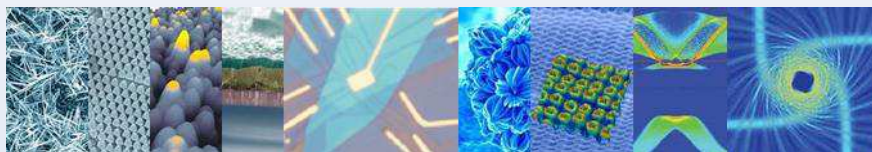


ICPAM-9

9th International Conference on Physics of Advanced Materials

20 – 23 September 2012, Iasi, Romania

Conference Programme



Organizers

Faculty of Physics, Alexandru Ioan Cuza University, Iasi, Romania

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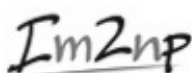


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Wednesday, 19.09.2012

16 ⁰⁰ -18 ⁰⁰	VENUE REGISTRATION - Lost Footsteps Hall, Alexandru Ioan Cuza University of Iasi
18 ⁰⁰ -20 ⁰⁰	WELCOME PARTY - Lost Footsteps Hall, Alexandru Ioan Cuza University of Iasi

Thursday, 20.09.2012

8 ⁰⁰ -9 ⁰⁰	REGISTRATION - Lost Footsteps Hall, Alexandru Ioan Cuza University of Iasi
9 ⁰⁰ -9 ³⁰	WELCOME ADDRESS - Aula Magna "Mihai Eminescu"
PLENARY SESSION: Aula Magna "Mihai Eminescu"- HALL 1 Chair persons: Daniel Tampu, Cristian Focsa	
9 ³⁰ -10 ¹⁰	What electron paramagnetic resonance tells us about the spin dynamics in diluted magnetic semiconductors? <u>L.M. Giurgiu</u> ¹ , O. Raita ¹ , A. Popa ¹ , D. Toloman ¹ ¹ National Institute for R&D of Isotopic and Molecular Technologies, Cluj-Napoca, Romania
10 ¹⁰ -10 ⁵⁰	Oligomers, layers and 3d supramolecular architecture in organopnictogen (M = Sb, Bi) chemistry <u>Cristian Silvestru</u> ¹ ¹ Faculty of Chemistry and Chemical Engineering, Department of Chemistry, Babes-Bolyai University, Cluj-Napoca, Romania
10 ⁵⁰ -11 ³⁰	Plasma surface interaction in material science <u>Gheorghe Popa</u> ¹ ¹ Faculty of Physics, "Alexandru Ioan Cuza" University, Iasi, Romania
11 ³⁰ -12 ⁰⁰	COFEE BREAK
INVITED AND ORAL SESSIONS	
Hall 1 : T4 - Magnetic Materials and Spintronics Chair persons: Sebastiaan van Dijken, Iosif Deac	
T4-I1 12 ⁰⁰ -12 ³⁰	Relevance of Fe atomic volumes for the magnetic properties of Fe-rich metallic glasses <u>Imre Bakonyi</u> ¹ ¹ Wigner Research Centre for Physics, Hungarian Academy of Sciences, Budapest, Hungary
T4-I2 12 ³⁰ -13 ⁰⁰	Ferromagnetic compounds stabilized on Ge(001) and Si(001) by molecular beam epitaxy Nicoleta Georgiana Apostol ¹ , George Adrian Lungu ¹ , Ruxandra Maria Costescu ¹ , Marius Adrian Husanu ¹ , Dana Georgeta Popescu ¹ , Laura Elena Stoflea ¹ , <u>Cristian-Mihail Teodorescu</u> ¹ ¹ Nanoscale Condensed Matter Physics, National Institute of Materials Physics, Magurele, Romania
T4-O1 13 ⁰⁰ -13 ²⁰	Magnetic and structural properties of nickel magnesium substituted lithium ferrites for microwave applications <u>Caltun O.F.</u> ¹ , Ramesh M. ² , Rao G.S.N. ² , Samatha K. ² , Parvatheeswara Rao B. ² ¹ Dept. of Physics, A.I. Cuza University, Iasi, Romania ² Dept. of Physics, Andhra University, Visakhapatnam, India

Al. Miller - Hall 2: T9 - Polymer Materials and Composites Chair persons: Grazyna Adamus, Magdalena Aflori	
T9-I1 12 ⁰⁰ -12 ³⁰	Polyhydrosilanes – a route to optoelectronics Liviu Sacarascu ¹ , <u>Valeria Harabagiu</u> ¹ , ¹ Romanian Academy, "Petru Poni" Institute of Macromolecular Chemistry, Romania
T9-I2 12 ³⁰ -13 ⁰⁰	Morphology maps of ice-templated hydrogels based on chitosan <u>Maria Valentina Dinu</u> ¹ , Martin Pradny ² , Ecaterina Stela Dragan ¹ , Jiri Michalek ² ¹ Functional Polymers Department, Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania ² Polymer Gels, Institute of Macromolecular Chemistry, Prague, Czech Republic
Ferdinand - Hall 3: T11 - Thin Films and Nanostructures for Modern Electronics Chair persons: Munizer Purica, Liviu Leontie	
T11-I1 12 ⁰⁰ -12 ³⁰	Studies on the influence of doping and deposition conditions on the electrical transport mechanism of ZnO thin films A. Yildiz ^{1*} , <u>F. Iacomi</u> ² ¹ Department of Energy Systems Engineering, Faculty of Engineering and Natural Sciences, Yildirim Beyazit University, Ankara, Turkey ² Faculty of Physics, Alexandru Ioan Cuza University, Iasi, Romania
T11-O1 12 ³⁰ -12 ⁵⁰	In situ X-ray photoelectron spectroscopy analysis of Au growth on PZT(001) surfaces <u>Nicoleta Georgiana Apostol</u> ¹ , Laura Elena Stoflea ¹ , George Adrian Lungu ¹ , Cristina Dragoi ¹ , Lucian Trupina ¹ , Lucian Pintilie ¹ , Cristian-Mihail Teodorescu ¹ ¹ Nanoscale Condensed Matter Physics, National Institute of Materials Physics, Magurele, Romania
T11-O2 12 ⁵⁰ -13 ¹⁰	Optically transparent n-channel thin film transistor based on wide band gap oxide semiconductors <u>Florin Comanescu</u> ^{1,2} , Munizer Purica ¹ , Elena Budeanu ¹ , Felicia Iacomi ³ , Bogdana Mitu ⁴ , Catalin Parvulescu ¹ , Paul Schiopu ² ¹ Micro/Nano Photonics Lab., National Institute for R&D in Microtechnologies, Bucharest, Romania ² Faculty of Electronics, Telecommunications and Information Technology, Polytechnic University of Bucharest, Romania ³ Faculty of Physics, Alexandru Ioan Cuza University, Iasi, Romania ⁴ Low Temperature Plasma Physics, National Institute for Laser, Plasma and Radiation Physics, Romania
13 ²⁰ -14 ⁵⁰	LUNCH: Cantina Restaurant “Titu Maiorescu”
Hall 1: T4 - Magnetic Materials and Spintronics Chair persons: Imre Bakonyi, Romulus Tetean	
T4-I3 14 ⁵⁰ -15 ²⁰	Current-induced magnetoresistance in La_{1-x}Ca_xMnO₃/BaTiO₃ composites <u>Iosif G. Deac</u> ¹ ¹ Faculty of Physics, Babes-Bolyai University, Cluj-Napoca, Romania
T4-I4 15 ²⁰ -15 ⁵⁰	Electric-field control of magnetic domain wall motion and local magnetization dynamics in ferromagnetic-ferroelectric heterostructures <u>Sebastiaan van Dijken</u> ¹ ¹ NanoSpin, Department of Applied Physics, Aalto University School of Science, Aalto, Finland
T4-I5 15 ⁵⁰ -16 ²⁰	Coherent spin and charge transport in single crystal magnetic tunnel junctions <u>Coriolan Tiusan</u> ^{1,2} ¹ Centre National de la Recherche Scientifique, Institut Jean Lamour/ Université de Lorraine, Nancy, France ² Department of Physics, Technical University Cluj-Napoca, Cluj-Napoca, Romania
T4-O2 16 ²⁰ -16 ⁴⁰	Doping evolution of the pairing state in Fe_{1.02}Te_{1-x}Se_x superconductors as determined from penetration depth measurements <u>Andrei Diaconu</u> ¹ , Jin Hu ² , Zhiqiang Mao ² , Leonard Spinu ¹ ¹ Department of Physics, University of New Orleans, New Orleans, USA ² Department of Physics and Engineering Physics, Tulane University, New Orleans, USA

