

Symposium M

MONDAY OCTOBER 9TH



8:15 A.M. – 10:15 A.M. ORAL SESSION M1

Chairperson: Prof. Jacobus W. Swart

Room: FEI Company

8:15 – 9:00 A.M. FOCUSED ION BEAM (FIB) APPLICATIONS IN NANOFABRICATION, MICROSCOPY, AND MICROANALYSIS (**M561, Invited**). [Phillip E. Russell](#) (North Carolina State U., USA)

9:00 – 9:15 A.M. INSTRUMENTED INDENTATION TESTING AND 3D SURFACE TOPOGRAPHY: ANALYTICAL METHODS TO EVALUATE THE SHAPE OF THE EFFECTIVE VICKERS INDENTER (**M597**). [Rafael Drumond Mancosu](#) (FAPEMIG/EEUFMG) and G. Cristina Durães Godoy (EEUFMG)

9:15 – 9:30 A.M. SIZE EFFECT ON THE MORPHOLOGY OF DIAMONDSYNTHEZIZEDAT HIGHPRESSURE AND HIGH TEMPERATURE (**M593**). Guerold Sergeivitchi Bobrovitchii (LAMAV/UENF), Sergio Neves Monteiro (LAMAV/UENF) and Ana Lucia Diegues Skury (LAMAV/UENF)

9:30 – 9:45 A.M. GROWTH OF CARBON NANOSTRUCTURED MATERIALS BY CATALYTIC CHEMICAL VAPOR DEPOSITION (**M542**). José Gonçalves (CCS-UNICAMP), Antônio Ramos (IFGW-UNICAMP), Stanislav Moshkalev (CCS-UNICAMP), [Carla Verissimo](#) (CCS-UNICAMP), Jacobus Swart (CCS-UNICAMP) and Oswaldo Alves (IQ-UNICAMP)

9:45 – 10:15 A.M. COMBINED DETERMINATION OF THE STRUCTURAL, ELECTRICAL, AND OPTICAL NANOSCALE PROPERTIES OF SEMICONDUCTORS (**M502, Invited**). Fernando A. Ponce (Arizona State University, USA) ■



10:15 A.M. - 10:30 A.M. – COFFEE BREAK



10:30 A.M. – 12:30 P.M. – ORAL SESSION M2

Chairperson: Dra. Carla Verissimo

Room: FEI Company

11:00 – 11:30 A.M. NANOPROTOTYPING FOR MATERIAL CHARACTERIZATION WITH DUALBEAM INSTRUMENTS (**M611, Invited**). [Wilhelmi, O.](#)

11:30 – 11:45 A.M. CHARACTERIZATION OF XENON NANOPARTICLES EMBEDDED IN SILICON BY TRANSMISSION ELECTRON MICROSCOPY (**M511**). [Stephen E. Donnelly](#) (Salford Univ.), Dominique Eyidi (LMP/Poitiers Univ.), Amy Gandy (Salford/Poitiers Univ.) and Marie-France Beaufort (LMP/Poitiers Univ.)

11:45 – 12:00 A.M. FAILURE OF EPOXY COMPOSITES WITH DIAMOND DISPERSED PARTICLES. (**M557**). José Roberto Moraes d'Almeida (PUC-Rio),

Guerold Sergeivichi Bobrovitchii (LAMAV/UENF), Ana Lucia Diegues Skury (LAMAV/UENF), Ruben Sanchez Rodriguez (LAMAV/UENF), Gustavo Wagner Menezes (LAMAV/UENF) and Sergio Neves Monteiro (LAMAV/UENF)

12:00 – 12:30 P.M. NANOMANIPULATOR FOR IN-SITU SEM EXPERIMENTS. (**M533, Invited**). Vitor T. A. Oiko (LNLS/Unicamp-IFGW), Paulo C. Silva (LNLS), Denise Nakabayashi (LNLS/Unicamp-IFGW) and [Daniel Ugarte](#) (LNLS/Unicamp-IFGW) ■



12:30 P.M. – 2:00 P.M. – LUNCH



2:00 P.M. – 2:45 P.M. – PLENARY LECTURE

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2:50 P.M. – 4:20 P.M. ORAL SESSION M3

Chairperson: Profa. Mônica A. Cotta

Room: FEI Company

2:50 – 3:20 P.M. MODERN TRENDS IN SUBWAVELENGTH MICROSCOPY: CONFOCAL AND TIP ENHANCED RAMAN AND FLUORESCENCE MICROSCOPY, 3D IMAGING, LIGHT TRANSPORT IN NANOSTRUCTURES, COMBINATION WITH AFM (**M548, Invited**). Sergey A. Saunin (NT-MDT Co.), Konstantin Mochalov (NT-MDT Co.), Pavel S. Dorozhkin (NT-MDT Co.) and Andrey S. Shubin (NT-MDT Co.)

