H. R. Telle, G. Steinmeyer, U. Keller  
 “Kerr-lens modelocked lasers as ultralow noise microwave sources”  
*CLEO/Europe-IQEC 2000*, paper QFE8, Nice, France, Sept. 10-15, 2000
- G. Cerullo, M. Zavelani-Rossi, S. De Silvestri, G. Angelow, V. Scheuer, T. Tschudi, L. Gallmann, N. Matuschek, D. H. Sutter, G. Steinmeyer, U. Keller,  
 "Dispersion compensation over 200 THz in the visible using only chirped mirrors in an optical parametric amplifier"  
*CLEO/Europe-IQEC 2000*, paper CTuC5, Nice, France, Sept. 10-15, 2000
- G. Steinmeyer, L. Gallmann, U. Keller, I. A. Walmsley,  
 “Spatially resolved full characterization of sub-10-fs pulses using SPIDER”  
*CLEO/Europe-IQEC 2000*, CTuH1, Nice, France, Sept. 10-15, 2000
- T. Südmeyer, J. Aus der Au, R. Paschotta, U. Keller, G. R. Smith, G. W. Ross, D. C. Hanna  
 “Optical parametric generator (OPG) for 1.38-1.56  $\mu\text{m}$  with up to 0.5 W average power in 270-fs pulses at 35 MHz”  
*CLEO/Europe-IQEC 2000*, paper CThH1, Nice, France, Sept. 10-15, 2000
- F. Brunner, J. Aus der Au, G. J. Spühler, L. Krainer, R. Paschotta, F. Morier-Genoud, U. Keller, N. Lichtenstein, S. Weiss, C. Harder, A. A. Lagatsky, A. Abdolvand, N. V. Kuleshov,  
 “1.1-W femtosecond diode-pumped Yb:KGd(WO<sub>4</sub>)<sub>2</sub> laser”  
*CLEO/Europe-IQEC 2000*, paper CMA2, Nice, France, Sept. 10-15, 2000
- R. Paschotta, G. J. Spühler, J. Aus der Au, U. Keller, M. Moser, S. Erhard, M. Karszewski, A. Giesen  
 "Power-scalable femtosecond thin disk Yb:YAG lasers"  
*CLEO/Europe-IQEC 2000*, paper CMA4, Nice, France, Sept. 10-15, 2000

- \* U. Keller,  
"Ultrafast solid-state lasers"  
*CLEO/Europe-IQEC 2000*, paper CMB3, Nice, France, Sept. 10-15, 2000
  
- M. Achermann, U. Siegner, B. A. Nechay, A. Hartmann, D. Oberli, E. Kapon, U. Keller  
"Femtosecond near-field optical spectroscopy of single V-groove GaAs quantum wires,"  
*The 6<sup>th</sup> International Conference on Near Field Optics and Related Techniques (NFO-6)*, University of Twente, The Netherlands, Aug. 27-31, 2000
  
- \* U. Keller,  
"Ultrafast all-solid-state lasers"  
*9<sup>th</sup> Annual International Laser Physics Workshop (LPHYS'2000)*, Bordeaux, July 17-21, 2000
  
- \* U. Keller  
"Pulse compression techniques,"  
*XFEL Workshop: Nonlinear Optics, Quantum Optics and Ultrafast*, Hamburg, July 13-14, 2000
  
- G. Steinmeyer, D. H. Sutter, U. Keller, J. Stenger, H. R. Telle, Poster  
"Carrier envelope offset phase stabilization for few-cycle nonlinear optics"  
*Ultrafast Phenomena XII*, Charleston, South Carolina, USA, July 9-13, 2000
  
- L. Gallmann, N. Matuschek, D.H. Sutter, G. Steinmeyer, U. Keller, V. Scheuer, G. Angelow, T. Tschudi,  
"Smooth dispersion compensation over one octave: novel chirped mirrors with suppressed dispersion oscillations,"  
*Ultrafast Phenomena XII*, Charleston, South Carolina, USA, July 9-13, 2000
  