T4-O3 16 ⁴⁰ -17 ⁰⁰	<p>Electrical field induced spin state switching and colossal conductivity change in spin crossover materials.</p> <p><u>Aurelian Rotaru</u>^{1,1}, Costel Lefter^{1,2}, Julien Dugay², Reasmey Tan², Il'ya Gural'skiy^{3,4}, Gábor Molnár³, Lionel Salmon³</p> <p>¹Faculty of Electrical Engineering and Computer Science, Stefan cel Mare University, Suceava, Romania ²LPCNO, CNRS & University of Toulouse, Toulouse, France ³LCC, CNRS & University of Toulouse, Toulouse, France ⁴Department of Chemistry, National Taras Shevchenko University, Kiev, Ukraine</p>
T4-O4 17 ⁰⁰ -17 ²⁰	<p>Magnetic And Structural Properties Of Fe₆₅Co₃₅ Alloys Obtained By Melting, High-Energy Milling And Heat Treatment</p> <p>Alexandru V. Trifu¹, <u>Albert F. Takacs</u>¹, Eugen Dorolti¹, Ionel Chicinas², Olivier Isnard³, Viorel Pop¹</p> <p>¹Faculty of Physics, Babes-Bolyai University, Cluj-Napoca, Romania ²Materials Science and Technology Dept., Technical University of Cluj-Napoca, Cluj-Napoca, Romania ³Institut Néel, CNRS, Université Joseph Fourier, Grenoble, France</p>
<p>Hall 2: T9 - Polymer Materials and Composites Chair persons: Martin Pradny, Niculae Olaru</p>	
T9-O2 14 ⁵⁰ -15 ¹⁰	<p>Studies on the structure, electrical and magnetic properties of iron oxide/polysiloxane composites</p> <p>Yildiz¹, R. Bosanceanu², M. Cazacu³, D. Tampu³, F. Iacomi²</p> <p>¹ Department of Energy Systems Engineering, Faculty of Engineering and Natural Sciences, Yıldırım Beyazıt University, Ankara, Turkey ² Faculty of Physics, Alexandru Ioan Cuza University, of Iasi, Romania ³ Institute of Macromolecular Chemistry „Petru Poni”, Iasi, Romania</p>
T9-O3 15 ¹⁰ -15 ³⁰	<p>Details concerning the use of epoxy soybean oil to obtain magnetic nanofluids</p> <p>Elena Alina Tăculescu^{1,2}, Ladislau Vékás², Fanică Mustață³, Oana Maria Marinică^{4,5}, Maria Camelia Daia², <u>Nicolae Crainic</u>⁴</p> <p>¹“Politehnica” University of Timisoara, Faculty of Industrial Chemistry and Environmental Engineering, Timisoara, Romania ²Romanian Academy-Timisoara Branch, Center for Fundamental and Advanced Technical Research, Timisoara, Romania ³Institute of Macromolecular Chemistry „Petru Poni”, Iasi, Romania ⁴“Politehnica” University of Timisoara, Research Center for Engineering of Systems with Complex Fluids, Timisoara, Romania ⁵West University of Timisoara, Faculty of Physics, Timisoara, Romania</p>
T9-O4 15 ³⁰ -15 ⁵⁰	<p>Silsesquioxane-based hybrid nanocomposites with hierarchical structures for monumental stone conservation</p> <p>Bogdana Simionescu^{1,2}, <u>Magdalena Aflori</u>¹, Irina Bordianu¹, Liviu Sacarescu¹, Florica Doroftei¹, Mihaela Olaru¹</p> <p>¹Physical Characterization of Polymers, Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania ²Synthesis Laboratory, "Costin D. Nenitescu" Centre of Organic Chemistry, Bucharest, Romania</p>
T9-O5 15 ⁵⁰ -16 ¹⁰	<p>Thin film polymer photonics: Spin cast distributed Bragg reflectors</p> <p><u>James Bailey</u>¹, James S. Sharp¹</p> <p>¹Physics and Astronomy, The University of Nottingham, Nottingham, United Kingdom</p>
T9-O6 16 ¹⁰ -16 ³⁰	<p>Use of Differential Scanning Calorimetry (DSC) as thermoanalytical technique to investigate degradation of insulation used in electrical cables</p> <p>Păun Costel¹, Monica Bostacă¹, Iosif Lingvay², Doina Elena Gavrilă¹</p> <p>¹Dept. of Physics, University Politehnica Bucharest, Bucharest, Romania ²ICPE-CA, ICPE-CA, Bucharest, Romania</p>
T9-O7 16 ³⁰ -16 ⁵⁰	<p>Prediction of mechanical properties of polymer concrete with tyre rubber using neural networks</p> <p><u>Rodica-Mariana Diaconescu</u>¹, Marinela Barbuta², Maria Harja¹</p> <p>¹Faculty of Chemical Engineering and Environmental Protection, Gheorghe Asachi Technical University of Iasi, Iasi, Romania ²Faculty of Civil Engineering and Services, Gheorghe Asachi Technical University of Iasi, Iasi, Romania</p>

