

THIRD PLENARY SESSION

Wednesday, September 12, 2007

Session III: 09⁰⁰-12⁰⁰

Chairpersons: A. Auroux, A.Ye. Yermakov and D. Raković

09⁰⁰-9³⁰ **NANOSTRUCTURED MATERIALS FOR INTERMEDIATE TEMPERATURE SOLID OXIDE FUEL CELLS (IT-SOFCs)**

E. Traversa

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9³⁰-10⁰⁰ **TRANSPORT PROPERTIES OF NANOSTRUCTURED ANTIMONY-DOPED TIN OXIDE FILMS**

J.A. Varela, T.R. Giraldo, E. Longo

Universidade Estadual Paulista – UNESP, Araraquara, SP, Brazil

10⁰⁰-10³⁰ **NO_x ABATEMENT OVER SUPPORTED BINARY OXIDE CATALYSTS CONTAINING CuO COUPLED WITH Ga₂O₃ AND SnO₂**

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Break: 10³⁰-11⁰⁰

11⁰⁰-11³⁰ **ELECTRICAL RELAXATIONS DUE TO ELECTRONS IN OXIDES**

J.-C. Badot

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11³⁰-12⁰⁰ **SURFACE REACTIVITY OF METAL OXIDES: SORPTION AND ADHESION PROCESSES**

G. Lefèvre, Lj. Čerović, M. Fédoroff

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POSTER SESSION II

Wednesday, September 12, 2007, 20³⁰-22⁰⁰

SYMPOSIUM B: ADVANCED MATERIALS FOR HIGH-TECHNOLOGY APPLICATIONS

- P.S.B.1. EXCITON STATES IN IRREGULAR TYPE-II QUANTUM-DOT SUPERLATTICES IN A MAGNETIC FIELD**
D. Veljković¹, M. Tadić^{1,2}, F.M. Peeters²
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²Department of Physics, University of Antwerp, Groenenborgerlaan, Belgium
- P.S.B.2. CORE-LEVEL AND VALENCE BAND STUDIES OF (GaMn)As WHISKERS**
I. Ulfat^{1,2}, J. Adell¹, J. Sadowski³, L. Ilver¹, J. Kanski¹
¹Department of Applied Physics, Chalmers University of Technology, Göteborg, Sweden, ²Department of Physics University of Karachi, Karachi, Pakistan,
³Institute of Physics, Polish Academy of Sciences, Warszawa, Poland
- P.S.B.3. MODELLING THE INFLUENCE OF DIFFERENT PACKAGING ON RADFET RESPONSE TO PROTON IRRADIATION**
S.J. Stanković, R.D. Ilić, D. Davidović, M. Kovačević
Vinča Institute of Nuclear Sciences, Belgrade, Serbia
- P.S.B.4. COMPOSITION DEPENDENCE OF THE DC AND AC CONDUCTIVITY OF NON-CRYSTALLINE SEMICONDUCTORS OF $\text{Cu}_x[(\text{As}_2\text{Se}_3)_{0.9}(\text{AsI}_3)_{0.1}]_{100-x}$ TYPE**
F. Skuban¹, S.R. Lukić¹, M. Slankamenac², D.M. Petrović¹
¹Department of Physics, Faculty of Sciences, University of Novi Sad, Novi Sad, Serbia, ²Faculty of Electrical Engineering, University of Novi Sad, Novi Sad, Serbia
- P.S.B.5. DEVELOPMENT OF FINE-GRAINED OXIDE CERAMICS USING PULSED COMPACTION OF LOW AGGLOMERATED NANOPOWDERS**
V.V. Ivanov
Institute of Electrophysics, UD RAS, Ekaterinburg, Russia
- P.S.B.6. SINGLE CRYSTAL ALLOYS. THERMAL FATIGUE AND CREEP.**
L.B. Getsov, E.R. Golubovskii, A.I. Rybnikov
NPO Central Boiler and Turbine Institute, St. Petersburg, Russia
- P.S.B.7. OPTICAL AND MAGNETIC PROPERTIES OF PbTe(Ni) SINGLE CRYSTALS**
N. Romčević¹, M. Romčević¹, J. Trajić¹, W. Dobrowolski², T.A. Kuznetsova³, D.R. Khokhlov³
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- P.S.B.8. ELECTRON STRUCTURE AND LUMINESCENCE PROPERTIES OF $\text{Ca}_3\text{Ga}_2\text{Ge}_3\text{O}_{12}$ GARNET CRYSTALS**
I.D. Shcherba¹, D. Uskoković², L.V. Kostyk³, L.O. Dobrjanska³, V.M. Uvarov⁴, A.J. Senkivich⁴, B.M. Jatcyk⁵
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- P.S.B.9. REFRACTION IN 2D HEXAGONAL-LIKE PHOTONIC CRYSTALS**
Dj. Jovanović¹, R. Gajić¹, K. Hingerl²
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- P.S.B.10. SYNTHESIS AND SANS STUDY OF POROUS ANODIC TiO_2 FILMS**
D.I. Petukhov, I.V. Kolesnik, A.A. Eliseev, A.V. Lukashin, Yu.D. Tretyakov
Department of Material Science Moscow State University, Moscow, Russia

