

XXIX Panhellenic Conference of Solid State Physics and Materials Science
22-25 September, 2013
National Center for Scientific Research “Demokritos”

PROGRAM

(Assignments for each poster session can be found at the end of the program)

Sunday, September 22, 2013

17:00-18:20 Registration

18:20-18:30 E. Liarokapis (Chairman of XXIX-PCSSP): Opening remarks

Session S00: Plenary talks	
Session chair: L. Tsetseris	
18:30	(Invited) Two-Dimensional Materials , <i>Socrates T. Pantelides</i> , Department of Physics and Astronomy and Department of Electrical Engineering and Computer Science, Vanderbilt University, Nashville, TN 37235 USA
19:15	(Invited) High-pressure phase transitions of transition metal compounds probed by diffraction and spectroscopy , <i>Karl Syassen</i> , Max-Planck-Institut für Festkörperforschung, 70569 Stuttgart

20:00 General Assembly and Election of Board Members for HSSTCM
(Hellenic Society for the Science and Technology of Condensed Matter, EETSY)

20:30 Welcome Reception

Monday, September 23, 2013

Session S01: Structural-dynamical and mechanical properties of condensed matter	
Session chairs: K. Syassen, S. Ves	
08:30	(Invited) Dynamic Ramp Compression of Solids to Ultrahigh Pressures , <i>Thomas S. Duffy</i> ¹ , ¹ Department of Geosciences, Princeton University, Princeton NJ 08544, USA)
9:00	Nanomechanical Response of Silver Doped Amorphous Carbon Films , <i>M. Constantinou</i> ¹ , <i>M. Pervolaraki</i> ² , <i>L. Koutsokeras</i> ¹ , <i>P. Patsalas</i> ³ , <i>J. Giapintzakis</i> ² , <i>G. Constantinides</i> ¹ , ¹ Research Unit for Nanostructured Materials Systems and Department of Mechanical Engineering and Materials Science and Engineering, Cyprus University of Technology, Limassol, Cyprus, ² Nanotechnology Research Center and Department of Mechanical and Manufacturing Engineering, University of Cyprus, Nicosia, Cyprus, ³ Department of Physics, Aristotle University of Thessaloniki, Thessaloniki, Greece
9:15	On the role of Icosahedral-like clusters in the solidification and mechanical response of Cu-Zr metallic glasses by Density Functional Theory , <i>G. B. Bokas</i> ¹ , <i>G. A. Almyras</i> ² , <i>A. E. Lagogiannou</i> ² , <i>Ch. E. Lekka</i> ¹ , <i>D. G. Papageorgiou</i> ¹ , <i>G. A. Evangelakis</i> ² , ¹ University of Ioannina, Department of Materials Science and Engineering, Ioannina 45100, Greece, ² University of Ioannina, Department of Physics, Ioannina 45110, Greece
9:30	Mg Based Nanocomposite for Efficient Hydrogen Storage , <i>M. Gjoka</i> ¹ , <i>E. Gkanas</i> ^{1,2} <i>Ioannidou</i> ¹ , <i>S. S. Makridis</i> ² , <i>N. Lupu</i> ³ , <i>G. Ababei</i> ³ , <i>D. Niarchos</i> ¹ , ¹ National Centre for Scientific Research 'Demokritos', Agia Paraskevi, Athens, 15310, GREECE, ² Department of Mechanical Engineering, University of Western Macedonia, Kozani, 50100, GREECE, ³ National Institute of Research and Development for Technical Physics, Iasi, 700050, ROMANIA
9:45	Resistivity Recovery Stages in Proton Irradiated Fe-Cr Alloys , <i>Z. Kotsina</i> ¹ , <i>G. Apostolopoulos</i> ¹ , <i>K. Mergia</i> ¹ , <i>S. Messoloras</i> ¹ , <i>A. Lagogiannis</i> ² and <i>S. Harissopoulos</i> ² , ¹ Institute of Nuclear and Radiological Science and Technology, Energy, and Safety, National Centre for Scientific Research 'Demokritos', 15310 Aghia Paraskevi Attikis, Greece, ² Institute of Nuclear and Particle Physics, National Centre for Scientific Research 'Demokritos', 15310 Aghia Paraskevi Attikis, Greece
10:00	Steel Health Monitoring Using Magnetic Techniques , <i>X. Vourna</i> , <i>A. Ktena</i> , <i>A. Mpalliou</i> , <i>E. Hristoforou</i> , Laboratory of Physical Metallurgy, National TU of Athens, Zografou Campus, Athens 15780
10:15	Mechanical Properties of Graphene, Graphene Nanoribbons, and Planar Allotropes: A Theoretical Study , <i>N. N. Lathiotakis</i> ¹ , <i>G. Kalosakas</i> ^{2,3} , <i>Z. G. Fthenakis</i> ⁴ , <i>C. Galiotis</i> ^{2,3} and <i>K. Papagelis</i> ^{2,3} , ¹ Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, Vass. Constantinou 48, GR-11635 Athens, Greece, ² University of Patras, Materials Science Department, Rio GR-26504, Greece, ³ ICEHT/FORTH, P.O. Box 1414, Rio GR-26504, Greece, ⁴ Dept. of Physics and Astronomy, Michigan State University, 567 Wilson Rd, East Lansing MI-48824, USA

Coffee Break

Session S02: Physics of surfaces, the nanoscale and low-dimensional systems	
Session chairs: S. T. Pantelides, T. Duffy	
11:00	(Invited) Quantum tricks in the shadows of strong correlations: teaching magnetic devices how to think ultra-fast , <i>Ilias Perakis</i> , Department of Physics, University of Crete, Greece
11:30	Manipulating the properties of thin ferromagnetic films with an externally applied electric field in ferromagnetic-piezoelectric-ferromagnetic hybrids , <i>D. Stamopoulos</i> ¹ , <i>S. Zhang</i> ² , ¹ Institute of Advanced Materials, Physicochemical Processes, Nanotechnology and Microsystems, NCSR Demokritos, 153-10, Aghia Paraskevi, Athens, Greece, ² Materials Research Institute, Pennsylvania State University, University Park, PA, 16802, US
11:45	Ordering in Epitaxial SiGe Quantum Dots , <i>G. Vantarakis</i> ^{1,2} , <i>I. Remediakis</i> ² , and <i>P. C. Kelires</i> ¹ , ¹ Research Unit for Nanostructured Materials Systems, Department of Mechanical and Materials Science Engineering, Cyprus University of Technology, P.O. Box 50329, 3603 Lemesos, Cyprus, ² Department of Materials Science and Technology, University of Crete, P.O. Box 2208, 710 03 Heraclion, Crete, Greece
12:00	Structure and Optoelectronic Properties of Carbon Nanofoams , <i>C. Mathioudakis</i> and <i>P. C. Kelires</i> , Research Unit for Nanostructured Materials Systems, Department of Mechanical and Materials Science Engineering, Cyprus University of Technology, P.O. Box 50329, 3603 Lemesos, Cyprus

12:15	Optoelectronic properties of single-layer, double-layer and bulk tin sulfide , <i>G. A. Tritsaris¹, B. D. Malone¹, E. Kaziras^{1,2}</i> , ¹ School of Engineering and Applied Sciences, Harvard University, Massachusetts 02138, United States, ² Department of Physics, Harvard University, Massachusetts 02138, United States
12:30	Characterization of CVD grown graphene on polycrystalline and single crystal copper , <i>J. Marquez-Velasco^{1,2}, N. Kelaidis¹, P. Tsipas¹, E. Xenogiannopoulou¹, D. Tsoutsou¹, E. Golias¹, Y. S. Raptis², Th. Speliotis¹, G. Pilatos¹, A. Chatzipavlidis¹, G. S. Pappas¹, G. Kordas¹ and A. Dimoulas¹</i> , ¹ NCSR DEMOKRITOS, Patriarchou Grigoriou and Neapoleos, GR- 15310, Athens, Greece, ² NTUA, School of Appl. Math. & Phys. Sci, National Technical University of Athens, GR-15780 Athens, Greece
12:45	Capabilities of Nanotechnology & Microsystems Laboratory and MiNaSys-CoE: A Greek Nanotechnology Initiative at NCSR-Demokritos , <i>P. Dimitrakis, A. Olziersky</i> , Department of Microelectronics, Institute of Advanced Materials, Physicochemical Processes, Nanotechnology and Microsystems, NCSR-Demokritos

13:00-15:00 Poster Session P01/Light Lunch

Session S03: Polymer, organic materials, biomaterials	
Session chairs: C. Papadakis, G. Malliaras	
15:00	(Invited) Organic Bioelectronics , <i>George Malliaras</i> , Department of Bioelectronics, Ecole Nationale Supérieure des Mines, France
15:30	Nanomechanical Properties of Tissue Engineering Scaffolds , <i>A. Skarmoutsou and C. A. Charitidis</i> , School of Chemical Engineering, National Technical University of Athens, Greece
15:45	UV Solid State Laser Ablation of Biocompatible Polymers , <i>A. Apostolopoulos, Ch. Evangelatos, D. P. Lagiou, E. Spyratou, C. Bacharis, M. Makropoulou, and A. A. Serafetinides.</i> , National Technical University of Athens, School of Applied Mathematical and Physical Sciences, Department of Physics, Zografou Campus, Athens, Gr-15772, Greece
16:00	High Pressure Raman Study of Collagen , <i>A. M. Paschou¹, M. Katsikini¹, D. Christofilos², J. Arvanitidis¹, G. A. Kourouklis² and S. Ves¹</i> , ¹ Physics Department, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece, ² Physics Division, School of Technology, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece
16:15	Biocompatible nickel dithiolene complexes/amphiphilic diblock copolymers hybrid nanosystems , <i>E. Vlassi¹, G. A. Mousdis¹ and S. Pispas¹</i> , ¹ Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, 48 Vassileos Constantinou Avenue, 11635 Athens, Greece
16:30	Fe and Zn Bonding in Human Nails , <i>M. Katsikini¹, E. Mavromati¹, F. Pinakidou¹, E. C. Paloura¹, K. Manika², D. Papakosta²</i> , ¹ School of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece, ² Pulmonary Department, Aristotle University of Thessaloniki, G. Papanicolaou Hospital, Exochi 57010, Thessaloniki, Greece
16:45	Diamondoid-DNA complexes as biosensors: a quantum-mechanical study , <i>G. Sivaraman, M. Fyta¹</i> , ¹ Institute for Computational Physics, University of Stuttgart, Allmandring 3, 70569 Stuttgart, Germany

Coffee Break

Session S04: Physics of surfaces, the nanoscale and low-dimensional systems	
Session chairs: I. Perakis, P. Kelires	
17:30	(Invited) Nanomagnetism: Superparamagnetism in Iron - Doped CeO_{2-y} Nanocrystals , <i>Zoran V. Popović</i> , Center for Solid State Physics and New Materials, Institute of Physics, University of Belgrade, Pregrevica 118, 11080 Belgrade, Serbia
18:00	Structural and Mössbauer Spectroscopy Studies of Heterometallic Enneanuclear Fe_xNi_{9-x} Complexes , <i>C. P. Raptopoulou, Y. Sanakis, A. N. Georgopoulou, A. K. Boudalis, M. Pissas and V. Psycharis</i> , ¹ NCSR Demokritos, IAMPPNM, Department of Materials Science, 15310 Aghia Paraskevi, Attikis, Athens, Greece
18:15	Finite element micromagnetic simulation of a ferromagnetic particle , <i>N. Ntallis and K. G. Efthimiadis</i> , Department of Physics, Aristotle University, 54124 Thessaloniki, Greece

