



**UNIVERSITY POLITEHNICA OF
BUCHAREST**
Department of Physics



**ACADEMY OF ROMANIAN
SCIENTISTS**
Section of Physical Sciences

THE 7th INTERNATIONAL COLLOQUIUM “PHYSICS OF MATERIALS” (PM 7)

**NOVEMBER 10-11, 2022
BUCHAREST, ROMANIA**

INVITATION

On behalf of the Organizing Committee you are invited to participate in the seventh edition of the International Colloquium “Physics of Materials” (ICPM-7), organized by the University “Politehnica” of Bucharest and the Academy of Romanian Scientists.

The 7th International Colloquium on “Physics of Materials” will be held on November 10-11, 2022 in Bucharest, Romania. The aim of the Colloquium is to provide a forum for the presentation of new advances in the physics of materials research and novel applications.

The accepted and presented contributions will be selected by the Scientific Committee for publication in either the ISI-quoted journals Scientific Bulletin of UPB, Series A, B or the Annals of the Academy of the Romanian Scientists.

The conference will be held online.

Chair: Prof. Dr. Habil. Doina Mănăilă-Maximean

PROGRAM

8:45 Test connection

9:00 -- 9:10 OPENING: Doina Manaila-Maximean, Doru Delion

9:10 - 11:00 Session 1: Invited communications

		Chairs : Doru Delion : Doina Manaila-Maximean
1	9.10-9:40	I1. Porous semiconductor compounds: obtaining and functionalization with metallic nanostructures for multifunctional applications Eduard V. Monaico National Center for Materials Study and Testing, Technical University of Moldova, Republic of Moldova Email: eduard.monaico@cnstm.utm.md
2	9:40-10:10	I.2. Continuous change from monoclinic to ferroelectric orthorhombic HfO₂ by a martensitic-like transition – challenge for nonvolatile memories <u>M L Ciurea^{1,3}, C Palade¹, A-M Lepadatu¹, A Slav¹, O Cojocaru^{1,2}, A Iuga¹, V A Maraloiu¹, V S Teodorescu^{1,4}, T Stoica¹</u> ¹ National Institute of Materials Physics, 077125 Magurele, Romania Email: ciurea@infim.ro ² University of Bucharest, Faculty of Physics, 077125 Magurele, Romania ³ Academy of Romanian Scientists, 050094 Bucharest, Romania
3	10:10-10:30	I.3. Numerical simulations as a solution to design the desired optical properties of multilayers thin films <u>Mihaela Girtan^{1*}</u> ¹ Photonics Laboratory, Angers University, 2, Bd. Lavoisier, 49045, Angers, France, mihaela.girtan@univ-angers.fr
4	10:30-10:50	I.4. Optical properties of spatially-ordered two-dimensional structures of spherical particles in absorbing matrix V.A. Loiko, A.A. Miskevich, N.A. Loiko <i>B.I. Stepanov Institute of Physics of the National Academy of Sciences of Belarus, Minsk, Belarus</i> <i>E-mail: loiko@ifanbel.bas-net.by</i>

10:50 - 11:00 Coffee Break

11:00 - 12:30 Session 2: Invited and oral communications

		Chairs : Magdalena Ciurea : Teodora Staicu
5	11:00 - 11:30	I.5. Tandem heterojunction solar cells with Cu₂O/ZnO Si based: optimization and defect analysis <u>L. FARA^{1,2*}, I. CHILIBON³, D. CRACIUNESCU¹, S. FARA¹</u> ¹ Department of Physics, Faculty of Applied Sciences, Polytechnic University of Bucharest, Romania ² Academy of Romanian Scientists, Bucharest, Romania ³ National Institute of Research and Development for Optoelectronics (INOE-2000), Bucharest-Magurele, Romania * lfara@renerg.pub.ro

