

5th. Workshop „Microtechnology for Chemistry and Biology Laboratories“

Ilmenau/Elgersburg (Thuringia, Germany, February 23.-25, 2010)

Program

(preliminary *January 13, 2010)

Tuesday, February 23

13.00 opening

biomolecular diagnostics

13.20-14.00 S. Haswell et. al., University of Hull: Development of microsystems for personalized biomolecular diagnostics

14.00-14.20 M. Ritzi-Lehnert et. al., Institut für Mikrotechnik Mainz GmbH: Microfluidic-based bio-diagnostic systems for healthcare

14.20-14.40 T. Kirner et. al., Kirner Microsystems: Integrated microfluidic diagnostic systems

14.40-15.00 M. Pribyl et. al., Institute of Chemical Technology Prague: Plastic microfluidic systems combined with the LIF detection for bioassays

15.00 - 15.30 coffee break

diagnostics for system biology/cells

15.30-16.10 J. Ducreé et. al., Dublin City University, IRL: Recent advancements on lab-on-a-chip technologies for point-of-care diagnostics and systems biology

16.10-16.30 M. Stubenrauch et. al., TU Ilmenau: Ansiedlung adhärenter Zellen in Bio-Mikrosystemen

16.30-16.50 B. Seise et. al., Friedrich-Schiller-Universität Jena: Chip-based point-of-care analysis for the detection of epizootics – Autonomous epizootic lab-on-a-chip system

16.50-17.10 S. Wiedemeier et. al., iba Heiligenstadt: Verkapselung von Langerhansschen Inseln – eine Technologieentwicklung für die Transplantationsmedizin

17.15 - 17.45 Poster: Short presentations (1 slide or transparency)

18.00 - 19.00 Poster presentation and coffee

19.30 dinner

Wednesday, February 24

micro process technology

8.30-9.10 V. Hessel et. al., Eindhoven University of Technology, NL: Micro process technology as holistic and systemic process intensification approach – from ex-ante cost/eco efficiency considerations via scaled-out pilot reactors to novel process windows

9.10-9.30 D. Boskovic et. al., Fraunhofer ICT Pfinztal: Residence time distribution studies in microfluidic structures

9.30-9.50 M. Schimmelpfennig et. al., Fachhochschule Jena: CFD simulation of microfluidic devices for optimization of chemical reactions

09:50-10.10 Hrdlicka et. al., Institute of Chemical Technology Prague: Mathematical modeling of AC electroosmosis in microfluidic channels

10.10-10.30 S. Maikowske et. al., Karlsruher Institut für Technologie: Mikroverfahrenstechnik im Universitätspraktikum

- 10.30- 11.00 coffee break
- 11.00-11.40 D. Agar et. al., Technische Universität Dortmund: Flüssig-Flüssig-Pfropfenströmung-Kapillarmikroreaktor
- 11.40-12.00 S. Hübner et. al., Leibniz-Institut für Katalyse e. V., Rostock: Microstructures and Ultrasound – A Good Combination?
The Development of Ultrasound Supported Multiphase Reactions in Microstructured Devices
- 12.30 lunch
- Nanoparticles and droplet based flow**
- 14.00-14.40 P. Bowen et. al., Ecole Polytechnique Federal de Lausanne, Lausanne, CH: Precipitation of Nanosized and Nanostructured Powders: Process Intensification using the Segmented Flow Tubular Reactor (SFTR)
- 14.40-15.00 M. Luty-Blocho et. al. Spherical and star shape synthesis of gold nanoparticles in an interdigital micromixer
- 15.00-15.20 N. Steinfeldt et. al., Leibniz-Institut für Katalyse e. V., Rostock: Application of microstructures for the synthesis of Pt-nanoparticles
- 15.20-15.40 M. Schmitt et. al., Hochschule Coburg: Acoustic deformation of droplets for technical applications
- 15.40-16.00 N. Gleichmann et al., IPHT Jena, Development environment for droplet based Lab-on-a-Chip Systems
- 16.00 forest walk
- 19.00 conference dinner Elgersburg castle

Thursday, February 25

monitoring and imaging

- 8.30-9.10 S. Löbbecke et. al., Fraunhofer ICT Pfinztal: Spectroscopic Inline-Monitoring of microreaction process by pushbroom imaging techniques
- 9.10-9.30 M. Amberg et. al., TU Ilmenau: Planar integrated free-space optical fluorescence detector for microfluidic applications
- 9.30-9.50 Y. Zhang et. al., iba Heiligenstadt: Impedance spectroscopy measurement in a microfluidic system
- 9.50-10.10 D. Malsch et. al., IPHT Jena: Image-based micro fluid segment characterization
- 10.10-10.50 coffee break

screening and biophysical methods

- 10.50-11.30 J. Lerchner et. al., TU Bergakademie Freiberg: Chip calorimetry as a tool for evaluation of antibiotics and phages
- 11.30-12.00 B. Cahill et. al., iba Heiligenstadt: Electrically-driven actuation of droplets
- 12.00-12.20 A. Funfak et. al., TU Ilmenau: segment-based microtoxicology
- 12.20-12.40 J. Schemberg et. al., iba Heiligenstadt: A novel platform for rapid detection of foodborne pathogenes integrating bio- and nanotechnology
- 12.40-13.00 final remarks
- 13.00 lunch