- M. J. Lederer, B. Luther-Davies, H. H. Tan, C. Jagadish, M. Haiml, U. Siegner, U. Keller, J. Zou, D. J. H. Cockayne,  
"Ion-implanted GaAs for ultrafast saturable absorber applications"  
*The 11<sup>th</sup> International Semiconducting and Insulating Materials Conference (SIMC-XI 2000)*, Canberra, Australia, 3-7 July, 2000
  
- M. Haiml, U. Siegner, F. Morier-Genoud, J. Gebauer, P. Specht, E. R. Weber, U. Keller  
"Separation of electron and hole dynamics in low-temperature grown GaAs"  
*The 11<sup>th</sup> International Semiconducting and Insulating Materials Conference (SIMC-XI 2000)*, Canberra, Australia, 3-7 July, 2000
  
- \* U. Siegner, M. Haiml, F. Morier-Genoud, U. Keller, P. Specht, E. R. Weber  
"Femtosecond all-optical switching with semiconductors,"  
*10th Conference on Laser Optics*, St. Petersburg, Russia, June 26-30, 2000
  
- \* U. Keller, **Plenary Talk**  
"New frontiers in ultrafast all-solid-state lasers"

*Northern Optics 2000/EOS Annual Meeting (EOSAM 2000)*, Uppsala, Sweden, June 6-8, 2000

G. Cerullo, S. De Silvestri, G. Angelow, V. Scheuer, T. Tschudi, L. Gallmann, N. Matuschek, D. H. Sutter, G. Steinmeyer, U. Keller,  
"Pulse compression in the visible over 200-THz bandwidth using only chirped mirrors"  
*Conference on Lasers and Electro-Optics 2000 (CLEO 2000)*, San Francisco, California, USA, May 7-12, 2000 (Paper CThE4)

L. Krainer, R. Paschotta, M. Moser, U. Keller,  
"Passively modelocked miniature Nd:YVO<sub>4</sub> lasers with up to 59 GHz repetition rates"  
*Conference on Lasers and Electro-Optics 2000 (CLEO 2000)*, San Francisco, California, USA, May 7-12, 2000 (Paper CMW5)

J. Aus der Au, G. J. Spühler, R. Paschotta, U. Keller, M. Moser, S. Erhard, M. Karszewski, A. Giesen,  
"Femtosecond microjoule pulses with 15.8 W average power from a passively modelocked diode-pumped Yb:YAG thin-disk laser"  
*Conference on Lasers and Electro-Optics 2000 (CLEO 2000)*, San Francisco, California, USA, May 7-12, 2000 (Paper CMQ1)

G. J. Spühler, T. Südmeyer, R. Paschotta, U. Keller, M. Moser, K. J. Weingarten,  
"27-W passively modelocked Nd:YAG laser"  
*Conference on Lasers and Electro-Optics 2000 (CLEO 2000)*, San Francisco, California, USA, May 7-12, 2000 (Paper CMQ3)

R. Häring, R. Paschotta, F. Morier-Genoud, U. Keller, A. Garnache, U. Oesterle, J. S. Roberts, S. Hoogland, S. Dhanjal, A. C. Trooper,  
"Passively modelocked diode-pumped surface-emitting semiconductor laser"  
*Conference on Lasers and Electro-Optics 2000 (CLEO 2000)*, San Francisco, California, USA, May 7-12, 2000 (Paper CMS1)

M. Achermann, U. Siegner, B. A. Nechay, U. Keller, A. Hartmann, Y. Ducommun, D. Oberli, E. Kapon,  
"Characterization of quantization energy fluctuations in single quantum wires by femtosecond near-field optics"  
*Quantum Electronics and Laser Science Conference 2000 (QELS 2000)*, San Francisco, California, USA, May 7-12, 2000 (Paper QMC6)

L. Gallmann, D. H. Sutter, N. Matuschek, G. Steinmeyer, U. Keller, C. Iaconis, I. A. Walmsley,  
"Spatially resolved amplitude and phase characterization of ultrashort optical pulses using SPIDER"  
*Conference on Lasers and Electro-Optics 2000 (CLEO 2000)*, San Francisco, California, USA, May 7-12, 2000 (Paper CFE1)