6	11:30-11:50	I.6. DICATIONIC IMIDAZOLIUM AND PYRIDINIUM SALTS: STUDY OF IONIC CONDUCTIVITY, LIQUID CRYSTALLINE AND EMISSION PROPERTIES M. Iliş ¹ , M. Micutz ¹ , T. Staicu ¹ , Doina Manaila-Maximean ² , and V. Cîrcu ^{1*} ¹ University of Bucharest, Bucharest, Romania Email: viorel.circu@chimie.unibuc.ro ² University Politehnica of Bucharest, Bucharest, Romania
7	11:50-12:00	O.1. Evaluation of mechanical and dielectric properties of some biodegradable cellulose-based composites A.I. Barzic ^{1*} , E. Turcu ¹ , M. Asandulesa ¹ , C. Tugui ¹ and R.M. Albu ¹ ¹ "Petru Poni" Institute of Macromolecular Chemistry, Laboratory of Physical Chemistry of Polymers, Grigore Ghica Voda Alley, 41A, 700487- Iasi, Romania Email: irina_cosutchi@yahoo.com
8	12:00-12:15	O.2. Behaviour of composite materials with polymer matrix / metal powders D.E.Gavrila ¹ , A.Caramitu ² , S.Mitrea ² , V.Stoian ¹ ¹ Physics Department, Faculty of Applied Sciences, University POLITEHNICA of Bucharest ² National Institute of Research and Development for Electrical Engineering ICPE-CA Bucharest doina.gavrila@physics.pub.ro
9	12:15-12:30	O.3. Nanoparticles of cobalt doped magnetite for tumor treatment Helmina Ardeleanu ^{1*} , Iordana Aşefănoaei ¹ , Dorina Creanga ¹ ¹ University Alexandru Ioan Cuza, Iasi, Romania Email: ardeleanu_helmina@yahoo.com

12:30-13:15 LUNCH

13:15-14:45 Session 3: Invited and oral communications

		Chairs: Radu Fierascu : Doina Manaila-Maximean
10	13:15-13:35	I.7. PCM simple modelling and energy storage simulation C. Stanciu ^{1*} , and D. Stanciu ¹ ¹ University Politehnica of Bucharest, Romania Email: camelia.stanciu@upb.ro
11	13:35-13:55	I.8. Adsorption of Methylene Blue upon substrates of fabrics and filter paper type L. Frunza*, N.G. Apostol, I. Zgura, C.P. Ganea, V.F. Cotorobai National Institute of Materials Physics, 077125 Magurele, Romania Email: lfrunza@infim.ro
12	13:55-14:05	O.4. Dielectric features of materials based on oxide nanopowders C.-P. Ganea*, I. Zgura, L. Frunza National Institute of Materials Physics, 077125 Magurele, Romania Email: paul.ganea@infim.ro
13	14:05-14:20	O.5. Orbital character of two dimensional electron gas at an oxide interface M. A. Husanu ^{1*} , A. Iancu ¹ , D. G. Popescu ¹ , C. Chirila ¹ , C. M. Teodorescu ¹ ¹ National Institute of Materials Physics, Atomistilor 405A, 077125 Magurele, Romania ahusanu@infim.ro
14	14:20-14:30	O.6. Synthesis and characterization of cellulose acetate-TiO₂ polymeric membrane for water and wastewater treatment S. Căprărescu ^{1*} , V. Purcar ² , C. Modroga ³ , A. M. Dăncilă ³ and O. D. Orbuleţ ³ ¹ University Politehnica of Bucharest, Faculty of Chemical Engineering and Biotechnologies, Inorganic Chemistry, Physical Chemistry and Electrochemistry Department, Romania Email: simona.caprarescu@upb.ro ² National Institute for Research & Development in Chemistry and Petrochemistry—ICECHIM, Bucharest, Romania ³ University Politehnica of Bucharest, Faculty of Chemical Engineering and Biotechnologies, Analytical Chemistry and Environmental Engineering Department, Romania

15	14:30-14:45	O.7. FORMAL ACTIVITIES TO LEARN ABOUT NEW MATERIALS AND TECHNOLOGIES USED IN MAKING SENSORS AND ACTUATORS <u>L.C Farcaș</u> ^{1,2*} , C. Enachescu ¹ ¹ Alexandru Ioan Cuza University of Iasi, Faculty of Physics, Iasi, Romania ² "St. John of La Salle" Technological High School, Pildesti, Romania Email: lidycera@yahoo.com
-----------	--------------------	--

14:45-15:00 Coffee Break

15:00 -17:00 POSTER Session

**Chairs: Marian Micutz
Viorel Cîrcu**

THE POSTERS ARE AVAILABLE ON THE SITE OF THE CONFERENCE

The authors will be connected online in the order of the posters, for five minutes and the interested scientists might contact the authors directly during or *after* the poster session.