18:30	Fe⁺ Irradiation Effects on the Structural and Magnetic Properties of Thin Iron Films , <i>K. Papamihail¹, K. Mergia¹, Yves Serruys², Th. Speliotis³, G. Apostolopoulos¹ and F. Ott⁴</i> , ¹ Institute of Nuclear and Radiological Science, Energy, Technology and, Safety, National Center for Scientific Research 'Demokritos', 15310 Athens, Greece, ² CEA-Saclay - DEN/DMN/SRMP - Laboratoire JANNUS, France, ³ Institute of Advanced Materials, Physicochemical Processes, Nanotechnology, and Microsystems, National Center for Scientific Research 'Demokritos', 15310 Athens, Greece, ⁴ Lab. Léon Brillouin CEA/CNRS, Centre d'Etudes de Saclay, 91191 Gif sur Yvette Cedex, France
18:45	Early Stages of Ti-O clusters growth on SWCNTs by Density Functional Theory Calculations , <i>M. A. Gialampouki, Ch. E. Lekka</i> , Department of Materials Science and Engineering, University of Ioannina, Ioannina 45110, Greece
19:00	Novel Applications in Surface Science. In-situ sample analysis in extreme environments , <i>M. Meyer</i> , SPECS Surface Nano Analysis GmbH, Voltastrasse 5, 13355 Berlin, Germany

20:45 Conference Dinner, Aegli Zappiou

Please bring your conference badge and the registration card for the conference dinner

Tuesday, September 24, 2013

Session S05: Electronics, photonics, and optoelectronics	
Session chairs: Z. V. Popović, D. Niarchos	
08:30	(Invited) LiCoO₂ Thin Films: Towards New Rewritable Media , <i>J. Giapintzakis¹, E. Svoukis¹, C. N. Mihailescu¹, V. H. Mai², G. I. Athanasopoulos¹, A. Breza³, C. Lioutas³, A. Moradpour², and O. Schneegans⁴</i> , ¹ Nanotechnology Research Center & Department of Mechanical and Manufacturing Engineering, University of Cyprus, ² Laboratoire de Génie Electrique de Paris, UMR 8507 of CNRS, Paris VI and Paris-Sud Universities, ³ Department of Physics, Aristotle University of Thessaloniki, ⁴ Laboratoire de Physique des Solides, UMR C8502 of CNRS, University Paris-Sud 11
9:00	Combined electrochromic-transparent conducting coatings consisting of noble metal and WO₃ multilayers , <i>E. Koubli, G. Leftheriotis and P. Yianoulis</i> , Energy and Environment Lab, Physics Department, University of Patras, Rion, 29500, Greece
9:15	Nonreciprocal Plasmonic Nanoarchitectures , <i>A. Christofi and N. Stefanou</i> , Department of Solid State Physics, University of Athens, Panepistimioupolis, GR-157 84 Athens, Greece
9:30	Efficient light absorption from surfaces with metallic and dielectric particle arrays , <i>E. Almpanis and N. Papanikolaou</i> , Department of Microelectronics, IAMPPNM, NCSR Demokritos, GR-153 10 Athens, Greece
9:45	Breathers Driven by Gain in PT-Symmetric Metamaterials , <i>N. Lazarides^{1,2}, G. P. Tsironis^{1,2}</i> , ¹ Department of Physics, University of Crete, P. O. Box 2208, 71003 Heraklion, Greece, ² Institute of Electronic Structure and Laser, FORTH, P.O. Box 1527, 71110 Heraklion, Greece
10:00	Optical properties of Au-Ag nanoparticle aggregates with subnanometric gaps , <i>C. Tserkezis and J. Aizpurua</i> , Donostia International Physics Center (DIPC) and Center for Materials Physics (CFM) CSIC-UPV/EHU, Paseo Manuel de Lardizabal 5, Donostia-San Sebastián, 20018, Spain
10:15	The L adsorption edges as index for the doped zirconia stabilization process , <i>D. Vlachos^{1,2}, S. Ostanin^{1,2}, A. J. Craven¹ and D. W. McComb²</i> , ¹ Department of Physics and Astronomy, University of Glasgow, Glasgow G12 8QQ, UK, ² Department of Chemistry, University of Glasgow, Glasgow G12 8QQ, UK

Coffee Break

Session S06: Polymer, organic materials, biomaterials	
Session chairs: E. Gogolides, S. Pispas	
11:00	(Invited) What happens during solvent vapor treatment of block copolymer thin films - in-situ, real-time studies with grazing-incidence small-angle X-ray scattering , <i>C. M. Papadakis¹, A. Sepe¹, J. Zhang¹, I. I. Potemkin², D.-M. Smilgies³ and D. Posselt⁴</i> , ¹ Technische Universität München, Physik-Department, Physik weicher Materie, James-Franck-Str. 1, 85748 Garching, Germany, ² Physics Department, Lomonosov Moscow State University, Moscow 119991, Russian Federation, ³ Cornell High Energy Synchrotron Source (CHESS), Wilson Laboratory, Cornell University, Ithaca, NY 14853, USA, ⁴ IMFUFU, Department of Science, Systems and Models, Roskilde University, P.O. Box 260, 4000 Roskilde, Denmark
11:30	Proton Transport in Acid Doped Polymer Matrices by Time Domain Dielectric Spectroscopy using Metal/Electrolyte/Oxide/Semiconductor Device Structures , <i>P. Goupidenis^{1,2}, A. M. Douvas¹, P. Dimitrakis¹, P. Argitis¹, K. Beltsios², E. Kapetanakis³, V. Saltas⁴, C. Pandis⁵, A. Kyritsis⁵, P. Pissis⁵, P. Normand¹</i> , ¹ Institute of Advanced Materials, Physicochemical Processes, Nanotechnology & Microsystems, National Center for Scientific Research Demokritos, 15310 Aghia Paraskevi, Athens, Greece, ² Dept of Materials Science and Engineering, University of Ioannina, 45110 Ioannina, Greece, ³ Dept of Electronics, Technological Educational Institute of Crete, 73133 Chania, Greece, ⁴ Dept of Natural Resources & Environment, Technological Educational Institute of Crete, 73133 Chania, Greece, ⁵ Dept of Physics, National Technical University of Athens, Zografou Campus, 15780 Athens, Greece
11:45	Thermoresponsive Transition of a PEO-b-PNIPAM block copolymer: from Hierarchical Aggregates to Well Defined Ellipsoidal Vesicles , <i>A. Papagiannopoulos¹, J. Zhao², G. Zhang², S. Pispas¹ and A. Radulescu³</i> , ¹ Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, 48 Vassileos Constantinou Avenue, 11635 Athens, Greece, ² Hefei National Laboratory for Physical Sciences at Microscale, University of Science and Technology of China, Anhui, 230026 Hefei, P. R. China, ³ Institute for Solid State Research, Research Centre Jülich, 52425 Jülich, Germany

12:00	Thermal Transitions and Segmental Dynamics in Polymer Nanocomposites , <i>A. Kyritsis¹, P. Klonos¹, S. Kripotou¹ and P. Pissis¹</i> , ¹ National Technical University of Athens, Department of Physics, Athens, Greece
12:15	Polymer nanocomposites produced by carbon nanotubes prepregs , <i>G. Trakakis¹, D. Tasis¹, J. Parthenios¹, C. Galiotis^{1,2} and K. Papagelis^{1,2}</i> , ¹ Institute of Chemical Engineering Sciences (ICE-HT), Foundation of Research and Technology Hellas, 26504 Patras, Greece, ² Department of Materials Science, University of Patras, 26504 Patras, Greece
12:30	Rheological Properties of Short Oil Alkyd Resins and Alkyd Paints , <i>A. F. Trompeta, C. A. Charitidis</i> , School of Chemical Engineering, National Technical University of Athens, 9 Heroon Polytechniou St, Zografos, Athens, Greece 157 80
12:45	Atomistic Simulations of Dipole Substituted peri-Hexabenzocoronene Molecular Crystals , <i>O. G. Ziogos¹, L. Tsetseris² and D. N. Theodorou¹</i> , ¹ Department of Chemical Engineering, National Technical University of Athens, Zografou Campus, GR-15780 Athens, Greece, ² Department of Physics, National Technical University of Athens, Zografou Campus, GR-15780 Athens, Greece

13:00-15:00 Poster Session P02/Light Lunch

Session S07: Electronics, photonics, and optoelectronics	
Session chairs: J. Giapintzakis, C. Londos	
15:00	(Invited) Iron Pnictides: DFT calculations and superconductivity , <i>Lilia Boeri</i> , Technical University Graz, Austria
15:30	Manipulating the properties of thin superconducting films with an externally applied electric field in superconductor-piezoelectric-superconductor hybrids , <i>D. Stamopoulos¹, M. Zeibekis¹ and H. Luo²</i> , ¹ Institute of Advanced Materials, Physicochemical Processes, Nanotechnology and Microsystems, NCSR Demokritos, 153-10, Aghia Paraskevi, Athens, Greece, ² Key Laboratory of Inorganic Functional Material and Device, Shanghai Institute of Ceramics, Chinese Academy of Sciences, Shanghai 201800, China
15:45	Topological and conventional ordering from correlations in Chern bands , <i>S. Kourtis and M. Daghofer</i> , Institute for Theoretical Solid State Physics, IFW Dresden, 01171 Dresden, Germany
16:00	Applications of a Thermodynamic, Non-Linear Quantum Master Equation to a Three-Level and a Harmonic Oscillator System Coupled with Two Heat Baths , <i>P. V. Alatas¹, V. G. Mavrantzas^{1,2}</i> , ¹ Department of Chemical Engineering, University of Patras, ² FORTH/ICE-HT
16:15	Mesoscopic physics in polycrystalline Bi and [Co/Bi]_n thin films , <i>C. Christides¹, P. Athanasopoulos¹ and Th. Speliotis²</i> , ¹ School of Engineering, University of Patras, 26504 Rion Patras, Greece, ² National Center for Scientific Research Demokritos, 15310 Athens, Greece
16:30	Influence of Thermal Treatment on the Electrical Characteristics of Metal/Alumina/Nitride/Oxide/Silicon Memory Capacitors , <i>N. Nikolaou^{1,2}, P. Dimitrakis¹, P. Normand¹, D. Skarlatos², K. Giannakopoulos¹, K. Kukli^{3,4}, J. Niinistö³, M. Ritala³, M. Leskelä³, V. Ioannou-Sougleridis¹</i> , ¹ Department of Microelectronics, IAMPPNM, NCSR Demokritos, 153 10 Athens, Greece, ² Department of Physics, University of Patras, 265 04 Patras, Greece, ³ Department of Chemistry, University of Helsinki, FI-00014 Helsinki, Finland, ⁴ Institute of Physics, University of Tartu, Riia 142, EE-51014 Tartu, Estonia
16:45	Polarization Dependent Raman Study of InN , <i>K. Filintoglou¹, M. Katsikini¹, J. Arvanitidis¹, D. Christofilos², G. P. Dimitrakopoulos¹, S. Ves¹, G. A. Kourouklis², A. Georgakilas³, N. Zoumakis⁴</i> , ¹ Physics Department, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece, ² Physics Division, School of Technology, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece, ³ Department of Physics, Microelectronics Research Group, University of Crete, P.O. Box 2208, GR 71003, Greece and IESL, FORTH, P.O. Box 1527, GR 71110 Heraklion, Greece, ⁴ Department of Applied Sciences, Technological Educational Institute of Thessaloniki, 57400 Sindos, Greece

Coffee Break

Session S08: Ceramic, composites, minerals, metallic and novel materials	
Session chairs: L. Boeri, P. Falaras	

