Tuesday, Mar. 26th, Poster Presentation

TU-01, Real-Time Spectroscopic Ellipsometry in Atomic Layer Deposition Process
Han Wang, Xiaoqiang Jiang, and Brian G. Willis
Department of Chemical, Materials & Biomolecular Engineering, University of Connecticut, Storrs, Connecticut 06269

TU-02, Measure the Electron and Hole Contact Resistance in Gated Kelvin Structure
Hui Yuan[1,2], Curt A. Richter[2], Hao Zhu[1,2], Haitao Li[1,2], Oleg Kirillov[2], Dimitris Ioannou[1], and Qiliang Li[1]
[1]Department of Electrical and Computer Engineering, George Mason University, Fairfax, VA 22030
[2]Semiconductor and Dimensional Metrology Division, NIST, Gaithersburg, MD 20899-8120

TU-03, Transmission Electron Backscatter Diffraction (T-EBSD) for Characterizing Ultrathin Films in the SEM
Katherine P. Rice, Roy H. Geiss, and Robert R. Keller
Applied Chemicals and Materials Division, National Institute of Standards and Technology, Boulder, CO 80305

TU-04, Spatially-Resolved Dopant Characterization with a Scanning Microwave Microscope
T. Mitch Wallis, Atif Imtiaz, Alexandra E. Curtin, Pavel Kabos, Matthew D. Brubaker, Norman A. Sanford, and Kris A. Bertness
National Institute of Standards and Technology (NIST), 325 Broadway, Boulder, Colorado 80305

TU-05, Modeling Scanning Electron Microscope Measurements with Charging
John S. Villarrubia
National Institute of Standards and Technology, Semiconductor and Dimensional Metrology Division, Stop 8212, 100 Bureau Dr., Gaithersburg, MD 20899

TU-06, Automated STEM and TEM Metrology of Advanced Semiconductor Devices
Mark J. Williamson, Michael Strauss, and David Horspool
FEI Company, 5350 NE Dawson Creek Drive, Hillsboro, Oregon, USA

TU-07, Contamination-Free Scanning Electron and Helium Ion Microscopy
K.P. Purushotham, András E. Vladár, and Michael T. Postek
National Institute of Standards and Technology, 100 Bureau Drive, Gaithersburg, MD 20899-8212, USA

TU-08, Measurement of Silica Particles by Transmission Electron Microscope
F. Kole, Y. Guan, and P. Konicek
VLSI Standards, Inc., Five Technology Drive, Milpitas, California 95035 USA

TU-09, Applications of Electron Tomography to Advanced CMOS Process Technology
Hugh L. Porter[1] and Jeremy D. Russell[2]
[1]SEMATECH and GLOBALFOUNDRIES, 257 Fuller Road, Suite 2200, Albany, NY 12203
[2]GLOBALFOUNDRIES, 400 Stone Break Extension, Malta, NY 12020

TU-10, Quantitative Characterization and Applications of 193 nm Scatterfield Microscope

M. Y. Sohn[1,2], B. M. Barnes[1], and R. M. Silver[1]
[1]National Institute of Standards and Technology (100 Bureau Drive, Gaithersburg, MD)
[2]Hyperion Biotechnology, Inc. (12002 Warfield, Suite 101, San Antonio, TX)

TU-11, 3-D Optical Metrology of Finite sub-20 nm Dense Arrays using Fourier Domain Normalization

J. Qin, H. Zhou, B. M. Barnes, R. Dixson, and R. M. Silver
Semiconductor and Dimensional Metrology Division, National Institute of Standards and Technology, 100 Bureau Dr. MS 8212, Gaithersburg, MD USA 20899-8212

TU-12, Multi-Technique Approach for Determination of Crystalline Phase and Electronic Structure of Atomic Layer Deposited $Hf1\text{-}xZr_xO_2$

Relja Vasić[1], Steven Consiglio[2], Robert Clark[2], Kandabara Tapily[2], Manasa Medikonda[1], Gangadhara Raja Muthinti[1], Eric Bersch[3], Gert Leusink[2], and Alain Diebold[1]
[1]College of Nanoscale Science and Engineering, University at Albany, 257 Fuller Rd., Albany, NY 12203
[2]TEL Technology Center, America, LLC, 255 Fuller Rd., Albany, NY 12203
[3]SEMATECH, 257 Fuller Rd., Albany, NY 12203

TU-13, Quantification of Hafnium in Hafnium Oxide Film by Isotope Dilution Neutron Activation Analysis

Toshiko Takatsuka, Kouichi Hirata, Kenji Ito, Naoko Nonose, and Tsutomu Miura
National Metrology Institute of Japan, National Institute of Advanced Industrial Science and Technology, Central 5, 1-1-1 Higashi, Tsukuba, Ibaraki 305-8565, Japan

