

**Particle Technology Seminar FS15**

Fridays 14-17h; ML F40

- Feb. 27 "Aerosol direct deposition of conductive silver nanoparticles"  
*Christoph Blattmann, PTL*  
„Simultaneous detection of ammonia, acetone and ethanol by sensor array for breath analysis“  
*Gustav Bredell, planning presentation of BS thesis, PTL*  
"Magnetic nanoparticles as contrast agents for magnetic resonance imaging"  
*Alexandra Vollenweider, planning presentation of BS thesis, PTL*
- Mar. 6 "Growth of silicon films by plasma enhanced chemical vapor deposition: A reaction-based kinetic Monte Carlo simulation approach"  
*Dr. Dimitris Tsalikis, University of Patras, Greece*  
"Ceria-based redox materials for solar thermochemical H<sub>2</sub>O and CO<sub>2</sub> splitting"  
*Sotiria Mostrou, planning presentation of MS thesis, PTL*
- Mar. 13 "Oxidative Dehydrogenation of Ethane using Flame-made Co-loaded MgAl<sub>2</sub>O<sub>4</sub> Catalysts"  
*Randika Sayakkarage, planning presentation of BS thesis, PTL*  
"Humidity Filters for Breath Analysis"  
*Daniel Gehrig, planning presentation of BS thesis, PTL*
- Mar. 20 "One step synthesis of alpha-Al<sub>2</sub>O<sub>3</sub> nanoparticles"  
*Simon Spiekermann, planning presentations of BS thesis, PTL*  
"Novel Method to Photocure Epoxy Using Semiconducting Nano Particles"  
*Kerolos Riad, Concordia University, Canada*
- Mar. 27 "Molecular Dynamic Simulation of ZnO Nanoparticle Interactions"  
*Saskia Kohler, planning presentation of BS thesis, PTL*  
"Design of Barium Titanate Nanogenerators"  
*Gian Schädli, planning presentation of MS thesis, PTL*
- Apr. 17 "Agglomerate Structure and Size Distribution by Coagulation and Surface Growth"  
*Georgios Kelesidis, mid-term presentation of MS thesis, PTL*  
"MOx : PANI nanocomposites for room temperature gas sensing in breath analysis"  
*Samuel Regli, mid-term presentation of MS thesis, PTL*
- Apr. 23 **Thu** "Aerosol direct deposition of conductive silver nanoparticles"  
**ML E13 @5pm** *Christoph Blattmann, PTL*
- Apr. 30 **Thu** "Oxidative Coupling of Methane on Flame-Made Mn-Na<sub>2</sub>WO<sub>4</sub>/SiO<sub>2</sub>: Influence of  
**CLA J1 @2.15pm** Catalyst Composition and Reaction Conditions"  
*Rajesh Koirala, PTL*  
"Understanding the evolution of soot in turbulent flames: Progress and Challenges"  
*Prof. G.J. Nathan, The University of Adelaide*
- May 8 "Sintering Rate and Crystallinity Dynamics of Gold Nanoparticles by Molecular Dynamics"  
*Eirini Goudeli, PTL*

