

THE CONFERENCE

The semiconductor industry faces significant challenges to continue increasing performance and functionality of information processing. New and improved metrology and characterization is required to support these advances in density and functionality. We bring together scientists and engineers interested in all aspects of the characterization technology needed for nanoelectronic materials and device research, development, and manufacturing. All approaches are welcome: chemical, physical, electrical, optical, in-situ, and real-time control and monitoring. The conference summarizes major issues and provides critical reviews of important semiconductor techniques needed as the semiconductor industry moves to silicon nanoelectronics and beyond.

The conference will consist of formal invited presentation sessions and poster sessions for contributed papers. The poster papers should cover new developments in characterization and metrology especially at the nanoscale.



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2011 INTERNATIONAL CONFERENCE ON FRONTIERS OF CHARACTERIZATION AND METROLOGY FOR NANOELECTRONICS



MAY 23-27, 2011
GRENOBLE, FRANCE
MINATEC CAMPUS

Confirmed Keynote Speakers:
Michel Brillouet, CEA LETI
Udo Nothelfer, Global Foundries
Rudi Cartuyvels, IMEC

www.nist.gov/pml/semiconductor/conference/

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Papers are solicited to address materials and device characterization and metrology for:

- ✦ 300 mm
- ✦ Alternative Gate Dielectrics
- ✦ Beyond CMOS
- ✦ Breakthroughs in Electron Microscopy
- ✦ Breakthroughs in Lithography
- ✦ Channel Engineering (e.g., strained silicon, 3/5s)
- ✦ Contamination, Detection, and Identification
- ✦ Critical Analytical Techniques
- ✦ Defects
- ✦ Device Manufacturing
- ✦ Diagnostics
- ✦ Embedded or Buried Interfaces
- ✦ In-Situ, Real-Time Control and Monitoring
- ✦ Integrated Metrology
- ✦ Interconnects; Present or Future
- ✦ Lab-on-a-Chip
- ✦ MEMS/NEMS Metrology Applications
- ✦ Modeling/Simulation
- ✦ Nanoelectronics Materials and Devices
- ✦ Non-Destructive Atomic Scale Methods
- ✦ Novel Measurement Methods, Breakthroughs
- ✦ Thin-Films
- ✦ Ultra-Shallow Junctions
- ✦ Wafer Fab
- ✦ Wafer Manufacturing and New Substrate Materials

HOTEL DETAILS

Blocks of rooms will be reserved at a selection of hotels in Grenoble. Additional details will be available soon.

ABSTRACTS

One-page, camera-ready abstracts must be received by December 20, 2010. The template is available in the "Author Instructions" section of the conference website. The cover page must include the name, address, telephone and fax numbers, and e-mail address of the contact author. Please include three key words that best describe your paper at the end of the abstract. Also, you are encouraged to provide at least one figure presenting data. Notice of acceptance of papers will be given by January 31, 2011.

MANUSCRIPTS

Address all abstracts to the conference publications coordinator, Erik Secula (erik.secula@nist.gov). Please send Microsoft Word or Adobe PDF files. If e-mail is not a practical option, please contact Erik Secula at (301) 975-2050 to make alternative arrangements.

The deadline for submission of camera-ready manuscripts is April 25, 2011, prior to the start of the conference.

All manuscripts will be reviewed before acceptance. Instructions for manuscript preparation will be provided when notification of accepted abstracts is given to the authors. It is considered crucial to the success of the conference that all papers be published in a special proceedings. The American Institute of Physics will again publish the book, along with a CD-ROM.

REGISTRATION

The registration fee for the conference includes coffee breaks, lunches, a banquet, an extended abstract booklet, and a hardback book containing the workshop proceedings, along with a CD-ROM. The registration fee is 450 €. Students and post-docs may register for 300 €. On-line registration is available now at the conference website.

BACKGROUND

With the semiconductor industry moving beyond standard silicon and further into nanoelectronics, the introduction of new materials and novel devices using innovative processing and assembly brings formidable metrology challenges. We are in an era where nanotechnology is driving us toward ever smaller, faster, cheaper, and more complex devices. Innovative metrology and characterization methods are required.

The 2011 International Conference on Frontiers of Characterization and Metrology for Nanoelectronics is the eighth in a series that began in 1995. It emphasizes the frontiers and innovation in characterization and metrology of nanoelectronics. The proceedings for all seven previous conferences were published as hardcover volumes by the American Institute of Physics, New York. The most recent proceedings, Frontiers of Characterization and Metrology for Nanoelectronics: 2009, was published in October 2009 and is available for purchase at scitation.aip.org/proceedings/confproceed/1173.jsp.