TU-14, Complementary Metrology – aA Prerequisite for Reliable and Traceable Characterization of Surfaces and Nanolayers

Andreas Nutsch[1,2], Burkhard Beckhoff[1], and Jaap Van Den Berg[3]
[1]Physikalisch-Technische Bundesanstalt, Abbestr 2-12, 10587, Berlin, Germany
[2]previously Fraunhofer IISB, Schottkystrasse 10, 91058 Erlangen, Germany
[3]University of Huddersfield, Huddersfield, HD1 3DH United Kingdom

TU-15, SIMS Correction and Depth Profiling of Ion Implantations Using Grazing Incidence XRF

Philipp Hönicke[1], Burkhard Beckhoff[1], Yves Kayser[2], and Sven Kayser[3]
[1]Physikalisch-Technische Bundesanstalt, Abbestr. 2-12, 10587 Berlin, Germany
[2]Paul Scherrer Institut, 5232 Villigen PSI, Switzerland
[3]ION-TOF GmbH, Heisenbergstr. 15, 48149 Münster, German

TU-16, Towards Nanoelectronics Metrology with a Laboratory Set-Up in the Soft X-Ray Range

D. Grötzsch[1], B. Kanngießer[1], I. Mantouvalou[1], C. Herzog[1], K. Witte[1], M. Spanier[1], J. Lubeck[2], P. Hönicke[2], and B. Beckhoff[2]
[1]Technische Universität Berlin, Institut für Optik und Atomare Physik, Hardenbergstr. 36, 10623 Berlin
[2]Physikalisch Technische Bundesanstalt, Abbestr. 2-12, 10587 Berlin, Germany

TU-17, Local Tunneling Measurements of in-situ Gated Topological Insulators

Jeonghoon Ha[1,2,3], Niv Levy[1,2], Tong Zhang[1,2], Young Kuk[3], and Joseph A. Stroscio[1]
[1]Center for Nanoscale Science and Technology, NIST, Gaithersburg, MD 20899, USA
[2]Maryland NanoCenter, University of Maryland, College Park, MD 20742, USA
[3]Department of Physics and Astronomy, Seoul National University, Seoul, 151-747, Korea

TU-18, Comprehensive Characterization and Understanding of Micro-Porous Low-κ Interconnects Using PALS, EP and XRR

D. Yang[1], R.L. Opila[1], G. Jiang[2], V. Pallem[2], D.W. Gidley[3], and N. Bhargava[4]
[1]Department of Materials Science and Engineering, University of Delaware, Newark, Delaware
[2]Delaware Research & Technology Center, Air Liquide America, Newark, Delaware
[3]Department of Physics, University of Michigan, Ann Arbor, Michigan
[4]Department of Electrical Engineering, University of Delaware, Newark, Delaware

TU-19, Direct Analysis of Undiluted Photoresist with Inline Autodilution Inductively Coupled Plasma Mass Spectrometry

Hyun-Kee Hong[1], J. S. Lee[2], Austin Schultz[2], Paul Field[2], and Daniel Wiederin[2]
[1]Samsung Electronics Co. Ltd., San #5, Banwol-Dong, Hwasung City, Gyeonggi-Do, Korea 445-701
[2]Elemental Scientific, 1500 North 24th Street Omaha, NE 68110, USA

TU-20, Extraction of Interfacial Doping Density in Metal/Silicon Contacts

Khaled Ahmed
Intermolecular, Inc., 3011 North First Street, San Jose, California 95134, USA

TU-21, Sub-Surface Metrology Using X-Ray Emitting AFM Probes

Faisal K. Chowdhury, H. Pourzand, and M. Tabib-Azar
Dept. of Electrical and Computer Engineering, University of Utah, Salt Lake City, UT, USA, 84112

TU-22, Work Function Characterization Of $Si_{1-x}Ge_x$ Heterostructure Using Kelvin Force Microscopy and Electron Spectroscopy

Sylvain Pouch, Nicolas Chevalier, Denis Mariolle, Eugenie Martinez, Pradeep Kumar, Olivier Renault, Julien Morin, Jean-Michel Hartmann, and Łukasz Borowik
CEA, LETI, MINATEC Campus, 17 rue des Martyrs, 38054 GRENOBLE Cedex 9, France

TU-23, Measurement Uncertainties in MEMS Kinematics by Super-Resolution Fluorescence Microscopy

Craig D. McGray, Samuel M. Stavis, and Jon Geist
National Institute of Standards and Technology, Gaithersburg, MD 20899

TU-24, Sample Alignment of X-Ray Reflectometry Using Thickness and Density From Certified Reference Materials

Donald Windover[1], David L Gil[1], Yasushi Azuma[2], and Toshiyuki Fujimoto[2]
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