L. Gallmann, G. Steinmeyer, D. H. Sutter, N. Matuschek, U. Keller,  
"Collinear type-II-FROG pulse characterization in the sub-10-fs regime"  
*Conference on Lasers and Electro-Optics 2000 (CLEO 2000)*, San Francisco, California, USA, May 7-12, 2000 (Paper CFL3)

G. Steinmeyer, A. E. Dunlop, D. H. Sutter, U. Keller, J. Stenger, H. R. Telle,  
"Carrier envelope offset phase stabilization for absolute optical frequency measurement  
and extreme nonlinear optics"  
*Conference on Lasers and Electro-Optics 2000 (CLEO 2000)*, San Francisco,  
California, USA, May 7-12, 2000 (Paper CWC6)

S. Arlt, J. Kunde, F. Morier-Genoud, U. Keller, U. Siegner,  
"Transfer of coherence properties between exciton and continuum transitions in  
semiconductor quantum wells"  
*Quantum Electronics and Laser Science Conference 2000 (QELS 2000)*, San Francisco,  
California, USA, May 7-12, 2000 (Paper QWD3)

J. Kunde, S. Arlt, L. Gallmann, F. Morier-Genoud, U. Siegner, U. Keller,  
"Sensitive characterization of ultrafast phase and amplitude nonlinearities for broadband  
semiconductor excitation"  
*Conference on Lasers and Electro-Optics 2000 (CLEO 2000)*, San Francisco,  
California, USA, May 7-12, 2000 (Paper CFL1)

M. Achermann, U. Siegner, B. A. Nechay, Y. Ducommun, A. Hartmann, D. Oberli, E.  
Kapon, U. Keller,  
"Ultrafast SNOM-measurements in semiconductor nanostructures"  
*Nanoscale Optics*, Engelberg, Switzerland, April 16-19, 2000

G. Steinmeyer, L. Gallmann, D. Sutter, U. Keller  
"Charakterisierung von sub-6-fs Laserpulsen: Vergleich von FROG, SPIDER und  
Autokorrelation"  
*Frühjahrstagung der Deutschen Physikalischen Gesellschaft*, Bonn, April 3-7, 2000

J. Stenger, H. R. Telle, G. Steinmeyer, D. H. Sutter, A. E. Dunlop, U. Keller  
"Modenbreite und Ankunftszeitfluktuationen eines Femtosekundenlasers"  
*Frühjahrstagung der Deutschen Physikalischen Gesellschaft*, Bonn, April 3-7, 2000

T. Südmeyer, J. Aus der Au, R. Paschotta, U. Keller, G. R. Smith, G. W. Ross, D. C.  
Hanna, Postdeadline Paper,  
"Femtosecond single-pass optical parametric generator (OPG) for 1.38-1.56  $\mu\text{m}$  with 35  
MHz repetition rate"  
*OSA Advanced Solid-State Lasers '00 (ASSL 2000)*, Davos, Switzerland, Feb. 13-16,  
2000

G. J. Spühler, J. Aus der Au, R. Paschotta, U. Keller, M. Moser, S. Erhard, M.  
Karszeski, A. Giesen, Postdeadline Paper,  
"High-power femtosecond Yb:YAG laser based on a power-scalable concept"  
*OSA Advanced Solid-State Lasers '00 (ASSL 2000)*, Davos, Switzerland, Feb. 13-16,  
2000

G. J. Spühler, J. Aus der Au, R. Paschotta, U. Keller, M. Moser, S. Erhard, M.  
Karszewski, and A. Giesen, Postdeadline Paper,  
"High-power femtosecond Yb:YAG laser based on a power-scalable concept"

*OSA Advanced Solid-State Lasers '00 (ASSL 2000)*, Davos, Switzerland, Feb. 13-16, 2000

G. J. Spühler, T. Südmeyer, R. Paschotta, U. Keller, M. Moser, K. J. Weingarten,  
"24 W picosecond diode-pumped Nd:YAG laser"  
*OSA Advanced Solid-State Lasers '00 (ASSL 2000)*, Davos, Switzerland, Feb. 13-16, 2000

L. Krainer, R. Paschotta, M. Moser, U. Keller,  
"Passively modelocked miniature Nd:YVO<sub>4</sub> lasers with up to 49 GHz repetition rate"  
*OSA Advanced Solid-State Lasers '00 (ASSL 2000)*, Davos, Switzerland, Feb. 13-16, 2000