- P.S.B.11. **DYNAMIC OF THE PROFILE CHARGING IN TWO FREQUENCY PLASMA ETCHING OF SiO₂**
B. Radjenović¹, M. Radmilović-Radjenović², Z.Lj. Petrović², Ž. Nikitović²
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- P.S.B.12. **CRYSTAL STRUCTURE OF A AND B SITE Ce DOPED CaMnO₃ PEROVSKITE**
J. Đukić¹, S. Bošković¹, B. Matović¹, V. Kahlenberg²
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- P.S.B.13. **PHONON CONTRIBUTION IN THERMODYNAMICS OF CRYSTALLINE QUANTUM WIRES**
D.I. Ilić¹, J.P. Šetrajčić², D.Lj. Mirjanić³, S.M. Vučenović³, S.K. Jaćimovski⁴, V.D. Sajfert⁵, V.M. Zorić²
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- P.S.B.14. **STRUCTURAL DEFORMATION IN Hf₂Ni OBSERVED BY TDPAC METHOD**
B. Cekić, A. Umičević, V. Ivanovski, V. Koteski, J. Belošević-Čavor, S. Pavlović, M. Šiljegović
Institute of Nuclear Sciences Vinča, Belgrade, Serbia
- P.S.B.15. **THE EFFECTS OF POLARIZATIONAL BREMSSTRAHLUNG IN ELECTRON COLLISIONS WITH CLUSTERS**
A.R. Tančić¹, M. Davidović²
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²GOŠA Institute, Belgrade, Serbia
- P.S.B.16. **PREPARATION AND IR-SPECTROSCOPIC CHARACTERIZATION OF AURIVILIUS Bi-LAYERED PEROVSKITE**
Z.Ž. Lazarević¹, B.D. Stojanović², M.J. Romčević¹, N.Ž. Romčević¹
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- P.S.B.17. **EVOLUTION OF STRUCTURE AND PROPERTIES OF Ti-Si-C COMPOSITES AT MECHANICAL SYNTHESIS AND HOT PRESSING**
M.N. Kachenyuk, A.A. Smetkin
Centre of Powder Materials Science of PSTU, Perm, Russia
- P.S.B.18. **ANALYTICAL MODEL OF DRIFT REGION VOLTAGE IMPACT ON SiC DIMOSFET STRUCTURE CHARACTERISTICS**
R.M. Ramović¹, S.M. Ostojić², P.M. Lukić³, R.M. Šašić²
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- P.S.B.19. **ENERGY LOSS AND DEFLECTION OF FAST IONS MOVING PARALLEL TO THE GRAPHENE SHEET**
I. Radović¹, Lj. Hadžievski¹, N. Bibić¹, Z.L. Mišković²
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- P.S.B.20. **INVESTIGATION OF GAMMA-RAY INDUCED CHARGE IN SILICON DIOXIDE FILMS BASED ON A STOCHASTIC MODEL**
M. Odalović, D. Petković
Faculty of Science and Mathematics, University of Pristina, Kosovska Mitrovica, Serbia
- P.S.B.21. **MATHEMATICAL MODELLING AND MULTICRITERIA DESIGN OPTIMIZATION OF A THIN-WALLED BEAM**
N. Andjelić, B. Rosić, V. Milošević Mitić
Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia
- P.S.B.22. **PARALLEL ANALYSIS OF HF MEASUREMENTS AND METHOD-OF-MOMENTS BASED ELECTROMAGNETIC SIMULATION OF LC EMI CHIP FILTERS**
M. Luković¹, O. Aleksić², V. Marić³, Lj. Živanov³
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³*Faculty of Technical Sciences, University of Novi Sad, Serbia*
- P.S.B.23. **MOLECULAR STRUCTURE IN CORRELATION WITH ELECTROCHEMICAL PROPERTIES OF MIXED-LIGAND COBALT COMPLEXES**
V.M. Jovanović¹, K. Babić², Samardžija^{2,3}, S.P. Sovilj⁴
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- P.S.B.24. **ANTIFERROMAGNETIC COUPLING OF COPPER(II) IONS VIA HYDROGEN BONDING IN Cu(II) COMPLEX WITH AN ARYLPYRAZOLE LIGAND**
V. Leovac¹, V. Spasojević², V. Kusigerski², M. Joksović³, N. Lazarov², S. Novaković²
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- P.S.B.25. **UPWARD PENETRATION OF GRAINS THROUGH A GRANULAR MEDIUM**