T9-O8 16 ⁵⁰ -17 ¹⁰	<p>Study of polyamideimides-hydrosilicates nanocomposites by using AFM combined with other investigation methods</p> <p><u>Daniel Timpu</u>¹, Galina Gubanova², S.V. Kononova², ¹"Petru Poni" Institute of Macromolecular Chemistry, Romanian Academy, Iasi, Romania ²Laboratory of polymeric morphology, Institute of Macromolecular Compounds, Russian Academy of Science, St. Petersburg, Russia</p>
	<p>Hall 3: T1 - Biomaterials and Healthcare Applications</p> <p>Chair persons: Valeria Harabagiu, Branislav Hadzima</p>
T1-I1 14 ⁵⁰ -15 ²⁰	<p>Advanced structural studies of bio(co)polyesters at the molecular level by mass spectrometry</p> <p><u>Grazyna Adamus</u>¹, Marek Kowalczyk¹ ¹Polish Academy of Sciences, Centre of Polymer and Carbon Materials, 41-819 Zabrze, Poland</p>
T1-I2 15 ²⁰ -15 ⁵⁰	<p>Trace-level quantitation by isotopic dilution GC/MS methods</p> <p><u>Monica Culea</u>¹ ¹Faculty of Physics, "Babeş-Bolyai" University, Cluj-Napoca, Romania</p>
T1-I3 14 ⁵⁰ -16 ²⁰	<p>Studies of proton transfer dynamics in biological systems</p> <p><u>Janez Mavri</u>^{1,2} ¹Laboratory for Biocomputing and Bioinformatics, National Institute of Chemistry, Ljubljana, Slovenia ²EN-FIST Centre of Excellence, Ljubljana, Slovenia</p>
T1-I4 16 ²⁰ -16 ⁵⁰	<p>Optimization of the analgesic pharmacodynamic effects using polymeric-drug nanoparticulate systems</p> <p><u>Liliana Tartău</u>¹, Viorel Melnig² ¹"Gr. T. Popa" University of Medicine and Pharmacy, Iasi, Romania ²"Alexandru Ioan Cuza" University, Blvd. Carol I, 11 A, 700506, Iasi, Romania</p>
T1-O1 16 ⁵⁰ -17 ¹⁰	<p>Silver nanoparticles healing mechanism on tissues: an adult stem cell stimulation mechanism ?</p> <p><u>Bogdan Alexandru Hagi</u>¹, Narcisa VRINCEANU^{2,3} ¹Department of Physical Education, "Al.I.Cuza" University of Iasi, IASI, România ²Department of Materials Chemistry, "Al.I.Cuza" University of Iasi, IASI, România ³Department of Industrial Machines and Equipments, "L.Blaga" University of Sibiu, Sibiu, România</p>
T1-O2 17 ¹⁰ -17 ³⁰	<p>Cyclodextrin complexes for increasing drug molecule efficiency</p> <p>Anton Airinei¹, Nicusor Fifere¹, Claudia Nadejde², <u>Dorina-Emilia Creanga</u>² ¹Physics, "P. Poni" Institute of Macromolecular Chemistry, Iasi, Romania ²Physics, "Al. I. Cuza" University, Iasi, Romania</p>
17 ³⁰ -19 ⁰⁰	<p align="center">Coffee break and POSTER SESSION: Lost Footsteps Hall</p>
20 ⁰⁰	<p align="center">COCKTAIL: Restaurant "La Castel"</p>

Friday, 21.09.2012

PLENARY SESSION: Aula Magna “Mihai Eminescu” – HALL 1 Chair persons: Marc de Micheli, Leonard Spinu	
9 ⁰⁰ -9 ⁴⁰	Growth and self-organisation of semiconductor nanostructures <u>Isabelle Berbezier</u> ¹ , ¹ IM2NP, CNRS - AMU, Marseille, France
9 ⁴⁰ -10 ²⁰	Advances on Photocatalytic materials for indoor depollution processes <u>G. Kiriakidis</u> ^{1,2} , V. Binas ¹ ¹ Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology (FORTH), P.O. Box 1527, Vasilika Vouton 71110, Heraklion, Crete, Greece ² University of Crete, Physics Department 71003 Heraklion, Crete, Greece
10 ²⁰ -10 ⁵⁰	COFFEE BREAK
INVITED AND ORAL SESSIONS	
Hall 1: T2 - Functional Materials. Processing and Characterization T3 - Thin Films and Nanostructures for Modern Electronics Chair persons: Ovidiu Pana, Coriolan Tiusan	
T3-I1 10 ⁵⁰ -11 ²⁰	Processing and characterization of advanced materials by laser ablation techniques <u>O.G. Pompilian</u> ¹ , <u>G. Dascalu</u> ² , <u>S. Gurlui</u> ² , <u>C. Focsa</u> ¹ ¹ Laboratoire de Physique des Lasers, Atomes et Molécules, Université Lille 1 Sciences & Technologies, France ² Faculty of Physics, "Alexandru Ioan Cuza" University, Iasi, Romania
T2-O1 11 ²⁰ -11 ⁴⁰	Hydroxylation of atomic force microscopy probes by H₂O plasma treatment <u>Lucel Sirghi</u> ¹ , <u>Aurelia Apetrei</u> ¹ , <u>Marius Dobromir</u> ¹ ¹ Department of Physics, "Al. I. Cuza" University, Iasi, ROMANIA
T2-O2 11 ⁴⁰ -12 ⁰⁰	New approach on the role of a polymer matrix in the strong texturation of zno nanopowders <u>Narcisa VRINCEANU</u> ^{1,2} , <u>Florin BRINZA</u> ¹ , <u>Aurel PUI</u> ¹ , <u>Eveline POPOVICI</u> ¹ , <u>Diana COMAN</u> ² ¹ Materials Chemistry, "Al.I.Cuza" University of Iasi, IASI, România ² Departament of Industrial Machines and Equipments, "L.Blaga" Univesrity of Sibiu, Sibiu, România ³ Departament of Industrial Engineering, "Gh.Asachi" University of Iasi, IASI, România
Hall 2 (Al. Miller): T8 - Nanostructures and Low Dimensional Systems Chair persons: Isabelle Berbezier, Victor Barsan	
T8-I1 10 ⁵⁰ -11 ²⁰	Static and Dynamic Interactions in 2D and 3D Magnetic Nanowires Arrays <u>Leonard Spinu</u> ¹ ¹ Department of Physics and AMRI, University of New Orleans, New Orleans, USA

T9-I1 11 ²⁰ -11 ⁴⁰	Sophisticated evolved gas analysis for the characterization of polymers by means of STA-FT-IR and STA-GC-MS <u>Markus Meyer</u> ¹ ¹ NETZSCH-Gerätebau GmbH, Selb, Bavaria, Germany
T8-O2 11 ⁴⁰ -12 ⁰⁰	The influence of the magnetically induced phase condensation on the static magnetization of aqueous magnetic colloids <u>Oana Marinica</u> ^{1,2} , Camelia Daia ³ , Vlad Socoliuc ³ ¹ Research Center for Engineering of Systems with Complex Fluids, "Politehnica" University of Timisoara, Timisoara, Romania ² Faculty of Physics, West University of Timisoara, Timisoara, Romania ³ Center for Fundamental and Advanced Technical Research, Romanian Academy - Timisoara Branch, Timisoara, Romania
12 ⁰⁰ -13 ³⁰	LUNCH: Cantina Restaurant "Titu Maiorescu"
	Hall 1: T2 - Functional Materials. Processing and Characterization Chair persons: Alfonso Nastro, Felicia Iacomì
T2-I2 13 ³⁰ -14 ⁰⁰	Magnetocaloric effect in 3d transition metals based intermetallic and oxidic compounds <u>Romulus Tetean</u> ¹ ¹ Faculty of Physics, Babes-Bolyai University, Cluj Napoca, Romania
T2-O3 14 ⁰⁰ -14 ²⁰	Research regarding influence of plasma treatment of a bamboo knitted fabric onto surface attributes Mirela Iorgoaea (Guignard ¹ , Stephanie Giraud ³ , Christine CAMPAGNE ^{2,3} , <u>Narcisa VRINCEANU</u> ^{4,5} , Luminita CIOBANU ¹ , Daniela FARIMA ¹ , Gianina Broasca (Asavei) ¹ ¹ Departament of Industrial Engineering, "Gh.Asachi" University of Iasi, IASI, România ² Textile Department, University of Lille, Lille, France ³ GEMTEX Laboratory, Ecole Nationale Supérieure des Arts et Industrie Textiles'' (ENSAIT), Roubaix, France ⁴ Faculty of Chemistry, "Al.I.Cuza" University of Iasi, IASI, România ⁵ Departament of Industrial Machines and Equipments, "L.Blaga" Univesrity of Sibiu, Sibiu, România
T2-O4 14 ²⁰ -14 ⁴⁰	Quantization of pre-edge peaks in near-edge X-ray absorption fine structure spectroscopy of transition metal oxides <u>Nicoleta Georgiana Apostol</u> ¹ , Dan Macovei ¹ , Cristian-Mihail Teodorescu ¹ ¹ Nanoscale Condensed Matter Physics, National Institute of Materials Physics, Magurele, Romania
T2-O5 14 ⁴⁰ -15 ⁰⁰	New insights on nanoscale interface reactions in magnetoelectric composites <u>Lavinia-Petronela Curecheriu</u> ¹ , Liliana Mitoseriu ¹ , Maria Teresa Buscaglia ² , Vincenzo Buscaglia ² ¹ Physics, Alexandru Ioan Cuza University, Iasi, Romania ² Electroceramics, Institute of Energetics and Interphases (IENI)-CNR, Genova, Italy
T2-O6 15 ⁰⁰ -15 ²⁰	Accelerators For Advanced Applied Research Installed At IFIN-HH Magurele-Romania <u>Dan Gabriel Ghita</u> ¹ ¹ Nuclear Physics Department, Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering (IFIN-HH), Magurele, Romania
	Hall 2: T8 - Nanostructures and Low Dimensional Systems T3 - Thin Films and Nanostructures for Modern Electronics Chair persons: George Kiriakidis, Sorin Tascu
T8-I3 13 ³⁰ -14 ⁰⁰	Quantum wires in lithium niobate : first realizations and characterizations Oleksandr Stepanenko ¹ , Emmanuel Quillier ¹ , Hervé Tronche ¹ , Pascal Baldi ¹ , Pierre Aschiéri ¹ , <u>Marc De Micheli</u> ¹ ¹ LPMC, Université de Nice Sophia Antipolis, Nice Cedex2, France