R. Häring, R. Paschotta, F. Morier-Genoud, U. Keller, J. S. Roberts, S. Hoogland, S. Dhanjal, A. C. Tropper,  
"Passively modelocked diode-pumped surface-emitting semiconductor laser"  
*OSA Advanced Solid-State Lasers '00 (ASSL 2000)*, Davos, Switzerland, Feb. 13-16, 2000

## 1999

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- \* U. Keller, **Keynote Speaker**  
"Advances in picosecond and femtosecond lasers"  
*Lasers '99*, Quebec City, Canada, Dec. 13-17, 1999
  
- \* G. Steinmeyer, D.H.Sutter, L. Gallmann, N. Matuschek, F. Morier-Genoud, and U. Keller,  
"Pushing the Frontiers: Generation and Full Characterization of Pulses in the Two-Cycle Regime"  
*1999 Annual LEOS Meeting*, San Francisco, California, USA November 8-11, 1999
  
- \* U. Keller, **Guest Speaker**  
"Advances in compact ultrafast lasers"  
*German-Israeli Bi-National Workshop on Ultrafast Optical Technologies*, Kibbutz Hotel Shefayim, Israel, Oct. 12-14, 1999
  
- S. Schön, M. Haiml, M. Achermann, U. Keller;  
"Growth of AlGaAs/Fluoride SESAM by Molecular Beam Epitaxy"  
*18<sup>th</sup> North American Conference on Molecular Beam Epitaxy*, Banff, Canada, Oct. 10-13, 1999.
  
- \* U. Siegner, M. Haiml, F. Morier-Genoud, R. C. Lutz, P. Specht, E. R. Weber, U. Keller,  
"Nonlinear optical properties of low-temperature grown semiconductors"  
*2nd Symposium on Non-Stoichiometric III-V Compounds*, Erlangen-Nürnberg, 4-6 Oct. 1999
  
- \* U. Keller,  
"Advances in compact ultrafast oscillators"

*OSA Annual Meeting*, Santa Clara, California, USA, Sept. 26 – Oct. 1, 1999

- \* U. Keller,  
"Advances in femtosecond lasers sources"  
*7th Annual CNOM Meeting*, Stanford University, Sept. 24-25, 1999
  
- \* U. Keller  
"Ultrashort pulse generation in the single-cycle regime: pushing the frontiers of femtosecond optics,"  
*EOS Topical Meeting on Diffractive Optics*, Jena, Aug. 23-25, 1999
  
- \* U. Keller,  
"The future of femtosecond technology"  
*Tri-Annual General Meeting of the International Commission for Optics*, San Francisco, California, USA, Aug. 2-6, 1999
  
- U. Siegner, M. Haiml, F. Morier-Genoud, R. C. Lutz, P. Specht, E. R. Weber, U. Keller,  
"Femtosecond nonlinear optics of low-temperature grown semiconductors"  
*The 20th International Conference on Defects in Semiconductors (ICDS-20)*, Berkeley, USA, July 26-30, 1999
  
- R. Paschotta, J. Aus der Au, G. J. Spühler, F. Morier-Genoud, M. Moser, U. Keller  
"High-power diode-pumped passively modelocked lasers,"  
*Ultrafast Optics '99*, Ascona, Switzerland, July 12-16, 1999
  
- L. Gallmann, D. H. Sutter, N. Matuschek, G. Steinmeyer, U. Keller,  
"Techniques for the characterization of sub-10-fs pulses: a comparison"  
*Ultrafast Optics '99*, Ascona, Switzerland, July 12-16, 1999
  
- D. H. Sutter, L. Gallmann, N. Matuschek, F. Morier-Genoud, G. Steinmeyer, V. Scheuer, G. Angelow, T. Tschudi, T. Gross, D. Ristau, U. Keller,  
"Sub-6-fs pulses from a SESAM-assisted KLM Ti:sapphire laser,"  
*Ultrafast Optics '99*, Ascona, Switzerland, July 12-16, 1999
  
- \* G. Steinmeyer and U. Keller, **Tutorial**  
"Tutorial on all-solid-state ultrafast lasers with pulse durations covering the range from nanoseconds to two optical cycles,"  
*Laser '99, Novel Lasers and Devices - Basic Aspects*, June 14-16, 1999
  
- A. V. Tikhonravov, M. K. Trubetskov, U. Keller, N. Matuschek  
"Designing of coatings for femtosecond lasers with phase derivatives targets"  
*International Conference on Optical System Design and Production (OSDP'99)*, Paper 3738-29, Berlin, Germany, May 25-28, 1999.
  