17:30	(Invited) Equilibrium and flow of cluster-forming complex fluids , <i>Christos N. Likos</i> , Faculty of Physics, University of Vienna, Boltzmanngasse 5, A-1090 Vienna, Austria
18:00	Vibrational study of thermally ion-exchanged sodium borosilicate glasses , <i>E. Stavrou¹, D. Palles¹, E. I. Kamitsos¹, A. Lipovskii², D. Taganzev², Y. Svirko³, S. Honkanen³</i> , ¹ Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, Greece, ² St. Petersburg State Polytechnic University, Russia, ³ University of Eastern Finland, Finland
18:15	Effect of substitution in A cation site on the magnetic and magnetocaloric properties of (La,Ba,Y)MnO₃ perovskite , <i>G. Tonoziis and G. Litsardakis</i> , Department of Electrical and Computer Engineering, Aristotle University, Thessaloniki, GR-54124, Greece
18:30	Optical Absorption of Carbon-Metal Nanocomposites , <i>G. Hadjisavvas¹, G. Tritsaris², E. Kaviras², C. Mathioudakis¹, and P. C. Kelires¹</i> , ¹ Research Unit for Nanostructured Materials Systems, Department of Mechanical and Materials Science Engineering, Cyprus University of Technology, P.O. Box 50329, 3603 Lemesos, Cyprus, ² Department of Physics, Harvard University, Cambridge, Massachusetts 02138, USA
18:45	Structure and Physical Properties of Strontium Borophosphate Glasses with High Chemical Durability , <i>M. D. Anastasopoulou, K. C. Vasilopoulos, D. K. Papayannis and M. A. Karakassides</i> , Department of Materials Science and Engineering, University of Ioannina, GR-45110 Ioannina, Greece

Session S09: Electronics, photonics, and optoelectronics	
Session chairs: C. N. Likos, D. Tsoukalas	
08:30	(Invited) Photoinduced processes involving nanostructured titania materials for energy and environmental applications , <i>P. Falaras</i> , ¹ National Center for Scientific Research Demokritos, Greece
9:00	Effect of acidic additives on the structure and performance of TiO₂ films prepared by chemical methods for dye-sensitized solar cells , <i>G. Syrokostas¹, G. Leftheriotis¹ and P. Yianoulis¹</i> , ¹ Energy and Environment Lab, Physics Department, University of Patras, Rion, 26500, Greece
9:15	Study of Laser Annealed a-Si Thin Layers for Solar Cell Applications, Raman-characterization and Comparison with Numerical Simulations , <i>Y. Theodorakos¹, V. Vamvakas², D. Tsoukalas¹, Y. S. Raptis¹, I. Zergioti¹</i> , ¹ School of Appl. Math. and Physical Sciences, National Technical University of Athens, Heroon Polytechniou 9, 15780 Zographou, Athens, Greece, ² Heliosphera, Industrial Area of Tripolis, 8th Building Block, 5th Road, GR-221 00 Tripolis, Greece
9:30	Molecular Beam Epitaxy of Single Phase InGaN Films for Photovoltaic Applications in the Entire Alloy Composition Range , <i>E. Papadomanolaki¹, M. Androulidaki², K. Tsagaraki², C. Bazioti³, Th. Kehagias³, G. Dimitrakopoulos³ and E. Iliopoulos^{1,2}</i> , ¹ Physics Dept, University of Crete, P.O.Box 2208, 71003 Heraklion, Greece, ² Micro/Nano Electronics Research Group, IESL-FORTH, P.O.Box 1385, 71110 Heraklion, Greece, ³ Physics Dept, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece
9:45	Use of silicon nanocrystals in third generation photovoltaic cells , <i>S. Gardelis, P. Manousiadis and A. G. Nassiopoulou</i> , IMEL, National Center for Scientific Research DEMOKRITOS, Athens 15310, GREECE
10:00	Self-Assembled Piezoelectric InAs/GaAs Quantum Dots for Single Photon Emitters at Room Temperature , <i>S. Germanis^{1,4}, A. Beveratos², A. Stavriniadis⁴, G. Konstantinidis⁴, Z. Hatzopoulos^{3,4} and N. T. Pelekanos^{1,4}</i> , ¹ Department of Materials Science and Technology, University of Crete, Heraklion, Greece, ² Laboratoire de Photonique et Nanostructures, LPN/CNRS, Marcoussis, France, ³ Department of Physics, University of Crete, Heraklion, Greece, ⁴ Microelectronics Research Group, IESL-FORTH, Heraklion, Greece
10:15	Structure, Optical and Electrical Properties of Hydrogenated Si:H Thin Films Grown by Pulsed Laser deposition , <i>A. Mellos^{1,3}, P. Koralli^{1,2}, M. Kandyla¹, M. Kompitsas¹, D. E. Manolakos²</i> , ¹ National Hellenic Research Foundation, Theoretical and Physical Chemistry Institute, 48 Vasileos Constantinou Avenue, 11635 Athens, GREECE, ² School of Mechanical Engineering, National Technical University of Athens, Iroon Polytechniou 9 Zografos, 15780 Athens, GREECE, ³ School of Applied Mathematical and Physical Sciences, National Technical University of Athens, Iroon Polytechniou 9 Zografos, 15780 Athens, GREECE

Coffee Break

Session S10: Physics of surfaces, the nanoscale and low-dimensional systems	
Session chairs: S. Kennou, M. Pissas	
11:00	(Invited) Nanoparticle assemblies and their applications , <i>Dimitrios Tsoukalas</i> , Department of Physics, National Technical University of Athens
11:30	RF Sputtered NiO as p-type Gas Sensor , <i>E. Gagaoudakis^{1,2}, I. Kortidis², G. Michael¹, V. Kampylafka², K. Tsagaraki², E. Iliopoulos¹, E. Aperathitis² and G. Kiriakidis^{1,2}</i> , ¹ Physics Department, University of Crete, P.O. Box 2208, 71003 Heraklion, Crete, Greece, ² Institute of Electronic Structure & Laser (IESL), Foundation for Research and Technology (FORTH) Hellas, P.O. Box 1385, Heraklion 70013, Crete, Greece
11:45	Investigation of PEDOT:PSS/Oxide Nanoparticle Interfaces by Photoelectron Spectroscopy for Tandem Organic Solar Cells Intermediated Layers , <i>K. Emmanouil¹, B. Lechne² and S. Kennou¹</i> , ¹ Department of Chemical Engineering, University of Patras, Karatheodori 1, 265 04 Patras, Greece, ² CEA-INES, 50 avenue du Lac Léman, 73377 Le Bourget du Lac, Chambéry, France

12:00	Dynamic Magnetic Behaviour of Assemblies of Nanoparticles with FM / AFM Interface , <i>M. Vasilakaki¹, K. N. Trohidou¹, D. Peddis², D. Fiorani², R. Mathieu², M. Hudl³, P. Nordblad³, C. Binns⁴ and S. Baker⁴</i> , ¹ IAMPPNM, Department of Materials Science, NCSR Demokritos, Athens, Greece, ² Instituto di Struttura della Materia-CNR, Monterotondo Stazione, Roma, Italy, ³ Department of Engineering Sciences, Uppsala University, Uppsala, Sweden, ⁴ Department of Physics and Astronomy, University of Leicester, Leicester UK
12:15	Experimental and First Principle Characterization of Functionalized Magnetic Nanoparticles , <i>E. Statharas, C. Giannouli, P. Tserotas, N. Papadopoulos, G. S. E. Antipas, and E. Hristoforou</i> , Laboratory of Physical Metallurgy, National Technical University of Athens, Zografou Campus, Athens 15780
12:30	Stochastic effects at nanoscale: Metrological and modeling challenges in nanolithography , <i>V. Constantoudis¹, V. K. M. Kuppuswamy^{1,2} and E. Gogolides¹</i> , ¹ Department of Microelectronics, N.C.S.R. Demokritos, Aghia Paraskevi, Greece, ² IMEC Kapeldreef 75, B-3001 Leuven, Belgium
12:45	A Study on Low Temperature Graphene Growth on Nickel Substrates of Various Thicknesses , <i>S. A. Giarnini^{1,2}, N. Kelaidis¹, A. Chatzipavlidis¹, G. S. Pappas¹, G. Kordas¹, A. Dimoulas¹</i> , ¹ NCSR DEMOKRITOS, Patriarchou Grigoriou and Neapoleos, GR-15310, Athens, Greece, ² National and Kapodistrian University of Athens, Faculty of Physics

13:00-15:00 Poster Session P03/Light Lunch

Session S11: Physics of surfaces, the nanoscale and low-dimensional systems	
Session chairs: C. Raptis, X. Zianni	
15:00	(Invited) Plasma processing and plasma nanotexturing as an enabling technology for smart polymeric surfaces, smart microfluidics and highly sensitive biomolecule microarrays , <i>E. Gogolides¹, A. Tserepi¹, K. Tsougeni¹, K. Ellinas¹, P. Petrou², and S. Kakabakos²</i> , ¹ IMEL, NCSR Demokritos, ² IRRP, NCSR 'Demokritos'
15:30	Can nanomechanical energy storage in twisting nanotube ropes surpass that of Li-ion batteries? , <i>Z. G. Fthenakis¹, D. Teich², Z. Zhu¹, G. Seifert² and D. Tománek¹</i> , ¹ Physics and Astronomy Department, Michigan State University, East Lansing, Michigan 48824-2320, USA, ² Physikalische Chemie, Technische Universität Dresden, D-01062 Dresden, Germany
15:45	Focused Ion Beam Fabricated Magnetic Antidot Arrays: Magnetic Structure Dependence on Lattice Symmetry , <i>A. Kaidatzis¹, R. del Real², F. Espinosa¹, R. Alvaro¹, J. Anguita¹, M. Vazquez², J. M. Garcia-Martin¹</i> , ¹ IMM-Instituto de Microelectronica de Madrid, CSIC, Tres Cantos, Madrid, Spain, ² ICMM-Instituto de Ciencia de Materiales de Madrid, CSIC, Madrid, Spain
16:00	Laser Induced Forward Transfer as a Tool for the Fabrication of Graphene-Based Organic Electronic Devices , <i>S. Papazoglou¹, M. Makrygianni¹, S. Chatzandroulis², Y. Raptis¹, I. Zergioti¹</i> , ¹ Physics Department, National Technical University of Athens, Heron Polytechniou 9, 15780 Zografou, Athens, Greece, ² Institute of Microelectronics, NCSR Demokritos, Agia Paraskevi 15310, Athens, Greece
16:15	Size-dependent gold nitride Schottky nanodiodes , <i>N. Spyropoulos-Antonakakis¹, E. Sarantopoulou¹, Z. Kollia¹ and A. C. Cefalas¹</i> , ¹ National Hellenic Research Foundation, Theoretical and Physical Chemistry Institute, 48 Vassileos Constantinou Avenue, Athens 11635, Greece
16:30	Nearest-Neighbor Hopping in Planar Tungsten-Polyoxometalate Molecular Junctions , <i>D. Velessiotis¹, A. M. Douvas¹, P. Dimitrakis¹, P. Argitis¹, N. Glezos¹</i> , ¹ Institute of AMPPNM, Department of Microelectronics, NCSR Demokritos, Athens, 15310, Greece
16:45	Grain Boundaries Effects on Boron and Phosphorus Dopants in poly-Si , <i>A. Kanaki¹ and X. Zianni^{1,2}</i> , ¹ Department of Applied Sciences, Technological Educational Institution of Chalkida 34 400 Psachna, Greece, ² Dept. of Microelectronics, IAMPPNM, NCSR Demokritos, 153 10 Aghia Paraskevi, Attiki, Greece

Coffee Break

Session S12: Electronics, photonics, and optoelectronics	
Session chairs: E. Syskakis, Y. Raptis	