T8-I4 14 ⁰⁰ -14 ³⁰	Core-shell magnetic nanoparticles with targeted properties <u>Ovidiu Pana</u> ¹ , Maria Loredana Soran ¹ , Cristian Leostean ¹ , Maria Stefan ¹ , Simona Gutoiu ¹ , Sergiu Macavei ¹ , Rodica Turcu ¹ ¹ Phys. of Nanostructured Systems, Natl. Inst for R&D of Isotopic and Molec. Technol., Cluj-Napoca, Romania
T8-O3 14 ³⁰ -14 ⁵⁰	Analytic Study of Fermions in Graphene; Heun Functions and Beyond Marina-Aura Dariescu ¹ , <u>Ovidiu Buhucianu</u> ¹ , Ciprian Dariescu ¹ ¹ Theoretical Physics, Al. I. Cuza” University, Iasi, Romania
T8-O4 14 ⁵⁰ -15 ¹⁰	New results in the theory of metallic ultra-thin films <u>Victor Barsan</u> ¹ ¹ Theoretical Physics, Center for Nuclear Physics, National Institute of Physics and Nuclear Engineering, Magurele , Bucharest, Romania
T3-O1 15 ¹⁰ -15 ³⁰	Collagen immobilization on polyethylene terephthalate surface after helium plasma treatment <u>Magdalena Aflori</u> ¹ , Mioara Drobotă ¹ , Dan Gh. Dimitriu ² , Irina Titorencu ^{1,3} , Valeria Harabagiu ¹ ¹ Physical Characterization of Polymers, Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania ² Faculty of Physics, “Alexandru Ioan Cuza” University, Iasi, Romania ³ Biopathology and Pharmacology of Inflammation, The Institute of Cellular Biology and Pathology, Bucharest, Romania
15 ³⁰ -17 ⁰⁰	COFEE BREAK + POSTER SESSION 2: Lost Footsteps Hall
17 ⁰⁰ -18 ⁰⁰	Round Table - Hall 1 Trends, Challenges and Frontiers in Physics of Advanced Materials
20 ⁰⁰	DINNER PARTY: Grand Hotel Traian Restaurant

Saturday, 22.09.2012

PLENARY SESSION: Aula Magna “Mihai Eminescu” Chair persons: Nicoleta Lupu, Marco Abbarchi	
9 ⁰⁰ -9 ⁴⁰	Low temperature growth of silicon nano-structures for electronic applications <u>Shashi Paul</u> ¹ , ¹ Emerging Technologies Research Centre, De Montfort University, The Gateway Leicester LE1 9BH, United Kingdom
9 ⁴⁰ -10 ²⁰	Multiferroic tunnel junctions <u>Marin Alexe</u> ¹ ¹ Max Planck Institute of Microstructure Physics, Weinberg 2, 06120 Halle, Germany
10 ²⁰ -10 ⁵⁰	COFFEE BREAK
INVITED AND ORAL SESSIONS	
Hall 1: T7 - Metamaterials. Applications T12 - Trends in Condensed Matter and Field Theory Chair persons: Radu Daniel, Ann Zingan	
T7-II 10 ⁵⁰ -11 ²⁰	Electromagnetic metamaterials <u>Raimond Grimberg</u> ¹ ¹ ., National Institute of Research & Development for Technical Physics, Iasi, Romania
T12-O1 11 ²⁰ -11 ⁴⁰	Theory of stimulated Raman atomic-molecular conversion in Bose condensate Ann Zingan ^{1,1} ¹ Physics and Mathematics, Dniester State University, Tiraspol, Moldova
T12-O2 11 ⁴⁰ -12 ⁰⁰	Tailoring dc-tunability properties by local field engineering in ferroelectric structures <u>Leontin Padurariu</u> ¹ , <u>Lavinia-Petronela Curecheriu</u> ¹ , <u>Liliana Mitoseriu</u> ¹ ¹ Physics, Alexandru Ioan Cuza University, Iasi, Romania
T12-O3 12 ⁰⁰ -12 ²⁰	The Schrödinger-Poisson heuristic limit of the Klein-Gordon-Maxwell-System and its S-Eigenmode solution for a spherically trapped particle Ciprian Dariescu ¹ , Marina-Aura Dariescu ¹ , <u>Ciprian Cretu</u> ¹ ¹ Faculty of Physics, Alexandru Ioan Cuza University, Iasi, Romania
T12-O4 12 ²⁰ -12 ⁴⁰	Solvatochromic effects in electronic absorption spectra of N-Ylids <u>Dana-Ortansa Dorohoi</u> ¹ , <u>Mihaela Maria Oprea</u> ¹ , <u>Valentina Closca</u> ¹ ¹ Alexandru Ioan Cuza University, Faculty of Physics, Iasi, Romania

Hall 2: T6 - Materials for Energy and Environment
T8 - Nanostructures and Low Dimensional Systems
Chair persons: Shizutoshi Ando, V. Ciupina