Z.M. Jakšić, S.B. Vrhovac, B. Panić, B.M. Jelenković
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- P.S.B.26. **ON THE PREPARATION OF OPEN-FRAMEWORK MANGANESE(II)-SUBSTITUTED ALUMINOPHOSPHATE**
S. Jevtić¹, N. Rajić¹, Dj. Stojaković¹, M. Mazaj², V. Kaučić²
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- P.S.B.27. **SYNTHESIS AND PROPERTIES OF NANO-SPINELS**
M. Pošarac¹, B. Matović¹, T. Volkov-Husović², M. Logar³, M. Nimić¹
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- P.S.B.28. **MODIFICATION OF PILLARED CLAYS WITH COBALT FUNCTIONALITY. THEIR CATALYTIC PROPERTIES**
S. Sredić¹, Ž. Čupić², M. Davidović³, V. Malbašić¹, D. Jovanović², U.B. Mioč⁴, D. Lončarević²
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- P.S.B.29. **SELF-ORGANIZING PROCESSES IN CONDENSED NANO-SYSTEMS**
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- P.S.B.30. **CHANGES IN THE MICROSTRUCTURE OF Fe-DOPPED Gd₅Si₂Ge₂**
I. Škulj¹, P.J. McGuinness², B. Podmiljšak², B. Šuštaršič¹, M. Jenko¹
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- P.S.B.31. **INVESTIGATION OF THE BEHAVIOUR OF NANOSIZED FERROMAGNETIC SOLUTIONS IN THE ELECTROMAGNETIC FIELD**
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- P.S.B.32. **IN-SITU INORGANIC NANOPARTICLE FORMATION IN SELF-ASSEMBLED POLYELECTROLYTE MULTILAYER FILMS**
 M. Logar, B. Jančar, D. Suvorov
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- P.S.B.33. **MODELING AND SIMULATION OF THICK FILM NTC THERMISTORS BASED ON NANO-STRUCTURED MANGANITE -NiMn₂O₄**
 B. Radojčić¹, O. Aleksić², R. Ramović³, S. Savić⁴
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- P.S.B.34. **CHARACTERIZATION OF BARIUM TITANATE CERAMICS BY IMPEDANCE SPECTROSCOPY**
 S. Marković¹, S. Mentus², Č. Jovalekić³, D. Uskoković¹
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- P.S.B.35. **ELECTROCHEMICALLY DEPOSITED CUPROUS OXIDE AND ZINC OXIDE FILMS FOR SOLAR APPLICATION**
 V. Georgieva, M. Georgieva
Faculty of Electrical Engineering and Information Technology, The "St. Cyril & Methodius" University, Skopje, Macedonia
- P.S.B.36. **ELECTROCHEMICALLY DEPOSITED ZnO THIN FILMS AND THE INFLUENCE OF HYDROGEN PLASMA ON THEIR TRANSMITTANCE**
 V. Georgieva¹, J. Wienke-Ullrich², A. Tanuševski³
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- P.S.B.37. **ELECTRICAL RESISTANCE AND THERMOPHYSICAL PROPERTIES OF Sc AND Ca AT SHOCK-WAVE COMPRESSION**
 D.V. Shakhrya, V.V. Avdonin, A.A. Golyshev
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- P.S.B.38. **CONDUCTIVITY OF C₆₀ AND C₇₀ FULLERENES UNDER DYNAMIC SHOCK COMPRESSION**
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- P.S.B.39. **INTRINSIC BULK CARRIER CONCENTRATION AND MOBILITY IN NANOSTRUCTURED MANGANITE AFTER POWDER ACTIVATION**
 S.M. Savić¹, O.S. Aleksić², G.M. Stojanović³, M.V. Nikolić², D.T. Luković¹
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- P.S.B.40. **REMOVAL OF ANTIBIOTIC DOXYCYCLINE FROM WASTE WATERS BY SURFACTANT-MODIFIED ZEOLITES**
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- P.S.B.41. **SYNTHESIS AND CHARACTERIZATION OF MESOPOROUS MATERIALS OBTAINED USING FAU ZEOLITE IN THE PRESENCE OF CITRIC ACID**