17:30	Enhanced Energy Conversion Efficiency in Non-Uniform Nanowires by Energy Band Structure Engineering , <i>X. Zianni</i> ^{1,2} , ¹ Dept. of Applied Sciences, Technological Educational Institution of Chalkida, 34 400 Psachna, Greece, ² Dept. of Microelectronics, IAMPPNM, NCSR Demokritos, 153 10 Athens, Greece
17:45	Thermal conductivity of amorphous/crystalline silicon nanowires and superlattices , <i>K. Termentzidis</i> ¹ , <i>E. Blandre</i> ¹ , <i>A. France-Lanord</i> ¹ , and <i>D. Lacroix</i> ¹ , ¹ LEMETA, CNRS UMR-7563, Un. Lorraine, Vandoeuvre les Nancy, France
18:00	Thermochromic Properties of VO₂ Films Grown by RF Sputtering and APCVD , <i>E. Gagaoudakis</i> ^{1,2} , <i>V. Kampylafka</i> ² , <i>E. Aperathitis</i> ² , <i>I. Kortidis</i> ² , <i>V. Binas</i> ² , <i>D. Vernardou</i> ³ , <i>D. Louloudakis</i> ^{1,3} , <i>E. Spanakis</i> ⁴ , <i>N. Katsarakis</i> ^{2,3} , <i>E. Koudoumas</i> ^{3,5} , <i>G. Iliadis</i> ⁶ and <i>G. Kiriakidis</i> ^{1,2} , ¹ Physics Department, University of Crete, P.O. Box 2208, 71003 Heraklion, Crete, Greece, ² Institute of Electronic Structure & Laser (IESL), Foundation for Research and Technology (FORTH) Hellas, P.O. Box 1385, Heraklion 70013, Crete, Greece, ³ Center of Materials Technology and Photonics, School of Applied Technology, Technological Educational Institute of Crete, 710 04 Heraklion, Crete, Greece, ⁴ Materials Science and Technology Department, University of Crete, P.O. Box 2208, 71003 Heraklion, Crete, Greece, ⁵ Electrical Engineering Department, School of Applied Technology, Technological Educational Institute of Crete, 710 04 Heraklion, Crete, Greece, ⁶ G. Iliadis, Uniglass Ltd, 31st Vouliagmenis Avenue, 16675 Athens, Greece
18:15	(Invited) Giant Thermoelectric Effect In Graded porous or nanocomposite micro-nanostructured thermoelectric materials , <i>D. G. Niarchos</i> , <i>R. H. Tarkhanyan</i> and <i>A. Ioannidou</i> , NCSR Demokritos, Athens 15310, Greece

18:45-19:00 Closing remarks

PROGRAM FOR POSTER PRESENTATIONS

Monday, September 23, 2013

13:00-15:00 Poster Session P01/Light Lunch

P01.01	Synthesis of Cu₂O/ZnO heterojunction , <i>I. Sakellis^{1,2}, S. Giamini¹, I. Moschos¹, C. Chandrinou¹, A. Travlos¹ and N. Boukos¹</i> , ¹ National Center for Scientific Research Demokritos, Institute of Materials Science, GR 15310 Agia Paraskevi Attikis, Athens, Greece, ² University of Athens, Physics Department, Section of Solid State Physics, Panepistimiopolis, GR 15684 Zografos, Athens, Greece
P01.02	Influence of Forming Gas Annealing on the Electrical Properties of Al/Al₂O₃/p-Ge MOS Structures , <i>A. Karageorgiou¹, V. Ioannou-Sougleridis², S. Ladas³, S. Kennou³, N. Z. Vouroutzis⁴ and D. Skarlatos¹</i> , ¹ Department of Physics, University of Patras, GR 26500 Patras, Greece, ² Department of Microelectronics, NCSR Demokritos, GR 15310 Aghia Paraskevi, Athens, Greece, ³ Department of Chemical Engineering, University of Patras, GR 26500 Patras, Greece, ⁴ Department of Physics, Aristotle University of Thessaloniki, GR 54006 Thessaloniki, Greece
P01.03	Laser Scribing of Thin Films Relevant for the Second Generation, Large Scale Monolithic Photovoltaic Solar Cells , <i>P. Koralli^{1,2}, M. Kandyla¹, M. Kompitsas¹, G. Mousdis¹, M. Girtan³, D. E. Manolakos²</i> , ¹ National Hellenic Research Foundation, Theoretical and Physical Chemistry Institute, 48 Vasileos Constantinou Avenue, 11635 Athens, Greece, ² School of Mechanical Engineering, National Technical University of Athens, Ironon Polytechniou 9 Zografos, 15780 Athens, Greece, ³ Photonics Laboratory, Angers University, 2, Bd. Lavoisier, 49045 Angers, France
P01.04	Photoluminescence and optical properties of Ni-doped ZnO thin films prepared by spray pyrolysis technique , <i>M. Jlassi¹, I. Sta¹, M. Hajji^{1,2}, M. Kompitsas³ and H. Ezzaouia¹</i> , ¹ Laboratoire de Photovoltaïque, Centre de Recherche et des Technologies de l'Énergie, Technopole de Borj-Cadria, BP 95, 2050 Hammam-Lif, Tunisie, ² Institut Supérieur d'Électronique et de Communication de Sfax, Université de Sfax, BP 868, 3018 Sfax, Tunisie, ³ National Hellenic Research Foundation, Theoretical and Physical Chemistry Institute, 48, Vasileos, Konstantinou Ave, 11635 Athens, Greece
P01.05	Theoretical and Experimental Study of Optical Trapping on a Micro-structured Substrate , <i>D. K. Polyzos¹, G. Tsigaridas¹, A. A. Serafetinides¹, M. Makropoulou¹, D. Kotsifaki¹, P. A. Atanasov², N. Nedlyakov²</i> , ¹ Department of Physics, School of Applied Mathematical and Physical Sciences, National Technical University of Athens, Zografou Campus, GR 15780 Athens, Greece, ² Institute of Electronics, Bulgarian Academy of Sciences, Charigradsko Shosse, Sofia, Bulgaria
P01.06	Depth Profiling of High Energy Ion Implantation on Silicon by micro-Raman Spectroscopy , <i>I. Kopsalis¹, M. Kokkoris¹, V. Paneta¹, M. Erich², S. Petrovic², E. Liarokapis¹</i> , ¹ School of Applied Mathematical and Physical Sciences, National Technical University of Athens, Zografou Campus GR-15780 Zografou, Greece, ² Laboratory of Physics, Vinča Institute of Nuclear Science, P. O. Box 522, 11001 Belgrade, Serbia
P01.07	Prompt Isothermal Decay of Thermoluminescence in a Material Exhibiting Strong Anomalous Fading , <i>I. K. Sfamba¹, V. Pagonis², G. S. Polymeris³, N. C. Tsiirliganis⁴, G. Kitis¹</i> , ¹ Aristotle University of Thessaloniki, Nuclear Physics Laboratory, 54124-Thessaloniki, Greece, ² McDaniel College, Physics Department, Westminster, MD 21157, USA, ³ Solid State Section, Department of Physics, 54124-Thessaloniki, Greece, ⁴ Laboratory of Radiation Applications and Archaeological Dating, Department of Archaeometry and Physicochemical Measurements, 'Athena' - Research and Innovation Center in Information, Communication and Knowledge Technologies, Kimmeria University Campus, 67100, Xanthi, Greece
P01.08	Electrical and Optical Properties of Ag/Mg₂Si composites , <i>G. S. Polymeris¹, A. Theodorakakos¹, K. Mars², E. Godlewska², E. Hatzikraniotis¹ and K. M. Paraskevopoulos¹</i> , ¹ Solid State Section, Physics Department, Aristotle University of Thessaloniki, GR- 54124, Thessaloniki, Greece, ² AGH University of Science and Technology, Faculty of Materials Science and Ceramics, Krakow, Poland
P01.09	Optical Properties of CVD a-Si, as a Function of Wavelength and Temperature for Solar Cell Applications , <i>L. Agiotis¹, I. Theodorakos¹, V. Vambakas² and Y. S Raptis¹</i> , ¹ School of Appl. Math. and Physical Sciences, National Technical University of Athens, Heron Polytechniou 9, 15780 Zographou, Athens, Greece, ² Heliosphera, Industrial Area of Tripolis, 8th Building Block, 5th Road, GR-221 00 Tripolis, Greece
P01.10	A simple method for the fabrication of WO₃ films with electrochromic properties , <i>G. Leftheriotis¹, M. Liveri¹ and P. Yianoulis¹</i> , ¹ Energy and Environment Lab, Physics Department, University of Patras, Rion, 26500, Greece

P01.11	Biocompatible Ti-xNb (14<x<40) alloys: Structural, electronic and mechanical properties , <i>J. J. Gutierrez Moreno¹, D. G. Papageorgiou¹, G. A. Evangelakis², Ch. E. Lekka¹, M. Boenisch³, A. Helth³, A. Gebert³, M. Calin³, J. Eckert³</i> , ¹ Department of Materials Science & Engineering, University of Ioannina, Ioannina, 45110 Greece, ² Department of Physics, University of Ioannina, Ioannina, 45110 Greece, ³ Institut fuer Komplexe Materialien, IFW Dresden, Dresden, 01069 Germany
P01.12	Characterization of advanced materials by low voltage electron microscopy techniques , <i>E. Mikmekova¹ and S. Mikmekova¹</i> , ¹ Institute of Scientific Instruments of the ASCR, v.v.i, Kralovopolska 147, Brno 612 64, Czech Republic
P01.13	Unexpected stable stoichiometries of sodium chlorides under pressure , <i>W. Zhang^{1,2}, A. R. Oganov^{2,3}, A. F. Goncharov⁴, Q. Zhu², S. E. Boulfelfel², A. O. Lyakhov², E. Stavrou⁴, M. Somayazulu⁴, V. B. Prakapenka⁵</i> , ¹ College of Science, China Agricultural University, Beijing, 100080, P.R.China, ² Department of Geosciences, Department of Physics and Astronomy, State University of New York at Stony Brook, Stony Brook, NY 11794-2100, U.S.A, ³ Geology Department, Moscow State University, 119992 Moscow, Russia, ⁴ Geophysical Laboratory, Carnegie Institution of Washington, Washington, D.C. 20015, U.S.A, ⁵ Center for Advanced Radiation Sources, University of Chicago, Chicago, Illinois 60637, U.S.A
P01.14	Nanostructure features of Mg₂Si_{0.95-x}Sn_xGe_{0.05} , <i>A. Chatzieftheriadou¹, N. Vlachos², C. B. Lioutas¹, Th. Kyrats², E. Hatzikraniotis¹, K. M. Paraskevopoulos¹</i> , ¹ Aristotle University of Thessaloniki, Solid State Physics Section, 54124 Thessaloniki, Greece, ² Department of Mechanical and Manufacturing Engineering, University of Cyprus, 1678 Nicosia, Cyprus
P01.15	Nanoindentation on Cohesive-Frictional Materials: A Computational Study , <i>E. Sarris¹ and G. Constantinides²</i> , ¹ Department of Civil and Environmental Engineering, University of Cyprus, Nicosia, Cyprus, ² Research Unit for Nanostructured Materials Systems and Department of Mechanical Engineering and Materials Science and Engineering, Cyprus University of Technology, Limassol, Cyprus
P01.16	Short-Range Order Kinetics in Fe-Cr Alloys Studied by means of Electrical Resistivity Measurements , <i>V. Lukianova^{1,2}, Z. Kotsina¹, E. Syskakis², G. Apostolopoulos¹</i> , ¹ Institute of Nuclear and Radiological Science and Technology, Energy, and Safety National Centre for Scientific Research Demokritos, 15310 Aghia Paraskevi Attikis, Greece, ² National and Kapodistrian University of Athens, Physics Department, Section of Solid State Physics, Panepistimiopolis, 15784 Athens, Greece
P01.17	Structure and magnetic properties of Hf₂(Co_{1-x}Fe_x)₁₁B Melt-spun and their hydride , <i>M. Gjoka¹, C. Sarafidis², G. Ababei³, N. Lupu³, T. Martinos⁴, S. Makridis⁴, O. Kalogirou², D. Niarchos¹</i> , ¹ IAMPPNM, N.C.S.R. 'Demokritos' Agia Paraskevi 15310 Athens, Greece, ³ Dept. of Physics, Aristotle University of Thessaloniki, 54 124 Thessaloniki, Greece, ² National Institute of R&D for Technical Physics, 47 Mangeron Blvd, 700050 Iasi, Romania, ⁴ University of Western Macedonia, Kozani, 50100, Greece
P01.18	High-pressure X-ray diffraction and Raman studies of MnF₂ , <i>E. Stavrou^{1,2}, A. Goncharov¹, Z. Konopkova³, C. Raptis⁴</i> , ¹ Geophysical Laboratory, Carnegie Institution of Washington, Washington, D.C, USA, ² Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, Athens, Greece, ³ Deutsches Elektronen-Synchrotron (HASYLAB), Hamburg, Germany, ⁴ Department of Physics, National Technical University of Athens, Greece
P01.19	Single-Crystal Elastic Constants of Magnesium Difluoride (MgF₂) to 7.4 GPa , <i>I. S. Zouboulis^{1,2}, F. Jiang¹, J. Wang¹ and T. S. Duffy¹</i> , ¹ Department of Geosciences, Princeton University, Princeton, NJ 08544, USA, ² National Technical University, School of Applied Sciences, Department of Physics, Zografou 15780, Greece
P01.20	ALD Deposited Al₂O₃/p-Ge MOS structures: Structural and Electrical Characterization , <i>M. Botzakaki¹, G. Skoulatakis², V. Gianneta³, N. Xanthopoulos¹, C. Tsamis³, E. Makarona³, S. Kennou², S. Ladas², S. N. Georga¹ and C. A. Krontiras¹</i> , ¹ University of Patras, Department of Physics, 26504 Rion-Patras Greece, ² University of Patras, Department of Chemical Engineering, 26504 Rion-Patras Greece, ³ NCSR Demokritos, Inst. of Advanced Materials, Physicochemical processes, Nanotechnology & Microsystems, GR 15310 Aghia Paraskevi, Athens, Greece
P01.21	Surface Doping of Exfoliated Graphene Sheets , <i>N. Delikoukos¹, D. Tasis¹, J. Parthenios¹, C. Galiotis^{1,2} and K. Papagelis^{1,2}</i> , ¹ Institute of Chemical Engineering Sciences (ICE-HT), Foundation of Research and Technology Hellas, 26504 Patras, Greece, ² Department of Materials Science, University of Patras, 26504 Rio Patras, Greece
P01.22	Investigation of the magnetic domain structure of Co thin films: Magnetic Force Microscopy study in comparison with micromagnetic simulation , <i>E. Aristomenopoulou</i> , Institute of Advanced Materials, Physicochemical Processes, Nanotechnology and Microsystems, NCSR Demokritos, Agia Paraskevi, Greece