T6-I1 10 ⁵⁰ -11 ²⁰	<p>Application of some carbon based nanostructures in divertors coatings from fusion reactor</p> <p><u>V. Ciupina</u>^{1,3}, I. Morjan², R. R. Vladioiu¹, C. P. Lungu², C. Porosnicu², I. Jecu², G. Prodan^{1,4}, I. M. Stanescu¹, A. Mandes¹</p> <p>¹Ovidius University of Constanta, Constanta, Romania ²National Institute for Laser Plasma and Radiation Physics, Magurele, 077125, Romania ³Academy of Romanian Scientists, Bucuresti, Romania ⁴Institute for Nanotechnology and Alternative Energy Sources, Constanta, Romania ⁵CERONAV, Constanta, Romania</p>
T6-I2 11 ²⁰ -11 ⁵⁰	<p>Development of solar cell materials for Si-free thin film solar cells by preparation techniques for the mass production with low cost</p> <p><u>Shizutoshi Ando</u>¹</p> <p>¹Faculty of Engineering, Tokyo University of Science, Tokyo, Japan</p>
T6-O1 11 ⁵⁰ -12 ¹⁰	<p>Pulsed Laser Ablation Modified Nafion/TiO2 Membranes for Proton Exchange Membrane Fuel Cells</p> <p><u>Daniela Ebrasu</u>¹, Mihai Varlam¹, Ioan Stefanescu¹, Ashok Vaseashta³, Gabriela Dorcioman², Emanuel Axente², Ion N. Mihailescu²</p> <p>¹National Center for Hydrogen and Energy, National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, ROMANIA, ²Lasers Department, National Institute for Lasers, Plasma and Radiations Physics, Magurele, Ilfov, ROMANIA ³U.S. Department of State, Washington, DC USA, Institute for Advanced Sciences Convergence and International Clean Water Institute, NUARI, 13873 Park Center Rd. Suite 500, Herndon VA USA</p>
T6-O2 12 ¹⁰ -12 ³⁰	<p>Removal of methylene blue from aqueous solutions with magnetic iron oxide nanopowder</p> <p><u>Oana Paska</u>¹, Cornelia Pacurariu¹, Robert Ianos¹</p> <p>¹Faculty of Industrial Chemistry and Environmental Engineering, "Politehnica" University of Timisoara, Timisoara, Romania</p>
T8-I2 12 ³⁰ -13 ⁰⁰	<p>Droplet epitaxial GaAs quantum dots as single photon sources on silicon</p> <p><u>Marco Abbarchi</u>^{1,2}</p> <p>¹Quantum Dot Research Center, National Institute for Materials Science, 1-1 Namiki, Tsukuba 305-0044, Japan ²Physics Department and European Laboratory for Nonlinear Spectroscopy, Universita di Firenze, Sesto Fiorentino (Firenze), Italy</p>
13 ⁰⁰ -14 ³⁰	LUNCH: Cantina Restaurant "Titu Maiorescu"
14 ³⁰ -15 ⁰⁰	Closing remarks: Aula Mihai Eminescu
15 ⁰⁰	Departure excursions

POSTER SESSIONS

Poster Session 1

Thursday, 20.09.2012, 17³⁰ Lost Footsteps Hall

- P 1. T1 Preparation of Chitosan and Gelatin Based Microcapsules by Ionic and Covalent Crosslinking in O/W/O Emulsion**
Mihaela Nicoleta Holban¹, Catalina Anisoara Peptu², Anca Niculina Jataru (Cadinouiu)², Marcel Popa², Valeriu Sunel¹
¹Faculty of Chemistry, AL.I.CUZA University, Iasi, Romania
²Faculty of Chemical Engineering and Environmental Protection, Gheorghe Asachi Technical University of Iasi, Iasi, Romania
- P 2. T1 Effects of colloidal suspensions on normal and tumor cell lines**
Elena Alina Tăculescu^{1,2}, Florina Maria Bojin³, Robert Ianoș¹, Virgil Păunescu³, Cornelia Păcurariu¹
¹“Politehnica” University of Timisoara, Faculty of Industrial Chemistry and Env. Engineering,
²Romanian Academy – Timisoara Branch, Center for Fundamental and Advanced Technical Research
³“Victor Babes” University of Medicine and Pharmacy Timisoara
- P 3. T1 Psyllium/polyvinyl alcohol matrix composite for morin as dietary supplement**
Marcela-Corina Rosu¹, Lidia Rednic¹, Ioan Bratu¹
¹Physics of Nanostructured Systems, National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, Romania
- P 4. T1 Electrochemical characteristics of calcium-phosphatized AZ31 Magnesium alloy in 0.9% NaCl.**
Branislav Hadzima¹, Filip Pastorek¹, Dagmar Faktorová²
¹Department of Materials Engineering, University of Žilina, Žilina, Slovak Republic
²Department of measurement and applied electrical engineering, University of Žilina, Slovak Republic
- P 5. T1 Synthesis and characterization of HAp-ZnFe nanocomposites**
A.M. Cantaragiu¹, C. Gheorghies¹, V.T. Romila (Gruia)¹, L.P. Georgescu¹
¹Chemistry, Physics and Environment, “Dunarea de Jos” University, Galati, Romania
- P 6. T1 Determination of compact bone mineral volume fraction using Bruggeman EMA model**
Ioana Veronica Ciuchi¹, Cristina Stefania Olariu¹, Liliana Mitoseriu¹
¹Department of Physics, Alexandru Ioan Cuza University, Iasi, Romania
- P 7. T1 A new approach to the comparison of microwave methods used at dielectric constant measurement**
Dagmar Faktorová¹, Branislav Hadzima², Adriana Savin³, Raimond Grimberg³
¹Department of Measurement and Applied Electrical Engineering, University of Žilina, Slovak Republic
²Department of Materials Engineering, University of Žilina, Žilina, Slovak Republic
³Nondestructive Testing Department, National Institute of R&D for Technical Physics, Iasi, Romania

- P 8. T1 3D-modeling of temperature gradients in a 3-body Domen-type calorimeter for absorbed dose measurements**
Cristina-Elena Ionita¹, Daniel Radu¹, Iordana Astefanoaei¹
¹Solid State and Theoretical Physics, "A.I.Cuza" University, Iasi, Romania
- P 9. T1 Application of spectroscopic techniques for studying the effects of non-thermal plasma on biomacromolecules**
Roxana Jijie¹, Ionut Topala¹, Valentin Pohoata¹
¹Faculty of Physics, Alexandru Ioan Cuza University, Iasi, Romania
- P 10. T1 Electromagnetic biosensor for glucose concentration measurement**
Dumitru-Daniel Herea¹, Horia Chiriac¹, Nicoleta Lupu¹
¹MDM, National Institute of R&D for Technical Physics, Iasi, Romania
- P 11. T1 In vitro study regarding the cytotoxicity of some TiNbZr alloys**
L. Dragan¹, C.E. Cotrutz², S. Strugaru², P. Avram¹, G.L. Pintilei¹, C. Munteanu¹
¹Faculty of Mechanical Engineering, Gheorghe Asachi Technical University, Iasi, Romania
²Faculty of Medicine, "Gr. T. Popa" University of Medicine and Pharmacy, Iasi, Romania
- P 12. T1 Biocompatibility evaluation for some new Ti-Nb-Zr-Ta alloys**
L. Dragan¹, C. Axinte¹, S.C. Strugaru¹, C. Munteanu¹, B. Istrate¹, G.N. Basescu¹
¹Faculty of Mechanical Engineering, Gheorghe Asachi Technical University, Iasi, Romania
- P 13. T1 On-Plate SERS detection in TLC separation**
Krisztian Herman¹, Nicoleta E. Mircescu¹, Vasile Chis¹, Nicolae Leopold¹
¹Faculty of Physics, Babes-Bolyai University, Cluj-Napoca, Romania
- P 14. T1 Obtaining of advanced functionalized ecotextiles dyed with natural colorants extracted from bilberry fruit**
Diana COMAN¹, Simona Oancea², Narcisa VRINCEANU^{1,3}
¹Department of Industrial Machines and Equipments, "L.Blaga" University of Sibiu, Sibiu, România
²Department of Agricultural Sciences, Environment and Food Industry, "L.Blaga" University of Sibiu, Sibiu, România
³Department of Materials Chemistry, "A.I.Cuza" University of Iasi, Iasi, România
- P 15. T1 WIRIS on the a MOODLE platform, a powerful instrument for the online processing of experimental data**
George Vaju¹, Mihai Vaju²
¹education, Technical College Grigore Moisil, Bistrita, Romania
²education, Technical University of Cluj Napoca, Bistrita, Bistrita, BN
- P 16. T1 Wine clarification by mean of highly ordered silica mesoporous materials**
Violeta Niculescu¹, Andreea Iordache¹, Roxana Ionete¹, Nadia Paun¹, Viorica Parvulescu², Monica Culea³
¹Research-Development, National R &D Institute for Cryogenics and Isotopic Technologies- ICIT Rm. Valcea, Ramnicu Valcea, Romania
²Surface Chemistry and Catalysis, "Ilie Murgulescu" Institute of Physical Chemistry, Romanian Academy, Bucuresti, Romania
³Physics Faculty, Babes-Bolyai University, Cluj-Napoca, Romania
- P 17. T1 A novel method for the production of calcium phosphate biomaterials**
Alfonso Nastro¹, Francesco Lamonaca², Domenico Grimaldi²
¹Department of Territorial Planning, Univeristy of Calabria, Arcavacata di Rende, Italy
²Department of Electronic System and Computer Science, Univeristy of Calabria, Arcavacata di Rende, Italy
- P 18. T1 Dual Detection Biosensor Based On Porous Silicon Substrate**
Monica Simion¹, Mihaela Kusko¹, Iuliana Mihalache¹, Adina Bragaru¹
¹Laboratory of Nanobiotechnology, National Institute for Research and Development in Microtechnologies (IMT), Bucharest, Romania