- T. Kellner, G. Huber, J. P. Meyn, R. Wallenstein, C. Hönninger, F. Morier-Genoud, U. Keller  
"Single-pass blue-light generation in bulk periodically poled LiTaO<sub>3</sub> with a passively modelocked Nd:YalO<sub>3</sub> laser at 930 nm"

*Conference on Lasers and Electro-Optics (CLEO '99)*, Baltimore, USA, May 23-28, 1999

J.-M. Hopkins, G. J. Valentine, W. Sibbett, U. Keller,  
"Highly compact femtosecond Cr:LiSAF laser with a simplified cavity geometry"  
*Conference on Lasers and Electro-Optics (CLEO '99)*, Baltimore, USA, May 23-28, 1999

H. L. Offerhaus, D. J. Richardson, R. Paschotta, R. Häring, E. Gini, H. Melchior, U. Keller,  
"0.1 mJ pulses from a passively Q-switched fiber source"  
*Conference on Lasers and Electro-Optics (CLEO '99)*, Baltimore, USA, May 23-28, 1999

R. Häring, R. Paschotta, E. Gini, H. Melchior, U. Keller  
"Sub-nanosecond pulses from passively Q-switched microchip lasers at 1.53  $\mu\text{m}$ "  
*Conference on Lasers and Electro-Optics (CLEO '99)*, Baltimore, USA, May 23-28, 1999

L. Krainer, R. Paschotta, U. Keller, M. Moser, D. Kopf, K. J. Weingarten,  
"Passively modelocked Nd:YVO<sub>4</sub> lasers with up to 13 GHz repetition rate"  
*Conference on Lasers and Electro-Optics (CLEO '99)*, Baltimore, USA, May 23-28, 1999

G. J. Spühler, R. Paschotta, D. H. Sutter, N. Matuschek, U. Keller, M. Moser, R. Hövel, V. Scheuer, G. Angelow, T. Tschudi,  
"Double-chirped semiconductor mirror for dispersion compensation in femtosecond lasers,"  
*Conference on Lasers and Electro-Optics (CLEO '99)*, Baltimore, USA, May 23-28, 1999

D. H. Sutter, L. Gallmann, N. Matuschek, F. Morier-Genoud, G. Steinmeyer, U. Keller, V. Scheuer, G. Angelow, T. Tschudi, C. Iaconis, I. A. Walmsley,  
"Pulses in the two-cycle regime from a SESAM-assisted KLM Ti:sapphire laser and sub-10-fs pulse characterization,"  
*Conference on Lasers and Electro-Optics (CLEO '99)*, Baltimore, USA, May 23-28, 1999

J. Aus der Au, R. Paschotta, U. Keller,  
"New scheme for dispersion compensation in compact femtosecond lasers,"  
*Conference on Lasers and Electro-Optics (CLEO '99)*, Baltimore, USA, May 23-28, 1999

G. J. Spühler, R. Paschotta, U. Keller, M. Moser, M. Dymott, D. Kopf, J. Meyer, K. J. Weingarten, J. D. Kmetec, J. Alexander, G. Truong,  
"10-W passively modelocked diode-pumped Nd:YAG laser,"  
*Conference on Lasers and Electro-Optics (CLEO '99)*, Baltimore, USA, May 23-28, 1999

H. Haiml, U. Siegner, F. Morier-Genoud, U. Keller, M. Luysberg, P. Specht, E. R. Weber,

“Annealing of low-temperature grown semiconductors: Material optimization for ultrafast all-optical gating,”

*Conference on Lasers and Electro-Optics (CLEO '99)*, Baltimore, USA, May 23-28, 1999