P01.23	Adsorption and diffusion of lithium in bulk and layered silicon , <i>G. A. Tritsaris^{1,2}, S. Meng³, E. Wang², E. Kaziras^{1,4}</i> , ¹ School of Engineering and Applied Sciences, Harvard University, Massachusetts 02138, United States, ² International Center for Quantum Materials, Peking University, Beijing 100871, China, ³ Institute of Physics, Chinese Academy of Sciences, Beijing 100190, China, ⁴ Department of Physics, Harvard University, Massachusetts 02138, United States
P01.24	Two-Dimensional Silicon and Germanium-Based Materials , <i>D. Kaltsas¹, T. Tsatsoulis¹, O. G. Ziogos² and L. Tsetseris¹</i> , ¹ Department of Physics, National Technical University of Athens, Athens, Greece ² Department of Chemical Engineering, National Technical University of Athens, Athens, Greece
P01.25	In-vitro Evaluation of Cobalt and Manganese Ferrite Nanoparticles for Magnetic Particle Hyperthermia , <i>A. Makridis¹, M. Tziomaki¹, K. Topouridou², K. Simeonidis¹, D. Sakellari¹, M. P. Yavropoulou², M. Angelakeris¹, J. G. Yovos² and O. Kalogirou²</i> , ¹ Department of Physics, Aristotle University, 54124 Thessaloniki, Greece, ² Division of Molecular Endocrinology, AHEPA University Hospital, Aristotle University of Thessaloniki, Thessaloniki, Greece
P01.26	Graphene Oxide Combined with PEDOT as Pt-Free Electrocatalyst for Quasi-Solid State Dye-Sensitized Solar Cells. An XPS Study , <i>L. Sygellou¹, D. Tasis¹, A. Nikolakopoulou^{1,2}, V. Dracopoulos², C. Galiotis^{1,3}, P. Lianos^{1,2}</i> , ¹ FORTH/ICE-HT, P.O. Box 1414, 26504 Patras, Greece, ² Engineering Science Dept, University of Patras, 26504 Patras, Greece, ³ Dept. Materials Science, University of Patras, 26504 Patras, Greece
P01.27	Surface Chemical Investigation of High-k Oxides Thin Films Grown by Atomic Layer Deposition on Ge (100) , <i>G. Skoulatakis¹, S. Kennou¹, M. Botzakaki², N. Xanthopoulos², S. N. Georga² and C. A. Krontiras²</i> , ¹ Department of Chemical Engineering, University of Patras, Karatheodoris 1, University Campus GR 265 00 Patras, Greece, ² Department of Physics, University of Patras, University Campus GR 265 00 Patras, Greece
P01.28	A multi-level computational approach to the binding possibilities of carbon onions , <i>B. Adhikari¹, B. Muthuraman¹, C. Mathioudakis², M. Fyta¹</i> , ¹ Institute for Computational Physics, University of Stuttgart, Allmandring 3, 70569 Stuttgart, Germany, ² Research Unit for Nanostructured Materials Systems, Department of Mechanical and Materials Science Engineering, Cyprus University of Technology, P.O. Box 50329, 3603 Limassol, Cyprus
P01.29	CO₂ adsorption on TiN/Graphene systems (N=1, 3, 13) by ab-initio Calculations , <i>M. A. Gialampouki¹, Ch. E. Lekka¹</i> , ¹ Department of Materials Science and Engineering, University of Ioannina, Ioannina. 45110, Greece
P01.30	Sol-Gel grown compound ZnO:Au Thin Films for optoelectronic and Gas Sensing Applications , <i>P. Koralli^{1,2}, G. Mousdis², M. Kompitsas², D. E. Manolakos¹</i> , ¹ School of Mechanical Engineering, National Technical University of Athens, Iron Polytechniou 9 Zografos, 15780 Athens, GREECE, ² National Hellenic Research Foundation, Theoretical and Physical Chemistry Institute, 48 Vasileos Constantinou Avenue, 11635 Athens, GREECE
P01.31	Broadband Dielectric Spectroscopy Study in PEDOT:PSS Films , <i>A. N. Papathanassiou¹, I. Sakellis¹, J. Grammatikakis¹, E. Vitoratos² and S. Sakkopoulos²</i> , ¹ University of Athens, Physics Department, Solid State Physics Section, Panepistimiopolis, GR 15784 Zografos, Athens, Greece, ² University of Patras, Physics Department, Condensed Matter Physics Section, GR 265 00, Patras, Greece
P01.32	Study of the Bioactivity and Biodegradability of a Ca, Mg, Si containing Bioceramic , <i>E. K. Dimou¹, G. Theodorou¹, O. M. Goudouri², L. Papadopoulou³, N. Kantiranis³, G. Zachariadis⁴, K. M. Paraskevopoulos¹</i> , ¹ Department of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece, ² Institute of Biomaterials, Department of Materials Science and Engineering, University of Erlangen-Nuremberg, 91058 Erlangen, Germany, ³ School of Geology, ⁴ Department of Chemistry, University of Thessaloniki, 54124 Thessaloniki, Greece
P01.33	Raman and XRF spectroscopy study of companion animal nails , <i>A. M. Paschou¹, M. Katsikini¹, D. Christofilos², J. Arvanitidis¹, S. Ves¹, and G. Kazakos³</i> , ¹ School of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, ² Physics Division, School of Technology, Aristotle University of Thessaloniki, 54124 Thessaloniki, ³ School of Veterinary Medicine, Aristotle University of Thessaloniki, 54124 Thessaloniki
P01.34	Scattering Study of Complexation of Lysozyme with Triblock Polyelectrolyte Micelles , <i>A. Papagiannopoulos¹, M. Karayianni¹, G. Mountrichas¹, S. Pispas¹ and A. Radulescu²</i> , ¹ Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, 48 Vassileos Constantinou Avenue, 11635 Athens, Greece, ² Institute for Solid State Research, Research Centre Jülich, 52425 Jülich, Germany

P01.35	Synthesis and Characterization of Silicate Glasses With the Sol-Gel Process Containing MgO and ZnO , <i>G. Theodorou</i> ¹ , <i>E. Kontonasaki</i> ² , <i>A. Patrikiou</i> ² , <i>O. M. Goudouri</i> ³ , <i>L. Papadopoulou</i> ⁴ , <i>N. Kantiranis</i> ⁴ , <i>K. Chrissafis</i> ¹ , <i>A. R. Boccaccini</i> ³ , <i>K. M. Paraskevopoulos</i> ¹ , ¹ Department of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece, ² School of Dentistry, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece, ³ Department of Materials Science and Engineering, University of Erlangen-Nuremberg, Germany, ⁴ School of Geology, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece
P01.36	Molecular simulation of polymer nanocomposites at multiple length scales , <i>I. G. Mathioudakis</i> ¹ , <i>G. G. Vogiatzis</i> ¹ and <i>D. N. Theodorou</i> ¹ , ¹ School of Chemical Engineering, National Technical University of Athens, Athens, Greece
P01.37	Mechanics of Biological Nanocomposites: The Case of Nacre in Mediterranean Shells , <i>M. Karyou</i> ¹ , <i>M. Constantinou</i> ¹ , <i>L. Koutsokeras</i> ¹ and <i>G. Constantinides</i> ¹ , ¹ Department of Mechanical Engineering and Materials Science and Engineering, Research Unit for Nanostructured Materials Systems, Cyprus University of Technology, Lemesos, Cyprus
P01.38	Effects of Heat Treatment on Anti-Corrosion Behavior of Carburized Ni Plates , <i>E. M Pechlivani</i> ¹ , <i>G. Stergioudis</i> ¹ , <i>E. Pavlidou</i> ² , <i>D. Tsipas</i> ³ , ¹ Applied Physics Laboratory, Department of Physics, Aristotle University of Thessaloniki, Thessaloniki 54124 Greece, ² Laboratory for Scanning Electron Microscope, Department of Physics, Aristotle University of Thessaloniki, Thessaloniki 54124 Greece, ³ Physical Metallurgy Laboratory, Department of Mechanical Engineering, Aristotle University of Thessaloniki, Thessaloniki 54124 Greece
P01.39	On the compaction of commercial thermoelectric Mg₂Si via cold pressing , <i>V. Giannoulatou</i> , <i>G. S. Polymeris</i> , <i>E. Hatzikraniotis</i> , <i>K. M. Paraskevopoulos</i> , Solid State Section, Physics Department, Aristotle University of Thessaloniki, GR- 54124, Thessaloniki, Greece
P01.40	Optical and Mechanical Properties of Silicone-based Nanocomposites , <i>P. Nikolaou</i> ¹ , <i>M. Constantinou</i> ¹ , <i>G. Constantinides</i> ¹ , <i>P. Patsalas</i> ² and <i>L. E. Koutsokeras</i> ¹ , ¹ Research Unit for Nanostructured Materials Systems, Department of Mechanical Engineering and Materials Science and Engineering, Cyprus University of Technology, Limassol, Cyprus, ² Department of Physics, Aristotle University of Thessaloniki, Thessaloniki, Greece

