

FIRST PLENARY SESSION

Monday, September 10, 2007

Session I: 10⁰⁰-13³⁰

Chairpersons: R. Sinclair, M. Vukčević and V. Radmilović

10⁰⁰-10³⁰ **CHARACTERIZATION AND MANIPULATION OF FUNCTIONAL NANOSTRUCTURES USING HIGH RESOLUTION ANALYTICAL TEM AND COMBINED SPM-TEM**

E. Olsson

Department of Applied Physics, Chalmers University of Technology, Göteborg, Sweden

10³⁰-11⁰⁰ **CONTROLLED ASSEMBLY OF EPITAXIAL NANOSTRUCTURES FOR NANOELECTRONIC APPLICATIONS**

R. Hull¹, J. Gray^{1,2}, J. Graham¹, M. Kammler^{1,3}, A. Portavoce^{1,4}, M. Gherasimova¹, S. Wolf¹, J. Floro¹, F. Ross⁵

¹Department of MSE, University of Virginia, Charlottesville, Virginia, USA, ²Now at U. Pittsburgh, PA, USA, ³Now at Infineon, Dresden, Germany; ⁴Now at CNRS, Marseilles, France; ⁵IBM TJ Watson Research Center, Yorktown Heights New York, USA

11⁰⁰-11³⁰ **SEMICONDUCTOR NANOWIRE NUCLEATION AND GROWTH KINETICS**

F.M. Ross

IBM T.J. Watson Research Center, Yorktown Heights, New York, USA

Break: 11³⁰-12⁰⁰

12⁰⁰-12³⁰ **SOME RECENT DEVELOPMENTS IN NANO-MATERIALS**

R. Sinclair

Department of Materials Science and Engineering, Stanford University, Stanford, California, USA

12³⁰-13⁰⁰ **FINITE SIZE EFFECTS ON DISTRIBUTION AND SHAPE OF SMALL PARTICLES**

D. Chatain

CRMCN-CNRS, Marseille, France

13⁰⁰-13³⁰ **NOVEL METALLIC THIN FILMS FOR NEMS APPLICATION**

V. Radmilović¹, D. Mitlin²

¹National Center for Electron Microscopy, Lawrence Berkeley National Laboratory, University of California, Berkeley, California, ²Chemical and Materials Engineering, University of Alberta and National Institute for Nanotechnology, Edmonton, Alberta, Canada

Break: 13³⁰-15⁰⁰

SYMPOSIUM A: ADVANCED METHODS IN SYNTHESIS AND PROCESSING OF MATERIALS

Session I: 15⁰⁰-19¹⁵

Chairpersons: J.A. Varela, V. Dondur and M. Drofenik

15⁰⁰-15¹⁵ **PREPARATION AND STUDY OF ZINC – DOPED MAGHEMITE NANOPARTICLES**

M. Drofenik^{1,2}, M. Kristl², D. Makovec¹, Z. Jagličič³, D. Hanžel¹

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15¹⁵-15³⁰ **PREPARATION AND MULTILAYERED AGGREGATION OF UNIFORM COLLOIDAL CHOLESTEROL PARTICLES**