B. A. Nechay, M. Achermann, F. Morier-Genoud, A. Schertel, U. Siegner, U. Keller,  
“Femtosecond near-field spectroscopy of spatiotemporal carrier dynamics in locally disorder-patterned quantum wells,”

*Quantum Electronics and Laser Science Conference (QELS'99)*, Baltimore, USA, May 23-28, 1999

J. Kunde, U. Siegner, S. Arlt, G. Steinmeyer, F. Morier-Genoud, U. Keller, Poster

“Chirp-induced modulation of broadband ultrafast semiconductor nonlinearities”

*Quantum Electronics and Laser Science Conference (QELS'99)*, Baltimore, USA, May 23-28, 1999

S. Arlt, U. Siegner, J. Kunde, F. Morier-Genoud, U. Keller

“Ultrafast dephasing of continuum transitions in GaAs and AlGaAs,”

*Quantum Electronics and Laser Science Conference (QELS'99)*, Baltimore, USA, May 23-28, 1999

\* R. Paschotta and U. Keller, **Tutorial**

"Recent advances in all-solid-state ultrafast lasers"

*EMBO Practical Course on Confocal and Multi-Photon Microscopy of Live Specimens*, Heidelberg, Germany, 9 - 11 and 16 - 23 April, 1999

D. H. Sutter, G. Steinmeyer, L. Gallmann, N. Matuschek, F. Morier-Genoud, U. Keller, V. Scheuer, M. Tilsch, T. Tschudi, Postdeadline Paper

"Ultrabroadband self-starting Ti:sapphire laser using double chirped mirrors and semiconductor saturable absorbers"

*OSA Advanced Solid-State Lasers '99 (ASSL '99)*, Paper TuC3, Boston, USA, Jan. 31 – Feb. 3, 1999

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“Design guidelines for passively Q-switched microchip lasers using semiconductor saturable absorber mirrors”

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### 2025

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[101] Florence Burri, expected graduated date based on 4 years PhD time: Nov. 2025

[100] Nicolas Huwyler, expected graduated date based on 4 years PhD time: Nov. 2025

[99] Moritz Seidel, expected graduated date based on 4 years PhD time: Sep. 2025

### 2024

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[98] Alexander Nussbaum-Lapping, expected graduated date based on 4 years PhD time: Okt. 2024

[97] Sandro Camenzind, expected graduated date based on 4 years PhD time: Sep. 2024

[96] Erik de Vos, expected graduated date based on 4 years PhD time: June 2024

[95] Carolin Bauer, expected graduated date based on 4 years PhD time: March 2024

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[94] Marco Gaulke, **20. Sep. 2023** “xxx” (Diss ETH Nr. xx)  
*Koreferent: Prof. Dr. Thomas Südmeyer, University of Neuchatel, Switzerland*

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[93] Jonas Heidrich, **12. Dec. 2022** “SWIR SESAMs for modelocked semiconductor and solid-state lasers” (Diss ETH Nr. 28893)  
*Koreferent: Prof. Dr. Mircea Guina, Tampere University of Technology, Finland*

[92] Fabian Brunner, **28. Nov. 2022** “Tunneling time in atomic hydrogen” (Diss ETH Nr. 28767)  
*Koreferent: Prof. Daniela Rupp and Prof. Lukas Gallmann, ETH Zurich*

[91] Pierre-Alexis Chevreuil, **22. Aug. 2022** “High repetition rate soft-X-ray sources from few-cycle OPCPAs” (Diss ETH Nr. 28609)  
*Koreferent: Prof. Thomas Feuerer, University of Bern and Prof. Lukas Gallmann, ETH Zürich*

[90] Arthur Niedermayer, **28. June 2022** “Electron dynamics in solids from femtosecond to attosecond timescales” (Diss ETH Nr. 28509)  
*Koreferent: Prof. David J. Norris, Department of Mechanical and Process Engineering, ETH Zürich, and Prof. Lukas Gallmann, ETH Zürich*

[89] Lukas Lang, **2. June 2022**, “Thin-disk lasers for high-power ultrafast optical parametric oscillators” (Diss ETH Nr. 28474)  
*Koreferent: Prof. Thomas Südmeyer, University of Neuchatel, Switzerland*