3:20 – 3:35 P.M. VANADIUM OXIDE NANOCCLUSERS ON SI(111) 7X7 STUDIED BY SCANNING TUNNELING MICROSCOPY (**M585**). Stavale, F.; Achete, C. A.; Niehus, H.

3:35 – 3:50 P.M. COMBINING HIGH RESOLUTION OPTICAL AND SCANNING PROBE MICROSCOPY. [Fernando Vargas](#) (Applications Scientist, WITec GmbH, Ulm, Germany)

3:50 – 4:05 P.M. MAGNETIC PROPERTIES ON MICROMETRIC OBJECTS (**M601**). Antonio Carlos Seabra (POLI/USP), Antonio Domingues dos Santos (IFUSP), Mariana Pojar (IFUSP), Jeroen Schoenmaker (IFUSP), Sergio Antonio Romero (IFUSP) and Yves Souche (CNRS-Grenoble, France)

4:05 – 4:20 P.M. THE RESEARCH NETWORKS NAMITEC AND NANOFAB: NANOCCHARACTERIZATION AND NANOFABRICATION ACTIVITIES (**M207, Invited**). [Swart, J. W.](#); Seabra, A. C. ■



4:20 P.M. – 4:40 P.M. – COFFEE BREAK



4:20 P.M. – 5:45 P.M. – POSTER SESSION PM1

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**5:50 P.M. – 6:35 P.M. – PLENARY LECTURE**

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TUESDAY OCTOBER 10TH**8:15 A.M. – 10:15 A.M. – ORAL SESSION M4**

Chairperson: Dr. Antonio Ramirez

Room: FEI Company

- 8:15 – 8:45 A.M.** 3D ORIENTATION MICROSCOPY IN A FIB-SEM (**M506, Invited**). Stefan Zaefferer (MPI für Eisenforschung), [Alice Bastos da Silva](#) (MPI für Eisenforschung) and Dierk Raabe (MPI für Eisenforschung)
- 8:45 – 9:00 A.M.** HIGH-RESOLUTION EBSD ANALYSIS OF ADIABATIC SHEAR BANDS FORCED IN IF-STEEL UNDER DYNAMIC COMPRESSION TESTS (**M521**). [Dierk Raabe](#) (MPI-E), Kenneth S. Vecchio (UCSD), Hugo R.Z. Sandim (EEL-USP) and Jefferson F.C. Lins (EEMVR-UFF)
- 9:00 – 9:15 A.M.** IN-SITU OBSERVATION OF GRAIN FRAGMENTATION DURING DEFORMATION OF ELECTRICAL STEELS SHEETS (**M582**). [Claudio Roberto dos Santos](#) (Epusp), Marcos Flávio de Campos (Inmetro), Fernando J.G. Landgraf (EPUSP), Maria do Carmo Amorim da Silva (EPUSP) and Ivan G.S. Falleiros (EPUSP)
- 9:15 – 9:30 A.M.** EBSPTS FROM A NATURAL MAGNETITE - A CRYSTALLOGRAPHIC APPROACH (**M554**). [Paola Ferreira Barbosa](#) (UFOP); Lagoeiro, L. E.
- 9:30 – 9:45 A.M.** RECRYSTALLIZATION TEXTURE OF SEMI-PROCESSED ELECTRICAL STEELS AFTER DIFFERENT SKIN-PASSES (4-12%) (**M564**). [Carlos A. Achete](#) (Dimci/Dimat Inmetro), Fernando J. G. Landgraf (Dept Met), Marcos Fukuhara (Dimci/Dimat Inmetro), Taeko Yonamine (Dimci/Dimat Inmetro), Marcos Flavio de Campos (Dimci/Dimat Inmetro) and Frank P. Missell (Dimci/Dimat Inmetro).
- 9:45 – 10:00 A.M.** SELECTING FRESH NUCLEATED GRAINS FOR TEXTURE COMPONENT DECOMPOSITION OF A PARTIALLY RECRYSTALLISED STEEL (**M560**). [Carlos Sérgio da Costa Viana](#) (IME/UFF), André Luiz Pinto (IME) and Elaine Gaspar de Souza (IME)
- 10:00 – 10:15 A.M.** MEASUREMENT OF AUTOMOTIVE CATALYST WASHCOAT THROUGH BSE, SEM-CL AND DIGITAL IMAGE ANALYSIS (**M572**). Mauri José Baldini Cardoso (CENPES/Petrobras), Arnaldo Alcover-Neto (CETEM/MCT), Fatima Maria Z. Zotin (IQ/UERJ), Otavio da F. Martins Gomes (CETEM/MCT e PUC-Rio) and Sidnei Paciornik (PUC-Rio) ■