P02.01	Structural and electromagnetic characterization of ferrite magnetodielectric materials for microwave applications , <i>E. Varouti¹, E. Manios¹, D. Stamopoulos¹, M. Pissas¹, A. Alexandridis², T. Zervos²</i> , ¹ Institute for Advanced Materials, Physicochemical Processes, Nanotechnology and Microsystems, NCSR Demokritos, 15310, Athens, Greece, ² Institute of Informatics & Telecommunications, NCSR Demokritos, 15310 Athens, Greece
P02.02	Magnetic Properties and Structure of Fe Doped Mn-Ni-Sn Ribbons , <i>C. Sarafidis^{1,2}, M. Gjoka², O. Kalogirou¹ and D. Niarchos²</i> , ¹ Third Lab. of Physics, Physics Dpt, Aristotle University of Thessaloniki, Greece, ² Institute for Advanced Materials, Physicochemical Processes, Nanotechnology & Microsystems NCSR Demokritos, Agia Paraskevi, Greece
P02.03	Aging effects in YBa₂Cu₃O_{6-x} single crystal with critical temperatures near the spin glass-superconducting phase boundary (0 < T_c < 30 K) , <i>G. Papageorgiou^{1,2} and M. Pissas¹</i> , ¹ Institute of Advanced Materials, Physicochemical Processes, Nanotechnology & Microsystems, NCSR Demokritos, ² Physics Department, National and Kapodistrian University of Athens
P02.04	Study of FePt-C/SiO₂ thin films for magnetic recording applications , <i>G. Giannopoulos, Th. Speliotis and D. Niarchos</i> , IAMPPNM, NCSR Demokritos, Athens 15310, Greece
P02.05	Orbital and spin order transitions in La_{1-x}Nd_xMnO_{3+δ} (δ ≥ 0) perovskite compounds , <i>K. Georgalas, E. Syskakis</i> , Section of Solid State Physics, Department of Physics, University of Athens, Panepistimiopolis, Gr-15784 Zografos, Athens
P02.06	Engineering Hidden Order Parameters And Quartets In Correlated Nanostructures , <i>G. Livanas¹, G. Varelogiannis¹ and P. Christodoulou¹</i> , ¹ Department of Physics, National Technical University of Athens, GR-15780 Athens, Greece
P02.07	Angular dependence of the peak effect in MgB_{2-x}C_x , <i>I. Amvrazi^{1,2} and M. Pissas¹</i> , ¹ Institute of Advanced Materials, Physicochemical Processes, Nanotechnology & Microsystems, NCSR Demokritos, ² Physics Department, National and Kapodistrian University of Athens
P02.08	Magnetism in binary and encapsulated Co-O clusters , <i>D. Tzeli¹, A. Morphis¹, J. A. Blackman², and K. N. Trohidou</i> , ¹ IAMPPNM, Department of Materials Science, NCSR Demokritos, Athens, Greece, ² Department of Physics and Astronomy, University of Leicester, Leicester LE1 7RH, United Kingdom
P02.09	Perpendicular magnetic anisotropy in W—CoFeB—MgO magnetic heterostructures , <i>Th. Speliotis, V. Psycharis, A. Kaidatzis and D. Niarchos</i> , Institute of Advanced Materials, Physicochemical Processes, Nanotechnology and Microsystems, National Center for Scientific Research Demokritos, 15310 Athens, Greece, * tspeliotis@ims.demokritos.gr
P02.10	Theoretical and experimental study on the stray magnetic field produced from cracks on ferromagnetic material , <i>I. Kaliakatsou-Papakosta^{1,2}, E. Manios¹, and M. Pissas¹</i> , ¹ Institute for Advanced Materials, Physicochemical Processes, Nanotechnology & Microsystems, NCSR Demokritos, ² Department of Physics, National and Kapodistrian University of Athens
P02.11	Suppression of the Jahn Teller distortion in LaMn_{1-x}Fe_xO_{3+δ} (δ ≈ 0) compounds , <i>G. Vertsioti, M. Calamiotou, E. Syskakis</i> , Section of Solid State Physics, Department of Physics, University of Athens, Panepistimiopolis, Gr-15784 Zografos, Athens
P02.12	Confined 1,4 cis Polyisoprenes within Self-Ordered Anodic Aluminum Oxide Effect on the Segmental and Global Dynamics , <i>S. Alexandris¹, M. Steinhart², G. Floudas¹</i> , ¹ Department of Physics, University of Ioannina, ² Institut für Chemie neuer Materialien, Universität Osnabrück
P02.13	β-Cyclodextrin Molecularly Imprinted Polymers (β-CyD MIPs) for dye binding , <i>G. Z. Kyzas, N. K. Lazaridis and D. N. Bikiaris</i> , Division of Chemical Technology, Department of Chemistry, Aristotle University of Thessaloniki, Greece
P02.14	HA Coatings Reinforced by La₂O₃, Sm Doped CeO₂ and Cu-Zr-Al-Ag Metallic Glass Addition on Metal Substrate: Bioactive Behavior Evaluation , <i>G. Theodorou¹, M. Perissi¹, L. Papadopoulou², N. Kantiranis², S. Yugeswaran³, A. Kobayashi³, K. M. Paraskevopoulos¹</i> , ¹ Department of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece, ² School of Geology, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece, ³ Joining & Welding Research Institute, Osaka University, Osaka 567-0047, Japan
P02.15	Thermoresponsive Aggregation of PS-PNIPAM-PS triblock copolymer in aqueous solutions , <i>A. Papagiannopoulos¹, J. Zhao¹, S. Pispas¹ and A. Radulescu²</i> , ¹ Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, 48 Vassileos Constantinou Avenue, 11635 Athens, Greece, ² Institute for Solid State Research, Research Centre Jülich, 52425 Jülich, Germany

P02.16	Controlled Drug Release And Antibacterial Activity Of Composite P(MAA-co-MBAAm)/Fe₃O₄/Ag Microspheres , <i>A. Chatzipavlidis</i> ^{1,2} , <i>L.-A. Tziveleka</i> ² , <i>P. Bilalis</i> ³ , <i>A. Galeou</i> , ⁴ <i>G. Kordas</i> ² , <i>C. A. Charitidis</i> ¹ , ¹ National Technical University of Athens, School of Chemical Engineering, 9 Heroon Polytechniou St, Zografos, Athens GR-15780, Greece, ² NCSR Demokritos, Institute for Advanced Materials, Physicochemical processes, Nanotechnology & Microsystems, Aghia Paraskevi Attikis, Athens, GR-15310, Greece, ³ Industrial Chemistry Laboratory, Department of Chemistry, University of Athens, 15771 Athens, Greece, ⁴ NCSR Demokritos, Institute of Biosciences & Applications, Aghia Paraskevi Attikis, Athens, GR-15310, Greece
P02.17	Neutron Scattering, Dielectric and Thermal Studies on Thermoresponsive Polymers of Complex Architecture , <i>D. Aravopoulou</i> ¹ , <i>M. Souli</i> ¹ , <i>K. Kyriakos</i> ² , <i>A. Miasnikova</i> ³ , <i>C. M. Papadakis</i> ² and <i>A. Kyritsis</i> ¹ , ¹ National Technical University of Athens, Department of Physics, Athens, Greece, ² Technische Universität München, Physikdepartment, Germany, ³ Universität Potsdam, Department of Chemistry, Potsdam, Germany
P02.18	Biocompatible γ-Fe₂O₃ nanoparticles/ amphiphilic diblock copolymers hybrid nanocolloids , <i>E. Vlassi</i> ¹ , <i>A. Bakandritsos</i> ² and <i>S. Pispas</i> ¹ , ¹ Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, 48 Vassileos Constantinou Avenue, 11635 Athens, Greece, ² Department of Materials Science, University of Patras, 26504 Rion, Greece
P02.19	Dehydration kinetics of Sepiolites and Palygorskites , <i>M. Tsampodimou</i> , <i>V. Gionis</i> and <i>G. D. Chrysikos</i> , Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, 48 Vassileos Constantinou Ave, Athens 11635, Greece
P02.20	The Case of Portable Icons from Historical Saint Paul's Church of 'T.C.M.F' , <i>A. Rousaki</i> ¹ , <i>D. Lazidou</i> ² , <i>T. Zorba</i> ¹ , <i>T. Fardi</i> ³ , <i>D. Nikolis</i> ³ , <i>N. Bonovas</i> ⁴ , <i>I. Iazlis</i> ⁵ , <i>E. Pavlidou</i> ⁶ , <i>K. M. Paraskevopoulos</i> ¹ , ¹ FTIR and Thermal Analysis Laboratory, Solid State Physics Section, Physics Department, Aristotle University of Thessaloniki, GR-54214 Thessaloniki, Greece, ² Head of conservation department, Museum of Byzantine Culture, 2 Stratou Avenue, GR-54640, Thessaloniki, Greece, ³ Painting Conservator, ⁴ Archaeologist, Museum of Byzantine Culture, 2 Stratou Avenue, GR-54640, Thessaloniki, Greece, ⁵ Archaeological Museum of Thessaloniki, ⁶ Manoli Andronikou Street. GR-54013, Thessaloniki, Greece, ⁶ Electron Microscopy Laboratory, Solid State Physics Section, Physics Department, Aristotle University of Thessaloniki, GR-54214 Thessaloniki, Greece
P02.21	Separating the Contribution of Thermal Activation in the Predose-Effect of Quartz , <i>S. K. Dimitriadis</i> ¹ , <i>I. K. Sfamba</i> ¹ , <i>G. S. Polymeris</i> ² and <i>G. Kitis</i> ¹ , ¹ Aristotle University of Thessaloniki, Nuclear Physics Laboratory, 54124, Thessaloniki, Greece, ² Aristotle University of Thessaloniki, Solid State Physics Section, 54124, Thessaloniki, Greece
P02.22	Morphology, Dielectric Response and Energy Storage in Zinc Titanate/Epoxy Resin Nanodielectrics , <i>G. C. Psarras</i> ¹ , <i>A. Kanapitsas</i> ² , <i>C. Tsonos</i> ² , ¹ Department of Materials Science, University of Patras, Patras 26504, Greece, ² Department of Electronics, Technological Educational Institute of Lamia, Lamia, Greece
P02.23	Microwave Reflection Reduction and Shielding Effectiveness of Carbon Black, Multiwalled Carbon Nanotube and Nanoclay loaded epoxy composites , <i>C. A. Stergiou</i> ¹ , <i>A. Z. Stimoniaris</i> ² and <i>C. G. Delides</i> ² , ¹ Lab. of Inorganic Materials, Centre for Research and Technology Hellas, 57001 Thessaloniki, Greece, ² Department of Pollution Control Technologies, T.E.I of Western Macedonia, Kila, 50100 Kozani, Greece
P02.24	A Magnificent Double Painted meta-Byzantine Icon of St. Panteleimon at Gazoros: Pigment Characterization by Combined Spectroscopic Analysis , <i>D. Patsiaoura</i> ¹ , <i>P. Beinas</i> ² , <i>E. Pavlidou</i> ³ , <i>T. Zorba</i> ¹ , <i>A. Rousaki</i> ¹ , <i>K. M. Paraskevopoulos</i> ¹ , ¹ FTIR and Thermal Analysis Laboratory, Solid State Physics Section, Physics Department, Aristotle University of Thessaloniki, GR-54124 Thessaloniki, Greece, ² Painting Conservator, 'Esaetexnon' Artwork conservation Laboratory, GR-60100 Katerini, Greece, ³ Electron Microscopy Laboratory, Solid State Physics Section, Physics Department, Aristotle University of Thessaloniki, GR-54124 Thessaloniki, Greece
P02.25	Construction of an Experimental Setup for the Study of the Behaviour of Ceramic Materials under Oxygen Partial Pressure Variation , <i>K. Panos</i> ¹ , <i>P. Pandis</i> ¹ , <i>P. M. Sakkas</i> ¹ , <i>D. G. Kanellopoulou</i> ¹ , <i>G. Sourkouni</i> ² , <i>Chr. Argirusis</i> ^{1,2} , ¹ National Technical University of Athens, School of Chemical Engineering, Laboratory of Inorganic Materials Technology, Iroon Polytechniou 9, Zografou, Greece, ² Energy Research Center of Lower Saxony (EFZN), 38640 Goslar, Germany
P02.26	Effect of Sonication on the Structural Changes and the Thermomechanical Properties of Epoxy/Fly Ash Composites , <i>A. Z. Stimoniaris</i> ¹ , <i>A. P. Karadiakos</i> ² , <i>C. A. Stergiou</i> ³ , <i>A. E. Domopoulou</i> ¹ , <i>M. A. Karakassides</i> ² and <i>C. G. Delides</i> ¹ , ¹ Department of Pollution Control Technologies, T.E.I. of Western Macedonia, Kozani, Greece, ² Department of Materials Science and Engineering, University of Ioannina, Greece, ³ Lab. of Inorganic Materials, Centre for Research and Technology Hellas, 57001 Thessaloniki, Greece