V. Uskoković, E. Matijević

Center for Advanced Materials Processing, Clarkson University, Potsdam, NY, USA

- 15³⁰-15⁴⁵ **DESIGN OF 3D FUNCTIONAL ARTICLES BY USING COMBINED SHS-SLS**
M.V. Kuznetsov¹, Yu.G. Morozov¹, I.V. Shishkovsky², I.P. Parkin³
¹*Institute of Structural Macrokineitics and Materials Science Russian Academy of Sciences, Chernogolovka, Moscow region, Russia*, ²*Lebedev Physics Institute, Samara Branch, Russian Academy of Sciences, Samara, Russia*, ³*Department of Chemistry, Christopher Ingold Labs, University College London, London, UK*
- 15⁴⁵-16⁰⁰ **SYNTHESIS AND CHARACTERIZATION OF POLYANILINE-ZEOLITE NANOCOMPOSITE**
V. Dondur¹, G. Ćirić-Marjanović¹, A. Radulović², Z. Vuković³, M. Milojević¹
¹*Faculty of Physical Chemistry, Belgrade, Serbia*
²*Institute of General and Physical Chemistry, Belgrade, Serbia*
³*Department of Catalysis and Chemical Engineering, ICTM, Belgrade, Serbia*
- 16⁰⁰-16¹⁵ **HARD MAGNETIC Co-Pt FILMS PREPARED BY ELECTRODEPOSITION**
K. Žužek Rožman^{1,2}, A. Krause², K. Leistner², H. Schlörb², S. Fähler², S. Baunack², L. Schultz²
¹*Jozef Stefan Institute, Ljubljana, Slovenia*, ²*IFW Dresden, Dresden, Germany*
- 16¹⁵-16³⁰ **SYNTHESIS OF Bi₃Nb_{1-x}Ta_xO₇ FLURITE - TYPE DIELECTRICS BY POLYMERIC PRECURSOR METHOD**
U. Pirnat¹, S.D. Škapin¹, D. Suvorov¹, M.A. Zaghete², J.A. Varela²
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²*Instituto de Química, UNESP, Araraquara, Brasil*
- 16³⁰-16⁴⁵ **RHOMBOHEDRAL CALCITE PRECIPITATION FROM CO₂-H₂O-Ca(OH)₂ SLURRY AT 90 °C AND 90 bar**
G. Montes-Hernandez, F. Renard, L. Charlet
LGIT, Maison de Géosciences, BP 53 X, Grenoble, France
- 16⁴⁵-17⁰⁰ **HYDROTHERMAL PROCESSING OF 1D –NANOMATERIALS FROM MINERAL SANDS**
L. Mančić¹, B. Marinković², P. Jardim², F. Rizzo², O. Milošević¹
¹*Institute of Technical Science of SASA, Belgrade, Serbia*,
²*Pontificia Universidade Catolica do Rio de Janeiro, Rio de Janeiro, Brasil*
- Break: 17⁰⁰-17³⁰**
- 17³⁰-17⁴⁵ **FRACTAL ASPECTS OF DISCRETE FRACTURE MECHANICS**
M.P. Wnuk
College of Engineering and Mathematical Science, University of Wisconsin – Milwaukee, Milwaukee, USA
- 17⁴⁵-18⁰⁰ **SOLVENT-FREE MECHANOCHEMICAL SYNTHESIS OF SOME PHYSIOLOGICALLY ACTIVE SUBSTANCES**
N. Pankrushina^{1,2}, I. Nikitina^{1,2}, E. Chernjak¹, C. Myz^{2,3}, T. Shakhshneider^{2,3}, V. Boldyrev^{2,3}
¹*Institute of Organic Chemistry, Novosibirsk, Russia*, ²*Research and Education Centre “Molecular Design and Ecologically Safe Technologies” at Novosibirsk State University, Russia*, ³*Institute of Solid State Chemistry and Mechanochemistry, Novosibirsk, Russia*
- 18⁰⁰-18¹⁵ **MECHANICAL MILLING: EVOLUTION OF CRYSTAL PARAMETER OF IRON POWDER**
I. Taut¹, G. Arghir¹, C. Popa¹, S.-D. Bolboacă², L. Jäntschi¹
¹*Technical University of Cluj-Napoca, Romania*, ²*“Iuliu Hatieganu” University of Medicine and Pharmacy Cluj-Napoca, Romania*
- 18¹⁵-18³⁰ **SUPERFICIAL DISTORTION INFLUENCE ON CHARACTERISTICS OF THE IRON-BASED MATERIALS**
L. Brândușan, L. Jäntschi
Technical University of Cluj-Napoca, Romania
- 18³⁰-18⁴⁵ **PLASMA POST-PROCESSING IN OXYGEN AND CARBON CONTAINING ATMOSPHERES FOR WIND TURBINE COMPONENTS TREATMENT**
M. Zlatanović¹, N. Popović²
¹*Faculty of Electrical Engineering, Belgrade, Serbia*,
²*Nuclear Science Institute Vinča, Belgrade, Serbia*
- 18⁴⁵-19⁰⁰ **SYNTHESIS OF OLIVINE-TYPE LiFePO₄ BY SONOCHEMICAL METHOD**

D. Jugović¹, M. Mitrić², N. Cvjetičanin³, S. Mentus³, D. Uskoković¹

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19⁰⁰-19¹⁵ **SYNTHESIS AND CHARACTERIZATION OF IRON CONTAINING MCM-41 POROUS SILICA – APPLICATION TO ADSORPTION OF ARSENATES** E.A. Deliyanni, K.S. Triantafyllidis, E.N. Peleka, K.A. Matis

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