- P 19. T1 Synthesis And Characterization Of Polymer-Coated Magnetic Nanoparticles For Biomedical Applications**
Alfonso NASTRO¹, Gigel NEDELCU², Luigi FILIPPELLI³, Cesare OLIVIERO ROSSI³, Felicia IACOMI²
¹ Dipartimento di Pianificazione Territoriale, University of Calabria, Cosenza Rende, Italy
² Faculty of Physics, Alexandru Ioan Cuza University of Iasi, Iasi, Romania
³ Dipartimento di Chimica, University of Calabria, Cosenza Rende, Italy
- P 20. T2 Some correlations between structural, morphological and optical properties of ZnO thin films obtained by thermally oxidized metallic zinc films**
Dragos Ioan Rusu¹, George Rusu¹, Dumitru Luca¹
¹ Faculty of Physics, Alexandru Ioan Cuza University of Iasi, Iasi, Romania
- P 21. T2 Ageing of low field dielectric constant in Ce-doped BaTiO₃ based solid solution**
Alexandra Maria Neagu¹, Geanina Apachitei¹, Lavinia Petronela Curecheriu¹
¹ Faculty of Physics, "Al. I. Cuza" University, Iasi, Romania
- P 22. T2 Combined approach to study of Sn doped BaTiO₃ ceramics**
Nadejda Horchidan¹, Adelina C. Ianculescu², Mihai V. Pop¹, Liliana Mitoseriu¹
¹ Department of Physics, Alexandru Ioan Cuza University of Iasi, Iasi, Romania
² Department of Oxide Materials Science & Eng. Polytechnics University Bucharest, Bucharest, Romania
- P 23. T2 Ferroelectric and dielectric properties of ferrite-ferroelectric ceramic composites**
Alexandra Maria Neagu¹, Cristina Elena Ciomaga¹, Mihai Valentin Pop¹, Sorin Tascu², Carmen Galassi³, Liliana Mitoseriu¹
¹ Physics, "Al. I. Cuza" University of Iasi, Iasi, Romania
² Physics, "Al. I. Cuza" University of Iasi, Res. Ctr. Adv. Mat. & Technol., Iasi, Romania
³ CNR, CNR -ISTEC, Faenza, Italy
- P 24. T2 Patterning and characterization of polyester fabrics surface**
Gianina Broasca¹, Daniela Farima¹, Narcisa Vrinceanu^{2,3}, Alexandra Nistor⁴, Christine Campagne⁵, Mihai Ciocoiu¹
¹ Department of Industrial Engineering, "Gheorghe Asachi" Technical University of Iasi, Iasi, România
² Department of Materials Chemistry, "Al.I.Cuza" University of Iasi, Iasi, România
³ Department of Industrial Machines and Equipments, "L.Blaga" University of Sibiu, Sibiu, Romania
⁴ Department of Biochemistry, "P.Poni" Institute of Macromolecular Chemistry, Iasi, România
⁵ GEMTEX, „Ecole Nationale Supérieure des Arts et Industrie Textiles” (ENSAIT), Roubaix, France
- P 25. T2 EMA and FEM modeling of dielectric properties of anisotropic porous PZT ceramics**
Cristina Stefania Olariu¹, Leontin Padurariu¹, Carmen Galassi², Liliana Mitoseriu¹
¹ Department of Physics, Alexandru Ioan Cuza University, Iasi, Romania
² Institute of Ceramics Science and Technology, ISTEC-CNR, Faenza, Italy
- P 26. T2 Structural properties of Cr substituted cobalt ferrite nanoparticles**
Caltun O.F.¹, Rao G.S.N.², Subba Rao P.S.V.³, Parvatheeswara Rao B.³
¹ Dept. of Physics, A.I. Cuza University, Iasi, Romania
² Dept. of Physics, Dr. V. S. Krishna Govt. Degree College, Visakhapatnam, India
³ Dept. of Physics, Andhra University, Visakhapatnam, India
- P 27. T2 Preparation by hydrothermal synthesis and photocatalytic properties of Bi₂Fe₄O₉ particles**
Felicia Gheorghiu¹, Maria Teresa Buscaglia², Vincenzo Buscaglia², Cristina G. Pastravanu³, Eveline Popovici³, Liliana Mitoseriu¹
¹ Department of Physics, Alexandru Ioan Cuza University, Iasi, Romania
² Dipart. di Ingegneria Chimica e di Processo, In. for Energetics & Interphases-CNR, Genoa, 49, Italy
³ Department of Materials Chemistry, Alexandru Ioan Cuza University, Iasi, Romania

