



E-MRS Spring Meeting 2014 - Symposium H: ALTECH 2014

Analytical Techniques for Precise Characterization of Nano Materials

Metrology is a prerequisite for the development of novel materials on the nanoscale. It supports the correlation of material properties and functionalities. The expected contributions should demonstrate how analytical techniques enable a deep understanding of new materials. This symposium will be organized by major European National Metrology Institutes and Imec.

Symposium topics

1. X-Ray diffraction, tomography, scattering and spectrometry based applications on advanced materials and in nanoscience
2. Recent developments of ion beam techniques for characterization of lateral and vertical thin films
3. New developments for optical spectroscopic measurements, large-area nanostructured high-refractive index materials measurement and modeling, optical scatterometry by coherent light
4. Techniques for thermal characterization of thin films
5. Methodologies for thin films, nanostructure, interfacial and nanostrain characterizations of semiconductor and advanced material systems
6. Scanning probe techniques for high resolution characterization of organic, hybrid and inorganic semiconductors
7. Analytical techniques for characterization of surface chemistry
8. Characterization of functionalized surfaces for e.g. biosensing and bioanalytics
9. Novel instrumentation for e.g. nanoanalysis, next generation of highest resolution microscopy including near-field methods, characterization of metallic and dielectric based superlenses
10. Ultra-trace analysis using complementary metrology
11. Reference and calibration samples for nanometrology

Invited speakers

Wim Coene, ASML, The Netherlands, "*Optical Metrology for Photo-Lithography*"

Thierry Conard, IMEC, Belgium, "*Nano-scale feature analysis: Achieving high effective lateral resolution with micro-scale material characterization techniques*"

David Ginger, University of Washington, USA, "*Imaging Structure/Function Relationships in Nanostructured Solar Cells*"

S  verine Gomes, CETHIL, France, "*Thermal nanometrology and scanning thermal microscopy*"

Jaime Gomez Rivas, FOM, The Netherlands, "*Plasmonics for Solid State Lighting*"

Poul-Erik Hansen, DFM, Denmark, "*Polarization dependent measurement of nanostructured surfaces*"

Ludger Koenders, PTB, Germany, "*Dimensional metrology for surface analytics*"

Jaechol Lee, Samsung Advanced Institute of Technology, South Korea, "*Characterizations of the oxide semiconductor and OLED materials using combination of surface analysis methods*"

Maria Luisa Polignano, ST Microelectronics, Italy, "*A comparative analysis of different measurement techniques to monitor metal and organic contamination in silicon device processing*"

Eddy Simoen, University Ghent and Imec, Belgium, "*Towards single-trap spectroscopy: Generation-Recombination noise in UTBOX SOI nMOSFETs*"

Wolfgang Unger, BAM, Germany, "*Metrology for Surface Chemical Analysis at the Nanoscale: Status and Challenges*"

[EMRS 2014 Spring Meeting - Symposium H](#)

Technical Sessions: May 26-30, 2014

Venue: Congress Center Lille, France

Info: www.emrs-strasbourg.com

Organizers

Burkhard Beckhoff, PTB, Germany

Fernando Araujo de Castro, NPL, U.K.

Omar El Gawhary, VSL, The Netherlands

Petr Klapetek, CMI, Czech Republic

Cor Claeys, Imec, Belgium

Scientific committee

Bernd Kolbesen, Laszlo Fabry, Ian Gilmore, Christoph Adelman, Bruno Hay, Bernd G  ttler, Miroslav Valtr, Marie-Christine L  py, Ellen Moons, Farshid Manoochehri, Norbert Esser, Ji-Seon Kim, Sabine Zakel, Emmanuel Nolot, Andreas Hertwig, Blanka Detlefs, Birgit Kanngie  ser, Peter Petrik, Andreas Nutsch

Proceedings

Guest Editors: A. Nutsch, C. Adelman, F. Castro, B. Detlefs

Peer reviewed proceeding papers will be published in *Physica Status Solidi (a)* and *(c)*.