P02.27	Low content TiO₂ Polymer Matrix Nanocomposites: Towards High Energy Storage Efficient Systems. , <i>G. N. Tomara¹, A. P. Kerasidou¹, A. C. Patsidis² P. K. Karahaliou^{1,2}, G. C. Psarras², S. N. Georga¹, C. A. Krontiras¹</i> , ¹ Department of Physics, University of Patras, 26504, Patras, Greece, ² Department of Materials Science, University of Patras, 26504, Patras, Greece
P02.28	Electromagnetic Characterization and Microwave Absorption of Y-type Hexaferrites , <i>C. A. Stergiou¹ and G. Litsardakis²</i> , ¹ Lab. of Inorganic Materials, Centre for Research and Technology Hellas, 57001, Themi, Greece, ² Lab. of Materials for Electrotechnics, Aristotle University of Thessaloniki, Greece
P02.29	Pre-dose effect in BaSO₄ and possibility of zeroing thermoluminescence signal of gypsum by petrification: two luminescence features affecting dating of portable paintings through ground layers by using luminescence , <i>B. A. Ageli¹, I. K. Sfamba¹, G. Kitis¹, G. S. Polymeris²</i> , ¹ Nuclear and Elementary Particle Physics Laboratory, Department of Physics, Aristotle University of Thessaloniki, GR-54214 Thessaloniki, Greece, ² Solid State Section, Department of Physics, Aristotle University of Thessaloniki, GR-54214 Thessaloniki, Greece
P02.30	Conductivity Study of the M₃Fe₄V₆O₂₄ System , <i>K. Karkas¹, N. Guskos^{1,2} and Ch. Voulgaris¹</i> , ¹ Department of Physics, University of Athens, Panepistimiopolis, 157.84 Zografos, Athens, Greece, ² Institute of Physics, Szczecin University of Technology, Al. Piastow 17, 70.310 Szczecin, Poland
P02.31	Dielectric Properties of Epoxy Resin - Boron Carbide Composites , <i>E. C. Senis¹, A. C. Patsidis¹ and G. C. Psarras¹</i> , ¹ Department of Material Science, University of Patras
P02.32	Dielectric response, functionality and energy storage in barium titanate-epoxy resin nanocomposites , <i>A. C. Patsidis¹, A. Kanapitsas², C. Tsonos² and G. C. Psarras¹</i> , ¹ Department of Materials Science, School of Natural Sciences, University of Patras, Patras 26504, Greece, ² Department of Electronics, Technological Educational Institute of Lamia, 35100 Lamia, Greece
P02.33	Saint Demetrios Monastery of Stomion: Study of Wall Paintings in the Catholicon , <i>L. Malletzidou¹, P. Beinas², A. Rousaki¹, T. Zorba¹, E. Pavlidou¹, K. M. Paraskevopoulos¹</i> , ¹ Physics Department, Solid State Physics Section, Aristotle University of Thessaloniki, GR-54124, Thessaloniki, Macedonia, Greece, ² Painting Conservator, 'Esaeitexnon' Artwork Conservation Laboratory, GR-60100 Katerini, Greece
P02.34	Joining of C_f/SiC composite to Ti alloy , <i>P. Yialouris¹, X. Hernandez², C. Jimenez², V. Liedtke³, C. Wilhelm⁴, S. Messoloras¹ and K. Mergia¹</i> , ¹ Institute of Nuclear and Radiological Science, Energy, Technology and Safety, National Centre for Scientific Research Demokritos, 15310 Aghia Paraskevi, Athens, Greece, ² Tecnalia Research & Innovation, Mikeletegi Pasealekua, 2, Donostia-San Sebastian, Spain, ³ Aerospace & Advanced Composites GmbH, A-2700 Wiener Neustadt, Austria, ⁴ EADS Innovation Works, 81663 Munich, Germany
P02.35	Contact-less Charging Effects in RF MEMS Capacitive Switches , <i>M. Koutsourelis¹, L. Michalas¹, P. Martins², E. Papandreou¹, A. Leuliet², S. Bansropun², G. Papaioannou¹ and A. Ziaei²</i> , ¹ Solid State Section, Physics Department, University of Athens, Athens 15784, Greece, ² Thales Research & Technology, F91767, Palaiseau Cedex, France
P02.36	Excimer Laser Annealing For Subsurface Modification Of Ag Nanoparticles in Aluminum Nitride Thin Films , <i>D. C. Koutsogeorgis¹, A. Siozios², E. Lidorikis², W. M. Cranton¹, C. Kosmidis³, P. Patsalas^{2,4}</i> , ¹ School of Science and Technology, Nottingham Trent University, Nottingham, NG11 8NS, United Kingdom, ² Department of Materials Science and Engineering, University of Ioannina, Ioannina, 45110, Greece, ³ Department of Physics, University of Ioannina, Ioannina, 45110, Greece, ⁴ Department of Physics, Aristotle University of Thessaloniki, GR-54124 Thessaloniki, Greece
P02.37	SEM-EDS and micro-Raman investigations in coated CoSb₃ skutterudite , <i>A. Rousaki¹, E. Hatzikraniotis¹, K. Zawadzka², E. Godlewska², K. Mars², D. Lampakis³ and K. M. Paraskevopoulos¹</i> , ¹ Solid State Section, Physics Department, Aristotle University of Thessaloniki, GR-54124, Thessaloniki, Greece, ² Faculty of Materials Science and Ceramics, AGH University of Science and Technology, Krakow, Poland, ³ University Ecclesiastical Academy of Thessaloniki, Department of Management and Conservation of Ecclesiastical Cultural Heritage Objects, 542 50 Thessaloniki, Greece
P02.38	Thin film silicon a-Si/μc-Si tandem photovoltaic modules and comparison of outdoor performance with c-Si modules , <i>G. Koutsourakis¹, G. Leftheriotis¹, P. Yianoulis¹</i> , ¹ Energy and Environment Lab, Physics Department, University of Patras, Rion, 26500, Greece
P02.39	Structural and optical properties of TiO₂ thin films prepared by spin-coating technique , <i>I. Sta¹, M. Jlassi¹, M. Hajji^{1,2}, M. Kompitsas³ and H. Ezzaouia¹</i> , ¹ Laboratoire de Photovoltaïque, Centre de Recherche et des Technologies de l'Énergie, Technopole de Borj-Cadria, BP 95, 2050 Hammam-Lif, Tunisie, ² Institut Supérieur d'Électronique et de Communication de Sfax, Université de Sfax, BP 868, 3018 Sfax, Tunisie, ³ National Hellenic Research Foundation, Theoretical and Physical Chemistry Institute, 48, Vasileos, Konstantinou Ave, 11635 Athens, Greece

P02.40	Local Symmetries And Perfect Transmission In 1-D Aperiodic Quantum And Photonic Systems , <i>P. A. Kalozoumis</i> ¹ , <i>C. Morfonios</i> ² , <i>N. Palaiodimopoulos</i> ¹ , <i>F. K. Diakonos</i> ¹ and <i>P. Schmelcher</i> ^{2,3} , ¹ Department of Physics, University of Athens, GR-15771 Athens, Greece, ² Zentrum für Optische Quantentechnologien, Universität Hamburg, Luruper Chaussee 149, 22761 Hamburg, Germany , ³ The Hamburg Centre for Ultrafast Imaging, Luruper Chaussee 149, 22761 Hamburg, Germany
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Wednesday, September 25, 2013

13:00-15:00 Poster Session P03/Light Lunch

P03.01	Dephasing rates in spin-based and charge based Quantum Dots , <i>V. N. Stavrou^{1,2} and G. P. Veropoulos²</i> , ¹ Department of Physics and Astronomy, University of Iowa, Iowa City, IA 52242, USA, ² Division of Physics, Hellenic Naval Academy, 185 39 Hadjikyriakou, Piraeus, Greece
P03.02	Annealing-induced lattice recovery and defect annihilation in In implanted GaN , <i>M. Katsikini¹, F. Pinakidou¹ and E. C. Paloura¹</i> , ¹ School of Physics, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece
P03.03	Fabrication and Characterization of MOS Memory Devices Containing Pt Nanocrystals , <i>P. Bousoulas, E. Verrelli, D. Tsoukalas</i> , Department of Applied Physics, National Technical University of Athens, Iroon Polytechniou 9 Zografou, 15780 Athens, Greece
P03.04	The Temperature Dependence of the Transient Photoconductivity of TiO₂ Nanopowder Modified with Urea , <i>T. Georgakopoulos¹, N. Todorova², K. Pomoni¹ and C. Trapalis²</i> , ¹ Department of Physics University of Patras, 26500 Patras Greece, ² Institute of Advanced Materials, Physicochemical Process, Nanotechnology and Microsystems, National Center for Scientific Research 'Demokritos' 15310 Ag. Paraskevi Attikis, Greece
P03.05	Simulating the Effect of CO₂ Laser Radiation on Plasma Doped Silicon , <i>S. Stathopoulos¹, A. Florakis¹, G. Bennisayag², F. Torregrosa³, Y. Spiegel³ and D. Tsoukalas¹</i> , ¹ Department of Physics, National Technical University of Athens, Zographou 15780, Athens, Greece, ² CEMES/CNRS, 31055 Toulouse CEDEX 4, France, ³ Ion Beam Services, 13790 Peynier, France
P03.06	RF-Sputtering Growth and Study of Thermochromic VO₂ Thin Layers , <i>M. Panagopoulou¹, D. Tsoukalas¹, Y. S. Raptis¹ and G. Iliadis²</i> , ¹ School of Applied Mathematical. & Physical Sciences, National Technical University of Athens, GR 157 80 Athens, Greece, ² Uniglass Ltd, 31 Vouliagmenis Avenue, GR 16675, Athens, Greece
P03.07	Electrical Properties of ALD- Deposited Al₂O₃ On n-type Germanium , <i>M. Barlas¹, V. Ioannou-Sougliridis², S. Ladas³, S. Kennou³, M. Bersani⁴, M. Barozzi⁴, Th. Speliotis⁵ and D. Skarlatos¹</i> , ¹ Department of Physics, University of Patras, GR 26500 Patras, Greece, ² Department of Microelectronics, NCSR Demokritos, GR 15310 Aghia Paraskevi, Athens, Greece, ³ Department of Chemical Engineering, University of Patras, GR 26500 Patras, Greece, ⁴ FBK-irst, Materials and Microsystem Center, Via Sommarive 18, 38123 Povo, Trento, Italy, ⁵ Department of Materials Science, NCSR Demokritos, GR 15310 Aghia Paraskevi, Athens, Greece
P03.08	Scanning Hot Probe system for studying Spatial In-homogeneities in thermoelectric materials , <i>A. Theodorakakos, G. S. Polymeris, E. Hatzikraniotis and K. M. Paraskevopoulos</i> , ¹ Solid State Section, Physics Department, Aristotle University of Thessaloniki, GR- 54124, Thessaloniki, Greece
P03.09	Micro-FTIR and SEM mapping in PbTe doped with Br , <i>E. C. Stefanaki¹, M. V. Nikolic², E. Pavlidou¹, G. S. Polymeris¹, E. Hatzikraniotis¹, P. M. Nikolic³ and K. M. Paraskevopoulos</i> , ¹ Physics Department, Aristotle University of Thessaloniki, GR-54124, Thessaloniki, Greece, ² Institute for Multi-disciplinary Research, University of Belgrade, Kneza Visaslava 1, 11000 Beograd, Serbia, ³ Institute of Technical Sciences of SASA, Knez Mihailova 35/IV, 11000 Belgrade, Serbia
P03.10	Thickness effect on the electrical properties of Si₃N₄/n-Si Metal-Insulator-Semiconductor capacitors , <i>I. Barmaxizoglou, I. Stavrakas, D. Triantis and S. F. Galata</i> , Department of Electronics, Technological Educational Institute of Athens, Athens, 12210, Greece
P03.11	Properties Of ZAO Films Sputtered With Various Deposition Power And Annealed In Air Or N₂/H₂ , <i>C. Tsiarapas¹, D. Girginoudi¹, N. Georgoulas¹ and V. Stathopoulos²</i> , ¹ Department of Electrical and Computer Engineering, Democritus University of Thrace, Building A' E&CE, University Campus Xanthi-Kimmeria, 67100, Xanthi, Greece, ² General Department of Applied Sciences, Technological Educational Institute of Chalkida, Sklhro, 34400, Psachna Evias
P03.12	Nanomechanical properties of engineering nanostructures , <i>E. P. Koumoulos¹ and C. A. Charitidis¹</i> , ¹ School of Chemical Engineering, National Technical University of Athens, 9 Heroon Polytechniou St, Zographos, Athens, 15780, Greece
P03.13	Electronic Properties of Double-Wall Carbon Nanotubes , <i>A. Diamantopoulou¹, S. Glenis¹, V. Likodimos^{1,2}, N. Guskos¹</i> , ¹ Department of Solid State Physics, University of Athens, Panepistimioupolis, GR-157 84 Athens, Greece, ² Institute of Advanced Materials, Physicochemical Processes, Nanotechnology and Microsystems, NCSR Demokritos, Aghia Paraskevi Attikis, 15341 Athens, Greece