- P 28. T2 New single-phase multiferroic: Ba₁₂Fe₂₈Ti₁₅O₈₄ self assembled perovskite-spinel multilayer structure**
Alexandra Maria Neagu¹, Lavinia Petronela Curecheriu¹, Geanina Apachitei¹, Giovanna Canu², Catalin Harnagea³, Liliana Mitoseriu¹, Vincenzo Buscaglia¹
¹Physics, "Al. I. Cuza" University, Iasi, Romania
²Electroceramics, Institute of Energetics and Interphases (IEND)-CNR, Genoa, Italy
³INRS-Energie, Matériaux et Télécommunications, University of Québec, Québec, Canada
- P 29. T2 Implementation of FORC measurements for ferroelectric ceramics: circuit design and numerical analysis**
Mihai Valentin Pop¹, Laurentiu Stoleriu¹, Nadejda Horchidan¹, Liliana Mitoseriu¹
¹Department of Physics, Alexandru Ioan Cuza University, Iasi, Romania
- P 30. T2 FORC analysis, polarization reversal and sub-switching properties of morphotropic phase boundary PZT ceramics**
Mihai Valentin Pop¹, Laurentiu Stoleriu¹, Liliana Mitoseriu¹, Carmen Galassi²
¹Department of Physics, Alexandru Ioan Cuza University, Iasi, Romania
²Institute of Science & Technology for Ceramics, ISTECC-CNR, Faenza, Italy
- P 31. T2 Investigation of the ferroelectric-relaxor crossover in Ce-doped BaTiO₃ ceramics by impedance spectroscopy**
Zina Violeta Mocanu¹, Lavinia Petronela Curecheriu¹, Cristina Elena Ciomaga¹, Liliana Mitoseriu¹
¹Department of Physics, Alexandru Ioan Cuza University, Iasi, Romania
- P 32. T2 Investigation of electrical properties of Mg_xNi_{1-x}Fe₂O₄ spinel ceramics and applications**
Zina Violeta Mocanu¹, Mirela Airimioaei^{2,3}, Cristina Elena Ciomaga¹, Florin Tudorache¹, Lavinia Petronela Curecheriu¹, Liliana Mitoseriu¹
¹Department of Physics, Alexandru Ioan Cuza University, Iasi, Romania
²Department of Chemistry, Alexandru Ioan Cuza University, Iasi, Romania
³Dept. Chemistry & Process Engineering, University of Genoa, Genoa, Italy
- P 33. T2 Rapidly Quenched Magnetic Shape Memory Alloys with Super-elastic Properties**
Firuta Borza¹, Adrian L. Paraschiv², Leandru Ghe. Bujoreanu², Nicoleta Lupu¹
¹Magnetic Materials and Devices, National Institute of R&Dt for Technical Physics - IFT Iasi, România
²Faculty of Materials Science and Engineering, "Ghe. Asachi" Technical University of Iasi, România
- P 34. T2 Modified lanthanum manganite nano-perovskites for catalyst applications**
Nicolae Rezlescu¹, Elena Rezlescu¹, Corneliu Doroftei^{2,1}, Paul Dorin Popa¹, Maria Ignat³
¹Physics, National Institute of Research and Development for Technical Physics, Iasi, Romania
²Faculty of Physics, "Al. I. Cuza" University, Iasi, Romania
³Faculty of Chemistry, "Al. I. Cuza" University, Iasi, Romania
- P 35. T2 On tungsten thin films properties and their relation with transport process of the sputtered atoms in a DC high power pulse magnetron discharge**
Vasile Tiron¹, Valentin Pohoata¹, Gheorghe Popa¹, Catalin Vitelaru²
¹Faculty of Physics, Alexandru Ioan Cuza University of Iasi, Iasi, Romania
²Advanced Surface Processing and Analysis by Vacuum Technologies, National Institute for Optoelectronics, Magurele, Romania
- P 36. T2 Intermolecular interactions of some carboethoxy-anilido-methylids in solutions**
Valentina Closca¹, Mihaela-Liliana Ivan¹, Dana-Ortansa Dorohoi¹
¹Alexandru Ioan Cuza University, Faculty of Physics, Iasi, Romania
- P 37. T2 Synthesis and characterization of functional Ni-doped ZnO thin films**
Alicia Petronela Rambu¹, Laura Ursu², George G. Rusu¹, Nicoleta Iftimie³, Felicia Iacomi¹
¹Faculty of Physics, Alexandru Ioan Cuza University of Iasi, Iasi, România
²Petru Poni Institute of Macromolecular Chemistry, Iasi, România
³National Institute of Research and Development for Technical Physics, Iasi, România

- P 38. T2 CaALDH as matrix for admixtures in concrete**
Maria Gaburici¹, Horia Chiriac¹, Nicoleta Lupu¹
¹MDM, National Institute of R&D for Technical Physics, Iasi, Romania
- P 39. T2 Magnetorheological fluids based on polymer coated iron particles**
George Stoian¹, Horia Chiriac¹
¹Magnetic Devices and Materials, National Institute of R&D for Technical Physics, Iasi, Romania
- P 40. T2 The Meyer-Neldel Rule in TiO₂ Films with Different Fe Content**
Daniel Florea¹, Dumitru Luca¹, Catalin Adomnitei¹, Cristian Mihail Teodorescu², Diana Mardare¹
¹Faculty of Physics, "Alexandru Ioan Cuza" University, Iasi, Romania
²Institute of Materials Physics, Institute of Materials Physics, Magurele, Romania
- P 41. T2 The structural transformation of the ceramic layer ZrO₂/20%Y₂O₃, obtained by thermal spraying after heat treatment**
Laura Geanina Pintilei¹, Florin Branza², Gica Narcis Basescu¹, Sorin Claudiu Iacob Strugariu¹, Bogdan Istrate¹, Corneliu Munteanu¹
¹Faculty of Mechanical Engineering, "Gheorghe Asachi" Technical University of Iasi, Romania
²Faculty of Physics, Alexandru Ioan Cuza University, Iasi, Romania
- P 42. T2 Behavior to high speeds heating-cooling of ceramic multilayer multifunctional structures based on the zirconie partial stabilized with yttria**
Laura Geanina Pintilei¹, Victor Manoliu², Gheorghe Ionescu², Gica Narcis Basescu¹, Sorin Claudiu Iacob Strugariu¹, Corneliu Munteanu¹
¹Faculty of Mechanical Engineering, "Gheorghe Asachi" Technical University of Iasi, Romania
²Materials laboratory, National Institute for Aerospace Research, Bucuresti, Romania
- P 43. T2 Functional characterization of Ni_{1-x}Co_xO thin films deposited by spin-coating**
G. Calin¹, C. Doroftei¹, M. Irimia¹, F. Iacom¹
¹Faculty of physics, "Alexandru Ioan Cuza" University of Iasi, Iasi, Romania
- P 44. T2 The Influence of Different Cr Content on the Properties of TiO₂ Thin Films**
Daniel Florea¹, Catalin Adomnitei¹, Nicoleta Ciornei², Dumitru Luca¹, Alina Manole¹, Marius Dobromir¹, Mihaela Girtan³, Diana Mardare¹
¹Faculty of Physics, "Alexandru Ioan Cuza" University, Iasi, Romania
²Faculty of Chemistry, "Alexandru Ioan Cuza" University, Iasi, Romania
³Photonics Laboratory, Angers University, Angers, France
- P 45. T2 Theoretical and spectral study of some vitamins**
C.M. Scoban¹, L.M Ivan¹, D. Dorohoi¹
¹Department of Physics, Alexandru Ioan Cuza University of Iasi, Iasi, Romania
- P 46. T2 Function graded materials obtained by gas carburizing method**
Marius Catalin Criveanu^{1,2}, Marco Actis Grande², Oana Gingu¹
¹IMST, University of Craiova, Craiova, Romania
²Dipartimento Scienza Applicata e Tecnologia, Politecnico di Torino, Torino / Alessandria, Italia
- P 47. T2 Optical and Photoluminescence characteristics of polycrystalline Zinc Oxide thin films at 78 K and 293 K**
Dragos Rusu¹, Igor Evtodiev², Iuliana Caraman¹, Dumitru Luca³, George Rusu³
¹, „V. Alecsandri” University of Bacau, Bacau, Romania
², Moldova State University, Chisinau, Republic of Moldova
³Faculty of Physics, „Al. I. Cuza” University, Iasi, Romania
- P 48. T2 Studies on the structural changes induced by annealing and gamma irradiation in iron rich mineral clays**
C. Tabacaru¹, V. Nica¹, M. Dobromir¹, M. Chipara², F. Iacom¹,
¹Faculty of Physics, Alexandru Ioan Cuza University of Iasi, Romania
²University of Texas Pan American, Edinburg, TX 78541, USA