**10:15 A.M. - 10:30 A.M. – COFFEE BREAK****11:00 A.M. – 12:30 P.M. – ORAL SESSION M5**

Chairperson: Prof. André Pinto

Room: FEI Company

- 11:00 – 11:15 A.M.** QEMSCAN TECHNOLOGY: A COMPLETE TOOL FOR SEM-BASED AUTOMATED MINERALOGY (**M612, Invited**). [Kwitko-Ribeiro, R.](#) (CVRD)
- 11:15 – 11:30 A.M.** INVESTIGATING THE MICROSTRUCTURE OF Ni/YSZ CERMETS BY USING SEM/EDS ANALYSES (**M504**). [Sônia M. Vasconcelos](#) (PEQ/COPPE/UFRJ), Mariana M.V.M. Souza (EQ/UFRJ), Nielson F.P. Ribeiro (PEQ/COPPE/UFRJ) and Martin Schmal (PEQ/COPPE/UFRJ)
- 11:30 – 11:45 A.M.** MICROTTEXTURE OF CHLORIDE TREATED CdTe THIN FILMS DEPOSITED BY CSS TECHNIQUE (**M508**). [Ramesh Dhare](#) (NREL), Leila Rosa Cruz (IME-RJ), Andre Luiz Pinto (IME-RJ), Helio Rodrigues Moutinho (NREL) and Joao Roberto de Toledo Quadros (IME-RJ)
- 11:45 – 12:00 M.** CHARACTERIZATION OF STRAIN INDUCED MARTENSITE IN AN AISI 301LN STAINLESS STEEL (**M520**). Pedro Lima Neto (UFC), Sheyla S Carvalho (UFC), Hamilton FG Abreu (UFC), Paulo O Silva (Petrobras) and Ricardo P Santos (UFC)
- 12:00M. – 12:15P.M.** COIR FIBER INTERFACE IN POLYESTER COMPOSITES (**M598**). [Felipe Perissé Duarte Lopes](#) (LAMAV/UENF), Luis Augusto Hernandez Terrones (LAMAV/UENF), José Roberto Moraes d'Almeida (PUC-Rio), Regina Coeli Martins Paes Aquino (CEFET - Campos) and Sergio Neves Monteiro (LAMAV/UENF)
- 12:15 – 12:30 P.M.** PERFORMANCE OF CURAUA FIBERS IN PULLOUT TESTS (**M571**). [Regina Coeli Martins Paes Aquino](#) (CEFET - Campos), José Roberto Moraes d'Almeida (PUC-Rio), Felipe Perisse Duarte Lopes (LAMAV/UENF) and Sergio Neves Monteiro (LAMAV/UENF) ■

**12:30 P.M. – 2:00 P.M – LUNCH****2:00 P.M. – 2:45 P.M – PLENARY LECTURE**

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**2:50 P.M. – 4:20 P.M. – ORAL SESSION M6**

Chairperson: André P. Tschiptschin

Room: FEI Company

- 2:50 – 3:20 P.M.** SEMICONDUCTOR NANOSTRUCTURES: TUNING SHAPES, SPATIAL POSITIONING AND ELECTRICAL PROPERTIES (**M545, Invited**). Humberto R. Gutiérrez (IFGW -UNICAMP), João G. Zelcovit (IFGW-UNICAMP), José Roberto R. Bortoleto (IFGW-UNICAMP), Klaus Orian Vicaro (IFGW-UNICAMP) and [Mônica A. Cotta](#) (IFGW- UNICAMP)

3:20 – 3:35 P.M. INVESTIGATION OF THREE-DIMENSIONAL NANOSTRUCTURE OF BIOLOGICAL AND POLYMER OBJECTS BY SCANNING PROBE MICROSCOPY COMBINED WITH ULTRAMICROTOMY **(M546)**. Pavel S. Dorozhkin (Institute of Solid State Physics, Chernogolovka, Russia and NT-MDT Company), Nadejda B. Matsko (Institute of Appl. Physic) and Anton E. Efimov (NT-MDT Co.)

3:35 – 3:50 P.M. HYDROPHOBIC CORNSTARCH PLASTICIZED FILMS PRODUCED BY PLASMA TECHNOLOGY: TOPOGRAPHIC FEATURES, CONTACT ANGLE AND AFM ADHESIVE FORCES MEASUREMENTS **(M596)**. Cristina T. Andrade (IMA - UFRJ), Rossana M.S.M. Thiré (COPPE - UFRJ), Moema Martins (COPPE - UFRJ), Monica L. V. da Silva (COPPE - UFRJ) and Renata Antoun Simão (COPPE - UFRJ)

3:50 – 4:20 P.M. ELECTROSTATIC CHARGING OF INSULATORS: ROLE OF ATMOSPHERIC WATER ADSORPTION **(M527,Invited)**. Lucas Costa Soares (Unicamp), Rubia Figueredo Gouveia (Unicamp), Fernando Galembeck (Unicamp) and Carlos Alberto Rodrigues Costa (Unicamp). ■



4:20 P.M. – 4:40 P.M. – COFFEE BREAK



4:20 P.M – 5:45 P.M – POSTER SESSION PM2

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5:50 P.M. – 7:20 P.M - ROUND - TABLE

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