- May 15 "Humidity filters for breath analysis"  
*Daniel Gehrig, final presentation of BS thesis, PTL*  
 "Phase Transition and Coalescence of ZnO Nanoparticles by Molecular Dynamics Simulation"  
*Saskia Kohler, final presentation of BS thesis, PTL*
- May 22 "Charge injection at metal-organic interfaces: how ultrathin functional monolayers on  
 @3.15pm Noble metals and TCOs create new functionalities in organic electronics"  
*Florian von Wrochem, Sony, Germany*  
 "One step synthesis of alpha-Al<sub>2</sub>O<sub>3</sub> nanoparticles"  
*Simon Spiekermann, final presentation of BS thesis, PTL*  
 "Simultaneous detection of NH<sub>3</sub>, acetone and ethanol for breath analysis by sensor array"  
*Gustav Bredell, final presentation of BS thesis, PTL*
- May 29 "Magnetic nanoparticles as contrast agents for magnetic resonance imaging"  
*Alexandra Vollenweider, final presentation of BS thesis, PTL*
- Jun 12 "Oxidative dehydrogenation of ethane using flame-made cobalt-loaded MgAl<sub>2</sub>O<sub>4</sub>  
 ML H37.1 @1.15pm catalysts"  
*Randika Sayakkarage, final presentation of BS thesis, PTL*
- Jun 19 "Synthesis and Characterization of Monodisperse Nanoparticles and Core-Shell  
 ML E13 @1.15pm Particles using Flow Reactors"  
*Prof. Hidehiro Kamiya, Tokyo University of Agriculture and Technology Koganei, Japan*  
 "Recent developments of dense gas-solid flow simulation"  
*Prof. Takuya Tsuji, Osaka University, Japan*  
 "Development of Continuous Process for Electrode Slurry of Lithium-ion Battery by twin-shaft screw kneader"  
*Dr. Takehisa Fukui, KURIMOTO Ltd., Japan*
- Jun 26 "Agglomeration and settling of CeO<sub>2</sub> nanoparticles in cell culture media"  
 ML F40 @12:30 *Sergio Mazzotti, MNP mini-project presentation*  
 "Pressure induced energy harvesting by piezoelectric BaTiO<sub>3</sub> nanogenerators"  
*Gian Schädli, mid-term presentation of MSc thesis, PTL*  
 "Structure and Size Distribution of Soot growing by Agglomeration and Surface Growth"  
*Georgios Kelesidis, final presentation of MSc thesis, PTL*
- Jul 6 Mon "Design, Synthesis, and Characterization of Nanoparticles for Biomedical Applications"  
 ML E13 @ 1.15pm *Dr. Donglu Shi, The Materials Science and Engineering Program, University of Cincinnati*  
 "Doped ZnO gas sensors for breath analysis"  
*Nicolay Pineau, final presentation of SA thesis, PTL*
- Jul 10 "Solar-light active TiO<sub>x</sub> photocatalyst: crystallization of TiO<sub>x</sub> in flame spray pyrolysis and  
 ML E13 @1.15pm post-annealing"  
*Kakeru Fujiwara, PTL*
- Jul 17 "The effect of Ba and K as storage material in NO<sub>x</sub> storage catalysts"  
 ML E13 @12:30 *Dr. Robert Büchel, PTL*  
 "Oxidative dehydrogenation of ethane on Co-catalysts supported on various mixed and single oxides"  
*Rajesh Koirala, PTL*  
 "Designed Chemical Synthesis and Assembly of Uniform-sized Nanoparticles for Medical and Energy Applications"  
 HCI J7 @4pm *Prof. Dr. Taeghwan Hyeon, Seoul National University*

Jul 24 "Small-angle scattering as a diagnostic tool for aerosols, their nanoparticle products, and  
**ML E13 @1.15pm** polymer composites"  
*Prof. Gregory Beaucage, University of Cincinnati, USA*  
 "Effect of settling on the *in vitro* cytotoxicity evaluation of nanoparticles"  
*Anastasia Spyrogianni, PTL*

Jul 28 Tue "Development of a Novel Flash Ironmaking Technology"  
**ML E13 @1.15pm** *Prof. Hong Yong Sohn, University of Utah, USA*

Jul 31 "Effect of Sampler Design on Nanoparticle Sizing"  
**CLA J1 @1.15pm** *Eirini Goudeli, PTL*

Aug 7 "Metal-oxide sensor systems for breath analysis"  
**ML E13 @1.15pm** *Andreas Güntner, PTL*  
 "Production of highly porous polylactic acid monoliths containing 45S5 Bioglass nanoparticles®"  
*Prof. Paula Wood-Adams, Concordia University, Canada*  
 "Brownian Dynamics simulations of the agglomeration of nanoparticles in the gas phase and their dynamics in the liquid phase"  
*Dr. Pavlos Stefanou, Polymer Physics ETH*

Aug 14 "Flame made multifunctional nanoparticles for theranostics"  
**ML E13 @1.15pm** *Fabian Starsich, PTL*

Aug 20 Thu "Porous polyaniline-metal oxide nanocomposites for room temperature gas sensing"  
**ML E13 @1.15pm** *Samuel Regli*  
 "Selective Isoprene detection by Ti doped ZnO gas sensors for breath analysis"  
*Nicolay Pineau, final presentation of SA thesis, PTL*

Aug 27 Thu "FSP made BaTiO<sub>3</sub> nanoparticles for piezoelectric nanogenerator"  
**ML F34 @1.15pm** *Gian Schädli, final presentation of MS thesis, PTL*  
 "Single-step preparation of polymer nanocomposites"  
*Christoph Blattmann, PTL*

Sept 12 Sat "Laser diagnostics of flame aerosol synthesis"  
**ML E13 @11.30am** *Prof. Shuiqing LI, Tsinghua University, Beijing, China*