- 49. T2 Influence of shot peening and anodizing on fatigue endurance of en-aw-6082 aluminium alloy in gigacycle regime**
 Viktor Škorik¹, Branislav Hadzima¹, František Nový¹,
¹Department of Materials Engineering, Faculty of Mechanical Engineering, University of Žilina, Žilina, Slovak Republic
- P 50. T3 Low pressure inverter plasma system for surface engineering experiments**
Cristian Daniel Tudoran¹
¹Department of Molecular and Biomolecular Physics, National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, Romania
- P 51. T3 Plasma parameters of argon and argon/molecular gas mixture plasmas produced in microwave discharge**
 Remus-Sorin Dobrea¹, Ilarion Mihaila¹, Gheorghe Popa¹
¹Faculty of Physics, "Al. I. Cuza" University, Iasi, Romania
- P 52. T3 Surface modification of polymers in relation to the spatial distribution of reactive oxygen species**
Gabriela Borcia¹, Radu Cazan¹, Catalin Borcia¹
¹Physics, Alexandru Ioan Cuza University, Iasi, Romania
- P 53. T3 Silicon plasma processing for front surface textured solar cells**
R. Rebigan¹, A. Avram¹, F. Craciunoiu¹, R. Tomescu¹, M. Popescu¹, D. Cristea¹, M. Purica¹, P. Schiopu²
¹..., National Institute of Microtechnologies Bucharest – IMT, Bucharest, Romania
²Fac. of Electronics, Telecommunications and Information Technology, Politechnica University of Bucharest, Romania
- P 54. T4 The influence of the additions and processing conditions on the magnetic properties and c-axis orientation of NdFeB thin films**
Maria Urse¹, Marian Grigoras¹, Nicoleta Lupu¹, Horia Chiriac¹, Firuta Borza¹
¹Magnetic Materials and Devices, National Institute of R & D for Technical Physics, Iasi, Romania
- P 55. T4 Spin filtering in graphene nanoribbons with Mn-doped boron nitride inclusions**
George Alexandru Nemnes¹, Stefan Antohe¹
¹Faculty of Physics, "Materials and Devices for Electronics and Optoelectronics" Research Center, University of Bucharest, Magurele, Romania
- P 56. T4 Flux concentrators with improved efficiency of the field detection limit for magnetoresistive sensors**
Nicolae-Cristian Rotarescu¹, Horia Chiriac¹, Nicoleta Lupu¹, Andrei Jitariu¹
¹MDM, National Institute of R&D for Technical Physics, Iasi , Romania
- P 57. T4 High frequencies absorption properties of multilayered CoFe-based GCAW**
Gabriel Ababei¹, Horia Chiriac¹
¹Magnetic Material, National Institute of R&D for Technical Physics, Iasi, Romania
- P 58. T4 Time dependent thermal stresses due to rapid cooling in a magnetic core - shell particle**
Iordana Astefanoaei¹, Ioan Dumitru¹, Alexandru Stancu¹
¹Department of Physics, Alexandru Ioan Cuza University , Iasi, Romania
- P 59. T4 Micromagnetic evaluation of thin film size on the critical curve of a synthetic antiferromagnetic**
Ciprian Pinzaru¹, Laurentiu Stoleriu¹, Alexandru Stancu¹
¹Faculty of Physics, "Alexandru Ioan Cuza" University, Iasi, Romania

- P 60. T4 Treatment temperature influence on the structure, electrical and magnetic properties of BaFe₁₂O₁₉ hexaferrite**
Florin Tudorache^{1,2}, Iulian Petrilă², Paul Dorin Popa³, Sorin Tascu²
¹Department of Physics, Alexandru Ioan Cuza University of Iasi, Iasi, Romania
²Research Center on Advanced Materials and Technologies, Faculty of Physics, Alexandru Ioan Cuza University of Iasi, Iasi, Romania
³Department of Physics, National Institute of R&D for Technical Physics-IFT Iasi, Iasi, Romania
- P 61. T4 Magnetic analysis of fired clays used for pottery**
Tiberiu Adrian Salaoru¹, Florica Matau¹, Ovidiu Chiscan¹, Sorin Tascu², I. Vladioiu³, Alexandru Stancu¹
¹Faculty of Physics, Center for Applied Research in Physics and Advanced Technologies (CARPATH), Alexandru Ioan Cuza University, Iasi, Romania
²Faculty of Physics, Research Center on Advanced Material and Technology, Alexandru Ioan Cuza University, Iasi, Romania
³Cislau School, Buzau, Romania
- P 62. T4 Structural and functional investigations of hematite thin films grown by spin – coating**
Gh. Zoderiu¹, R. Bosinceanu¹, E. Vasile², I. Deac³, G. Constantinescu⁴, C. Doroftei¹, F. Iacomi¹
¹Alexandru Ioan Cuza University of Iasi, Romania
²METAV CD SA, Bucharest, Romania
³Babes Bolyai University, Cluj-Napoca, Romania
⁴Jacobs University, Bremen, Germany
- P 63. T1 The distribution study in vital organs of silver nanoparticles ingested by rats**
Luiza Budeanu¹, Liliana Tartau², Viorel Melnig¹
¹“Alexandru Ioan Cuza” University, Blvd. Carol I, 11 A, 700506, Iasi, Romania
²“Gr. T. Popa” University of Medicine and Pharmacy Faculty of Medicine Pharmacology-Algesiology Department, Universitatii Street No. 16, 700115, Iasi, Romania
- P 64. T1 Optical activity enhancement of gold nanoparticles by exposure in light**
Daniela Pricop, Viorel Melnig
Faculty of Physics, “Al. I. Cuza” University, 11A, Carol I Blvd., 700506, Iasi, Romania

Poster Session 2

Friday, 21.09.2012, 15³⁰

Lost Footsteps Hall

- P 65. T6 Applying the RVM method to study degradation of high power transformer insulation**
C. Ilies¹, D.E. Gavrilă¹
¹University Politehnica Bucharest, Bucharest, Romania
- P 66. T6 Investigation of anthocyanins adsorption from wine on SBA-15 using a HPLC method**
Camelia Elena Luchian¹, Valeriu V. Cotea¹, Marius Niculaua², Antoanela Patras¹, Nicolae Bilba³
¹Horticulture, University of Agricultural Sciences and Veterinary Medicine, Iasi, Romania
²Research Centre for Oenology, Romanian Academy, Iasi, Romania
³Chemistry Department, "Al. I. Cuza" University, Iasi, Romania
- P 67. T6 DFT comparative study of organic dyes for TiO₂ dye-sensitized solar cells**
Corneliu I. Oprea¹, Anca Dumbrava², Boris F. Minaev³, Petre Panait¹, Fanica Cimpoesu⁴, Mihai A. Girtu¹
¹Department of Physics and Electronics, Ovidius University of Constanta, Constanta, Romania
²Department of Chemistry and Chemical Engineering, Ovidius University of Constanta, Romania
³Department of Chemistry, Bogdan Khmel'nitsky National University, Cherkassy, Ukraine
⁴Department of Theoretical Chemistry, Institute of Physical Chemistry, Bucharest, Romania
- P 68. T6 Fabrication of bulk heterojunction organic solar cells using different small organic molecules as electron acceptors.**
Iulia Salaoru¹, Shashi Paul¹, Zainab Alhashim¹
¹EMTERC, Faculty of Technology, DeMontfort University, Leicester, UK
- P 69. T6 Investigation of atmospheric pollution by LIDAR and other spectroscopic techniques**
Ovidiu-Gelu Tudose^{1,2}, Dana-Ortansa Dorohoi¹, Ioan Balin^{1,2}
¹Faculty of Physics, Optics and Spectroscopy Department, Al.I.Cuza University of Iasi, Romania
²Research and Development Department, SC EnviroScopY SRL, Iasi, Romania
- P 70. T6 Selective shielding multilayered material for high frequency radiation**
Gabriel Ababei¹, Valeriu David², Vlad Dafinescu², Ionut Nica², Horia Chiriac¹, Alexandra Pica³
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Nare Gabrielyan¹, Shashi Paul¹
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 Liviu Leontie¹, Ramona Danac², Mihaela Girtan³, Marius Prelipceanu⁴, Adrian Graur⁴, Aurelian Carlescu¹, Gheorghe I. Rusu¹
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²Physics, Chemistry, Electronics and Petroleum Technology Faculty, Ovidius University, Constanta, Romania
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 Florin Tudorache¹, Paul Dorin Popa², Felicia Iacom¹
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 Cristian Viespe¹, Constantin Grigoriu¹
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