P03.14	Intercalation Properties of Hydrothermally Grown Vanadium Oxide as a Capacitor Electrode Material , <i>M. Apostolopoulou¹, D. Louloudakis^{2,3}, D. Vernardou², N. Katsarakis^{2,4} and E. Koudoumas^{2,5}</i> , ¹ Department of Materials Science and Technology, University of Crete, 7103 Heraklion, Crete, Greece, ² Center of Materials Technology and Photonics, School of Applied Technology, Technological Educational Institute of Crete, 7104 Heraklion, Crete, Greece, ³ Department of Physics, University of Crete, 71003 Heraklion, Crete, Greece, ⁴ Institute of Electronic Structure and Laser, Foundation for Research & Technology-Hellas, P.O. Box 1527, Vassilika Vouton, 711 10 Heraklion, Crete, Greece, ⁵ Electrical Engineering Department, Technological Educational Institute of Crete, 71004 Heraklion, Crete, Greece
P03.15	Electronic Properties of Carbon Nanotube Poly(ether-ester) Composites , <i>O. Manos¹, S. Glenis¹, A. Szymczyk², V. Likodimos^{1,3}, N. Guskos¹</i> , ¹ Department of Solid State Physics, University of Athens, Panepistimioupolis, GR-157 84 Athens, Greece, ² West Pomeranian University of Technology, Institute of Physics, Al. Piastów 17, 70-310 Szczecin, Poland, ³ Institute of Advanced Materials, Physicochemical Processes, Nanotechnology and Microsystems, NCSR Demokritos, Aghia Paraskevi Attikis, 15341 Athens, Greece
P03.16	Superlattices and nano-structures of metal di-borides: a first-principles study , <i>E. Gkogkosi¹ and L. Tsetseris¹</i> , ¹ Department of Physics, National Technical University of Athens, Athens, Greece
P03.17	Hydrophobic/Hydrophilic Channel Flows at the Nanoscale , <i>F. Sofos, T. E. Karakasidis and A. Liakopoulos</i> , Laboratory of Hydromechanics and Environmental Engineering, Department of Civil Engineering, School of Engineering, University of Thessaly, Volos, GR-38334, Greece
P03.18	Laser-assisted growth of graphene for energy applications , <i>A. Antonelou,^{1,2} T. Ioannides,¹ N. Bouropoulos,^{1,2} and S. N. Yannopoulos^{1,2}</i> , ¹ FORTH/ICE-HT, P.O. Box 1414, GR-26504, Patras, Greece, ² Department of Materials Science, University of Patras, GR-26504, Patras, Greece
P03.19	The dependence of the magnetoresistance effect observed in Co-Nb-Co trilayers on the thickness of the superconducting interlayer , <i>E. Aristomenopoulou, D. Stamopoulos</i> , Institute of Advanced Materials, Physicochemical Processes, Nanotechnology and Microsystems, NCSR Demokritos, 153-10, Aghia Paraskevi, Athens, Greece, * densta@ims.demokritos.gr,
P03.20	Structure and Stability of Nanocrystalline Silicon , <i>C. Neophytou¹ and P. C. Kelires¹</i> , ¹ Research Unit for Nanostructured Materials Systems, Department of Mechanical and Materials Science Engineering, Cyprus University of Technology, P.O. Box 50329, 3603 Lemesos, Cyprus
P03.21	Photoluminescence from Nanocrystalline/Microcrystalline Materials Based on (CH₃NH₃)(1-Naphthylmethyl Ammonium)₂Pb₂C₁₇ and Similar Compounds , <i>G. C. Papavassiliou, G. Pagona, G. A. Mousdis, N. Karousis</i> , ¹ Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, 48, Vassileos Constantinou Ave, Athens 116 35, Greece
P03.22	Surface Characterization of Laser Irradiated Polymers/CNT Composites by Using SEM and SPM , <i>E. Spyratou, S. Koutsoumpis, S. Kripotou, A. Kyritsis and P. Pissis</i> , Department of Physics, National Technical University of Athens, Zografou Campus, 157 80 Athens, Greece
P03.23	Graphene scrolls around carbon nanotubes: a first-principles study , <i>M. Tzavala¹ and L. Tsetseris¹</i> , ¹ Department of Physics, National Technical University of Athens, Athens, Greece
P03.24	Energy Dispersive X-Ray Fluorescence Spectroscopy , <i>E. Tsompopoulou^{1,2}, K. Mergia²</i> , ¹ Department of Physics, University of Athens, 15784 Athens, Greece, ² Institute of the Nuclear & Radiological Science, Energy, Technology & Safety, National Centre for Scientific Research Demokritos, 15310 Athens, Greece
P03.25	Maximizing magnetic hyperthermia response by nanoparticle assembling , <i>E. Myrovali¹, K. Simeonidis², M. Marciello³, M. P. Morales³, D. Serantes³, O. Chubykalo-Fesenko³, C. Martinez-Boubeta⁴, M. Angelakeris¹</i> , ¹ Physics Department, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece, ² Department of Mechanical Engineering, University of Thessaly, 38334 Volos, Greece, ³ Instituto de Ciencia de Materiales de Madrid ICMM-CSIC, 28049 Cantoblanco Madrid, Spain, ⁴ Departament d'Electronica-IN2UB, Universitat de Barcelona, 08028 Barcelona, Spain
P03.26	Shape Effects on the Magnetic Behavior of Nanoparticles with Core/Shell Morphology , <i>M. Vasilakaki¹, K. N. Trohidou¹, A. Morphis¹, C. Binns²</i> , ¹ IAMPNNM, Department of Materials Science, NCSR Demokritos, Athens, Greece, ² Department of Physics and Astronomy, University of Leicester, Leicester UK
P03.27	Optical Properties of MoS₂ Nanostructures , <i>D. Davelou¹, G. Kopidakis¹, G. Kioseoglou¹ and I. N. Remediakis¹</i> , ¹ Department of Materials Science and Technology, University of Crete, Greece
P03.28	Shaping the Composition Profiles in Heteroepitaxial Islands: Interplay of Thermodynamic and Kinetic Effects , <i>C. Georgiou¹ and P. C. Kelires¹</i> , ¹ Research Unit for Nanostructured Materials Systems, Department of Mechanical and Materials Science Engineering, Cyprus University of Technology, P.O. Box 50329, 3603 Lemesos, Cyprus

P03.29	High Pressure Graphene-Environment Interactions Probed by Raman Spectroscopy , <i>K. Filintoglou¹, J. Arvanitidis¹, D. Christofilos², S. Ves¹, G. A. Kourouklis², J. Parthenios³, C. Galiotis^{3,4} and K. Papagelis^{3,4}</i> , ¹ Physics Department, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece, ² Physics Division, School of Technology, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece, ³ FORTH/ICE-HT, 26504 Rio Patras, Greece, ⁴ Materials Science Department, University of Patras, 26504 Rio Patras, Greece
P03.30	XPS Characterization of Drug Delivery Systems Based on Microporous Zeolites and Ordered Mesoporous Carbons , <i>L. Sygellou¹, T. A. Steriotis², G. C. Charalambopoulou², V. Nikolakis³, D. G. Fatouros⁴, A. Siokou¹</i> , ¹ FORTH/ICE-HT, P.O. Box 1414, 26504 Patras, Greece, ² National Center for Scientific Research Demokritos, Agia Paraskevi Attikis 15341, Greece, ³ University of Delaware, Catalysis Center for Energy Innovation & Department of Chemical and Biomolecular Engineering ,150 Academy St, Newark, DE 19716, USA, ⁴ Aristotle University of Thessaloniki, School of Pharmacy, Department of Pharmaceutical Technology, GR-54124 Thessaloniki, Greece
P03.31	Metallic-Nanoparticles-Decorated Graphene for Surface Enhanced Raman Scattering , <i>I. Lariou, M. Panagopoulou, S. Stathopoulos, D. Tsoukalas and Y. S. Raptis</i> , School of Applied Mathematical & Physical Sciences, National Technical University of Athens, GR 157 80 Athens, GREECE
P03.32	Magnetic Properties of Few-Layer Graphene , <i>P. Bougiatioti¹, S. Glenis¹, V. Likodimos^{1,2}, N. Guskos¹</i> , ¹ Department of Solid State Physics, University of Athens, Panepistimioupolis, GR-15784 Athens, Greece, ² Institute of Advanced Materials, Physicochemical Processes, Nanotechnology and Microsystems, NCSR Demokritos, Aghia Paraskevi Attikis, 15341 Athens, Greece
P03.33	Laser-Assisted Synthesis and Processing of Functional Chalcogenide Nanostructures , <i>Th. Vasileiadis^{1,2}, V. Dracopoulos¹, M. Kolia³, L. Syggellou¹, and S. N. Yannopoulos^{1,2}</i> , ¹ FORTH/ICE-HT, P.O. Box 1414, GR-26504, Patras, Greece, ² Department of Materials Science University of Patras, ³ Lab of Electron Microscopy and Microanalysis, University of Patras, GR-26504, Rio-Patras, Greece
P03.34	Defects investigation of (CdZn)Te, (CdTe)In and (CdTe)Cl Bulk Single Crystals , <i>B. Kotsos¹, Th. Ganetsos¹, Ed. Belas², L. Cedivy² and N. Laskaris¹</i> , ¹ Department of Electronics, TEI of Central Greece, Lamia, 35100, Greece, ² Institute of Physics, Charles University, Prague, Czech Republic
P03.35	Synthesis and Hydrogen Sorption Characteristics of Mechanically Alloyed Mg(Ni_xCr_{1-x})₂ Intermetallics , <i>E. I. Gkanas¹, G. Stoian³, A. Ioannidou², M. Gjoka², S. S. Makridis¹, N. Lupu³</i> , ¹ H2matters Group, Mechanical Engineering Department, University of Western Macedonia, Greece, ² Institute for Advanced Materials, Physicochemical Processes, Nanotechnology & Microsystems, National Centre for Scientific Research 'Demokritos', Agia Paraskevi, Athens, 15310, GREECE, ³ National Institute of Research and Development for Technical Physics, Iasi, Romania