[88] Léonard Krüger, **7. Jan. 2022** “Advancing high-repetition rate infrared platforms for broadband frequency comb spectroscopy” (Diss ETH Nr. 28169)  
*Koreferent: Prof. Scott Diddams, Fellow of NIST and Prof. Adjoint at University of Colorado, USA*

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[87] Jaco Fuchs, **19. Jan. 2021** “Novel schemes of attosecond interferometry” (Diss ETH Nr. 27367)  
*Koreferent: Prof. Anne L’Huillier, Lund University, Sweden*

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[86] Jacob Nürnberg, **11. Dec. 2020**, “Towards semiconductor disk lasers for single- and dual-comb applications” (Diss ETH Nr. 27300)  
*Koreferent: Prof. Oliver Heckl, University of Vienna*

[85] Stefan Hrisafov, **30. Oct. 2020**, “High-power few-cycle near-infrared OPCPA as a source for high repetition rate soft X-rays” (Diss ETH Nr. 27207)  
*Koreferenten: Prof. Thomas Feuerer, University of Bern, Switzerland and Prof. Lukas Gallmann, ETH Zurich*

[84] Nadja Hartmann, “Ultrafast processes on different timescales: from attosecond electron dynamics to femtosecond molecular dynamics”, **2. Oct. 2020** (Diss ETH Nr. 27145)  
*KoreferentInnen: Prof. Ruth Signorell and Prof. Lukas Gallmann, ETH Zurich*

[83] Luca Pedrelli, “Measurement and reconstruction of electron wavepackets.” **14. Aug. 2020** (Diss ETH Nr. 27010)  
*Koreferent: Prof. Dr. Daniela Rupp, ETH Zürich*

[82] Francesco Saltarelli, “Novel concepts for versatile and high-power thin-disk laser oscillators,” **31. July 2020** (Diss ETH Nr. 26982)  
*Koreferent: Prof. Thomas Südmeyer, University of Neuchatel, Switzerland*

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*Koreferent: Prof. Jens Limpert, Friedrich Schiller University Jena, Germany*

[80] Justinas Pupeikis, “Next generation attosecond technology”, **18. Nov. 2019**, (Diss ETH Nr. 26454)  
*Koreferent: Prof. Jean-Pierre Wolf, University of Geneva, Switzerland*

[79] Benjamin Willenberg, “Strong-field ionization dynamics beyond the electric dipole approximation and towards benchmark experiments on atomic hydrogen” **27. Aug. 2019** (Diss ETH Nr. 26271)

*Koreferent: Prof. Henrik Stapelfeldt, Aarhus University, Denmark*

[78] Fabian Schläpfer, “Attosecond electron dynamics in III-V semiconductors” **27. Aug. 2019** (Diss ETH Nr. 26251)

*Koreferent: Prof. Adrian Cavalieri, University of Bern and PSI Switzerland*

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*Koreferenten: Prof. Steve Johnson and PD Dr. Lukas Gallmann, D-PHYS, ETH Zurich*

[76] Cesare Alfieri, “Semiconductor devices for ultrafast laser applications” **11. Oct. 2018** (Diss ETH Nr. 25522)

*Koreferent: Prof. Jürg Leuthold, D-ITET, ETH Zurich*

[75] Nicolas Bigler, “High-power ultrafast optical parameter chirped pulse amplifiers in the mid-infrared” **9. Oct. 2018** (Diss ETH Nr. 25521)

*Koreferent: Prof. Dr. Günter Steinmeyer, Institute of Physics of the Humboldt-University Berlin and Max-Born-Institute*

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*Koreferenten: Prof. Dr. Francesca Calegari, Center for Free-Electron Laser Science (CFEL) and Deutsches Elektronen-Synchrotron (DESY) & PD Dr. Lukas Gallmann, ETH Zurich*

[73] Dominik Waldburger, “Semiconductor disk lasers for optical frequency comb applications” **14. Aug. 2018** (Diss ETH Nr. 25372)

*Koreferent: Prof. Dr. Mircea Guina, Tampere University of Technology, Finland*

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*Koreferent: Prof. Derryck T. Reid, Heriot-Watt University, Edinburgh, Scotland*