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- P.S.B.42. **CRYSTAL STRUCTURES OF RARE-EARTH DOPED HEXACELSIANS**
B. Nedić¹, V. Dondur¹, A. Kremenović^{2,3}, R. Dimitrijević², B. Antić³, J. Blanuša³
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- P.S.B.43. **CONDUCTING NANOSTRUCTURES OF POLYANILINE DOPED WITH SULFURIC ACID**
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- P.S.B.44. **SYNTHESIS OF NANOSTRUCTURED CONDUCTING POLYANILINE IN THE PRESENCE OF 3,5-DINITROSALICYLIC ACID**
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- P.S.B.45. **SYNTHESIS AND CHARACTERIZATION OF THE BENZOCAINE OLIGOMERS**
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- P.S.B.46. **CHEMICAL OXIDATIVE OLIGOMERIZATION OF THE ETHACRIDINE LACTATE**
B. Marjanović¹, I. Juranić², M. Trchová³, P. Holler³, G. Ćirić-Marjanović⁴
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- P.S.B.47. **RADICAL POLYMERISATION OF MONO-n-BUTYL ITACONATE**
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- P.S.B.48. **THE INFLUENCE OF RADIATION ON THERMAL STABILITY OF POLYIMIDES BASED ON N-[4-BENZOYL-2-(2,5-DIOXO-2,5-DIHYDRO-PYRROL-1-YL)-PHENYL]-ACETAMIDE**
M. Marinović-Cincović¹, D. Babić¹, E. Džunuzović², K. Popov-Pergal³, M. Rančić³
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- P.S.B.49. **CALCULATIONS OF STRUCTURE, ELECTRONIC AND VIBRATIONAL SPECTRA OF DISILOXANE BISBENZOCYCLOBUTEN**
N. Ivanović, I. Radisavljević, D. Marjanović, N. Novaković
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- P.S.B.50. **EVALUATION OF MOLECULAR DYNAMICS IN ELASTOMER BLENDS BY MDSC MEASUREMENTS**
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- P.S.B.51. **ORGANOBENTONITE-SYNTHESIS AND CHARACTERIZATION**
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- P.S.B.52. **SINTERING OF SILICON NITRIDE WITH Mg-EXCHANGE ZEOLITE ADDITIVE**
B. Matović, A. Šaponjić, M. Pošarac, A. Radosavljević Mihajlović, E. Volceanov, S. Bošković
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- P.S.B.53. **PREPARATION OF SiALON POWDER USING DIATOMACIOUS EARTH**
A. Šaponjić, B. Matović, S. Bosković, A. Radosavljević Mihajlović
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- P.S.B.54. **PREPARATION OF HIGHLY POROUS SiC CERAMICS**
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- P.S.B.55. **COMPUTER SIMULATION OF SiO₂ DISSOLUTION IN NaOH AQUEOUS SOLUTION**
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- P.S.B.56. **NEW OPTIMAL TECHNOLOGY FOR SMALL SECTIONS OF HSS AND SOFTWARE FOR DOCUMENTATION PROCESSING**
J. Rodič², W. Holzgruber¹, H. Holzgruber¹, A. Scheriau¹, R. Tarmann¹, R. Hartner¹
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- P.S.B.57. **AGEING EFFECT ON THE PSEUDOELASTICITY CHARACTERISTICS OF Ti-RICH TiNi SHAPE MEMORY ALLOY**
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- P.S.B.58. **HIGH TEMPERATURE LOW CYCLE FATIGUE OF SUPERALLOY INCONEL 738LC**
K. Obrtlík, A. Chlupová, M. Petrenec, J. Polák
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- P.S.B.59. **DESTRUCTIVE AND NON-DESTRUCTIVE TECHNIQUES APPLIED TO THE CHARACTERIZATION OF AS-CAST MODEL STEELS WITH PARAMETRIC VARIATION OF Ni, Mn, Si AND Cr CONTENT**
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- P.S.B.60. **NUMERICAL MODELLING OF DUCTILE FRACTURE INITIATION IN PRESSURE VESSEL STEEL**
D. Veljić¹, M. Rakin², Z. Cvijović², M. Zrilić², V. Grabulov³, A. Sedmak⁴
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- P.S.B.61. **THE ANALYSIS OF MICROSTRUCTURE AND MECHANICAL PROPERTIES OF WELDED JOINTS OBTAINED WITH TWO TYPES OF CORED FILLER WIRES**
N. Bajić¹, V. Šijački-Žeravčić², M. Rakin³, D. Čikara⁴
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- P.S.B.62. **MECHANICAL AND MICROSTRUCTURAL PROPERTIES OF HIGH-CARBON STEEL SURFACE WELDED LAYER**

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