



Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Particle Technology Laboratory

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Particle Technology Seminar FS16

Fridays 14-17h; ML F40

- February 26
CLA J1 @12 "NIR-to-NIR downconversion photoluminescence of flame-made nanophosphors"
Pascal Gschwend, final presentation of MS thesis, ETHZ
- March 7 **Mon**
ML E13 @2pm "Cancer detection from breath? Aldehyde sensing by nanostructured microsensor arrays"
"Ti-ZnO solid solutions enable selective isoprene sensing from breath"
Andreas Güntner, PTL
- March 11 "Control of Particle Structure and Size Distribution by Humidity"
Florian Furrer, planning presentation of BS thesis, ETHZ
"Single-step flame synthesis of multi-stage delivery particles for cancer theranostics"
David Shapira, planning presentation of BS thesis, ETHZ
"Catalytic Technologies & Adaptive Materials Design for Sustainability"
Prof. Kyriaki Polychronopoulou, Khalifa University
- March 18 "Large-scale synthesis of Multi-Stage Delivery Vectors for targeted and triggered drug release"
Felix Pfeifer, planning presentation of BS thesis, ETHZ
"Flame synthesis of complex magnetic/plasmonic nanostructures with high absorption in the near-infrared"
Loris Albisetti, planning presentation of BS thesis, ETHZ
"Fabrication optimization of Si:MoO₃, Si:WO₃ & Ti:ZnO sensing films on Si substrates"
Stéphanie Schon, planning presentation of BS thesis, ETHZ
"Atomistic Simulation of Pyrene Functionalized PMMA as Dispersing Agent of Graphene for the Fabrication of Polymer Nanocomposites"
Emmanuel Skountzos, University of Patras, Greece
- March 22 **Tue**
ML F40 @5.15pm "ZnO – A Diva Among Nanoparticles"
Prof. Dr. Markus Winterer, University of Duisburg-Essen, Germany
- March 24 **Thu**
ML E13 @1.15pm "Fat burn monitoring during exercise with a portable breath sampler"
Tobias Gulich, planning presentation of BS thesis, ETHZ
"E-Nose 2.0: From Non-Specific to Orthogonal Sensor Arrays for Direct Targeting of Multiple Analytes"
Julia Kompalla, planning presentation of BS thesis, ETHZ
"Molecular dynamics simulation of nanoparticle-nanoparticle interactions to compute the mean force between a pair of nanoparticles"
Vasil Vasilev, planning presentation of Semester thesis, ETHZ
"Agglomeration with Polydisperse Primary Particles in the Free Molecular Regime"
Eirini Goudeli, PTL
- April 7 **Thu**
ML E13 @9.15am "An Eulerian model of particle transport and deposition in the lungs incorporating alveolar mixing"
Filippos Filippitzis, University of Thessaly, Greece
"Selective diagnosis of human diseases using nanomaterials-based chemiresistive electronic nose"
Hi Gyu Moon, Yonsei University & Korea Institute of Science and Technology

- April 15 "An introduction to Monolith Materials"
Enoch Dames, Monolith Materials, USA
"Multifunctional nanoparticles for targeted theranostics"
Fabian Starsich, PTL
"Agglomeration with Polydisperse Primary Particles in the Free Molecular Regime"
Eirini Goudeli, PTL
"Highly active Pd/TiO₂ photocatalyst under solar light"
Kakeru Fujiwara, PTL
- April 22 "Flame-made BaTiO₃ nanoparticles for piezoelectric nanogenerators, flexible thinfilm electronics and piezoelectric bone scaffolds"
Gian Nutal Schädli, PTL
- April 29 "Flame-made YVO₄:Bi,Eu nanophosphors for cell imaging"
Anastasia Spyrogianni, PTL
- May 2 **Mon**
ML E13 @1pm "Preparation of nanostructured WO₃ thin film by flame reactor and its application"
Prof. Kyo-Seon Kim, Kangwon National University, Korea
- May 13 "Control of Particle Structure and Size Distribution by Humidity"
Florian Furrer, final presentation of BS thesis, ETHZ
"Molecular dynamics simulation of nanoparticle-nanoparticle interactions to compute the mean force between a pair of nanoparticles"
Vasil Vasilev, final presentation of SA thesis, ETHZ
"Synthesis and characterization of ferritic powders for the induction heating of loaded materials"
Maria Carmen Giordano, PSI
- May 27
@3.15pm "Nascent Soot Formation by Agglomeration & Surface Growth"
Georgios Kelesidis, PTL
- June 3 "Single-step flame synthesis of multi-stage delivery particles for cancer theranostics"
David Shapira, final presentation of BS thesis, ETHZ
"Fat burn monitoring during exercise with a portable breath sampler"
Tobias Gulich, final presentation of BS thesis, ETHZ
- June 17
ML F34 @1.15pm "Large-scale synthesis of Multi-Stage Delivery Vectors for targeted and triggered drug release"
Felix Pfeifer, final presentation of BS thesis, ETHZ
"Flame synthesis of complex plasmonic nanostructures"
Loris Albisetti, final presentation of BS thesis, ETHZ
- June 21 **Tue**
ML E13 @2.15pm "Silica@Cells - a special relationship"
Prof. Jeff Brinker, Sandia Natl. labs, Albuquerque, NM, USA
- June 23 **Thu**
CLA J1 @1.15pm "Selective Isoprene Sensing for Breath Analysis by Ti:ZnO Chemo-resistive Sensors"
Andreas Güntner, PTL
- July 1
ML E13 @1.15pm "Morphology-controlled patterning of temperature sensitive flame-made gas sensors on silicon"
Stéphanie Schon, final presentation of BS thesis, ETHZ
"E-Nose 2.0: From Non-Specific to Orthogonal Sensor Arrays for Direct Targeting of Multiple Analytes"
Julia Kompalla, final presentation of BS thesis, ETHZ
- July 14 **Thur**
ML E13 @1.15pm "Solar photocatalytic NO removal by subnano-clustered Pd on TiO₂"
Kakeru Fujiwara, PTL

- July 22 "Perovskite Nanoplatelets - A new 2D excitonic material"
ML E13 @1.15pm *Michael Seitz*
- July 29 "Shape-controlled synthesis of particles with core-shell structure for catalysis and CO2 capture"
ML E13 @1.15pm *Mo Li, Institute of Energy Science, ETH Zürich*
 "Effect of synthesis conditions on structure of flame-made silica nanoparticles"
Vaios Moschos, planning presentation of Semester thesis, ETHZ
- August 13 **Sat** "The use of Volatile Organic Compounds (VOCs) in systems biology (metabolomics) studies"
ML E13 @11am *Prof. Agapios Agapiou, Department of Chemistry, University of Cyprus*
- August 23 **Tue** "E-nose for selective formaldehyde detection in breath analysis"
ML F34 @1.15pm *Andreas Güntner, PTL*
 "Palladium subnano-clusters on titania for solar photocatalytic NO removal"
Kakeru Fujiwara, PTL
- September 2 "The crystal structure and sintering of coalescing gold nanoparticles and its alloys"
ML E13 @1.15pm *Eirini Goudeli, PTL*
- September 8 **Thu** "Effect of synthesis conditions on structure of flame-made silica nanoparticles"
CLA J1 1.15pm *Vaios Moschos, final presentation of Semester thesis, ETHZ*
 "Settling rate of agglomerated nanoparticles in water by Brownian dynamics simulations"
Anastasia Spyrogianni, PTL