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*Koreferent: Prof. Dr. Franz Kärtner, DESY, CFEL, Germany*

## **2017**

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*Koreferenten: Prof. Dr. Martin Aeschlimann, University of Kaiserslautern, Germany, and PD Dr. Lukas Gallmann, ETH Zurich*

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*Koreferenten: Dr. Nathalie Picqué, MPQ Garching, Germany*

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*Koreferenten: Prof. Dr. Alexandra Landsman, MPI Dresden, Germany and Prof. Renato Renner, ETH Zurich*
- [67] André Ludwig, “Attosecond and Strong-Field Ionization Dynamics in Atoms and Molecules” **25. Jan. 2016** (Diss ETH Nr. 23279)  
*Koreferenten: Prof. Dr. Thomas Pfeifer, MPI Heidelberg, Germany and PD Dr. Lukas Gallmann, University of Bern*

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*Koreferenten: Prof. Dr. Uwe Morgner, Leibniz-Universität Hannover, Germany and PD Dr. Lukas Gallmann, University of Bern*
- [65] Sebastian Heuser, “Photoemission dynamics from atomic and molecular systems on the attosecond time scale”, **3. Nov. 2015** (Diss ETH Nr. 23074)  
*Koreferenten: Prof. Dr. Jon Marangos, Imperial College London, U. K. and PD Dr. Lukas Gallmann, University of Bern*
- [64] Florian Emaury, “High repetition rate XUV sources based on thin-disk oscillators”, **1. Sep. 2015** (Diss ETH Nr. 22936)  
*Koreferent: Prof. Dr. Jens Limpert, Friedrich Schiller University Jena*
- [63] Mario Mangold, “Advances in high-power ultrafast MIXSELS”, **16. April 2015** (Diss ETH Nr. 22646)  
*Koreferent: Prof. Dr. Erwin Bente, Technical University Eindhoven*
- [62] Cinia Schriber, “Towards high average power SESAM-modelocked thin-disk lasers with short pulse durations”, **9. April 2015** (Diss ETH Nr. 22635)  
*Koreferent: Prof. Dr. Günter Huber, University of Hamburg*
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*Koreferent: Prof. Dr. Tobias Kippenberg, EPFL*

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*Koreferenten: Prof. Dr. Jürg Osterwalder, University of Zurich and PD Dr. Lukas Gallmann, University of Bern*

- [59] Jens Herrmann, "Attosecond transient absorption spectroscopy: controlling extreme ultraviolet light-matter interaction", **29. Sep. 2014** (Diss ETH Nr. 22263)  
*Koreferenten: Prof. Dr. Mauro Nisoli, Politecnico di Milano, Italy and PD Dr. Lukas Gallmann, University of Bern*
- [58] Christian Zaugg, "Novel Concepts in Modelocked VECSELS", **19. Sep. 2014** (Diss ETH Nr. 22239)  
*Koreferenten: Prof. Dr. Mircea Guina, Tampere University of Technology, Finland*
- [57] Mazyar Sabbar, "Attosecond XUV coincidence spectroscopy", **1. Sep. 2014** (Diss ETH Nr. 22188)  
*Koreferenten: Prof. Dr. Hans Jakob Wörner and PD Dr. Lukas Gallmann, University of Bern*

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- [56] Reto Locher, "Attosecond photoemission dynamics from noble metal surfaces", **30. Sep. 2013** (Diss ETH Nr. 21504)  
*Koreferenten: Prof. Dr. Jürg Osterwalder, University of Zurich and PD Dr. Lukas Gallmann, ETH Zurich*
- [55] Wolfgang Pallmann, "Passively modelocked electrically pumped VECSELS", **17. Sep. 2013** (Diss ETH Nr. 21457)  
*Koreferenten: Prof. Dr. Bernd Witzigmann, Universität Kassel*
- [54] Oliver Sieber, "Scaling high-power ultrafast VECSELS into the femtosecond regime", **29. May 2013** (Diss ETH Nr. 21247)  
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C4-Professur at University of Karlsruhe, April 1999; Associate Professor at MIT, USA,  
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