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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- Michael Current, Current Scientific
- Bob Havemann, SRC
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- Bob McDonald, formerly of Intel (Treasurer)
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FIRST ANNOUNCEMENT

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2013 INTERNATIONAL CONFERENCE ON FRONTIERS OF CHARACTERIZATION AND METROLOGY FOR NANOELECTRONICS (FCMN)

MARCH 25-28, 2013
GAITHERSBURG, MD

NATIONAL INSTITUTE
OF STANDARDS AND
TECHNOLOGY

www.nist.gov/pml/div683/conference/

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2013 FCMN

CALL FOR PAPERS

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

- 450 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

A block of rooms is reserved at the Crowne Plaza Hotel in Rockville, MD. To receive the special conference rate, please use the three-letter code FCM. You may book your reservations by calling 18002CROWNE or on-line: www.ichotelsgroup.com/crowneplaza/hotels/us/en/reservation/roomrate

ABSTRACTS

Camera-ready abstracts of up to two pages must be received by Nov. 13, 2012. The template will be available soon in the "Author Instructions" section of the conference website. A cover page must include the name, address, telephone number, and e-mail address of the contact author as well as a list of 3-6 key words that best describe your paper. Your abstract should include at least one figure and/or table presenting data. Notice of acceptance of papers will be given by Dec. 19, 2012.

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.

MANUSCRIPTS

It is considered crucial to the success of the conference that all papers be published in a special proceedings. The deadline for submission of camera-ready manuscripts will be before 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.

REGISTRATION

The registration fee for the conference includes coffee breaks, lunches, a reception, a banquet, a barbecue, an extended abstract booklet, and the conference proceedings. All payments for advanced and student registration must be received by Feb. 28, 2013. On-line registration will be available soon.

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 2013 FCMN is the ninth in a series that began in 1995. It emphasizes the frontiers and innovation in characterization and metrology of nanoelectronics. The proceedings for all eight 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: 2011, was published in Dec. 2011 and is available for purchase at proceedings.aip.org/resource/2/apcpcs/1395/1. The proceedings for most of the other entries are available free-of-charge at www.nist.gov/pml/div683/conference/archives.cfm.