No.	Title	Authors	Email
P.1. S1	Design of liquid crystals based on copper (I) complexes with Schiff bases	<u>M. Alkali</u> ¹ and V. Cîrcu ^{1*} ¹ University of Bucharest, Department of Inorganic Chemistry, Romania *Corresponding author: viorel.circu@chimie.unibuc.ro	Muhammed.alkali@s.unibuc.ro viorel.circu@chimie.unibuc.ro
P.2. S1	Synthesis, Structural Characterization and Photoluminescent studies of schiff base ligand First Row-Transition Metal Complexes	<u>Jocelyn N. Kuate</u> ¹ , Paboudam G. Awawou ¹ , Viorel Cîrcu ^{2*} , Peter T. Ndifon ^{1*} , Marilena Ferbinteanu ² ¹ Department of Inorganic Chemistry, Faculty of Science, University of Yaounde I, Yaounde, Cameroon ² University of Bucharest, Bucharest, Roumania	Jocelynjomkam@gmail.com viorel.circu@chimie.unibuc.ro
P.3. S1	Synthesis and Characterization PMMA/CaAl-Layered Double Hydroxide Nanocomposites via Solvent Blending Technical	<u>W. Haffaf</u> ^{1*} , M. Hamouni ¹ , and Z. Abdelsadek ² ¹ University Abubekr Belkaid, Faculty of Science, Macromolecules Research Laboratory (MRL), Tlemcen, Algeria. ² Institute of Electrical and Electronics Engineering, University of M'hamed-Bougara, Independence Avenue, 35000, Boumerdès, Algeria	m_hamouni@yahoo.fr zoulisabrina@yahoo.fr
P.4. S2	Diameter modulated GaAs nanowire arrays via crossing crystallographic pores	Elena I. Monaico National Center for Materials Study and Testing, Technical University of Moldova, Republic of Moldova	elena.monaico@cnstm.utm.md
P.5. S2	Atmospheric and Biological Nitrous Oxides Sensors Based on Triggerable-Response Metasurfaces	<u>O. Dănilă</u> ^{1*} , B. M. Gross ² ¹ University Politehnica of Bucharest, 060042 Bucharest, Romania ² City University of New York, 10031 New York, United States of America	octavian.danila@upb.ro gross@ccny.cuny.edu
P.6. S2	MID-INFRARED RADIATION CONTROL WITH METAL-DIELECTRIC MICROSTRIP NANOANTENNAS	<u>A. Grigore</u> ¹ , A. Bărar ² , D. Mănăilă-Maximean ³ and O. Dănilă ^{4*} ¹ Faculty of Mechanics and Mechatronics, University Politehnica of Bucharest, Bucharest, Romania ² Faculty of Electronics, Telecommunications and Information Technology, University Politehnica of Bucharest, Bucharest, Romania ³ Faculty of Applied Sciences, University Politehnica of Bucharest, Bucharest, Romania ⁴ Faculty of Applied Sciences, University Politehnica of Bucharest, Bucharest, Romania	alexandra.grigore@stud.upb.ro ana.barar@upb.ro octavian.danila@upb.ro doina.manaila@upb.ro

P.7. S2	METAL-DIELECTRIC FREQUENCY-SELECTIVE SURFACES IN THE TERAHERTZ WINDOW	C. Coman ¹ , A. Bărar ² , D. Mănăilă-Maximean ³ and O. Dănilă ^{4,*} ¹ Faculty of Mechanics and Mechatronics, University Politehnica of Bucharest, Bucharest, Romania ² Faculty of Electronics, Telecommunications and Information Technology, University Politehnica of Bucharest, Bucharest, Romania ³ Faculty of Applied Sciences, University Politehnica of Bucharest, Bucharest, Romania ⁴ Faculty of Applied Sciences, University Politehnica of Bucharest, Bucharest, Romania	cosmin.coman@stud.upb.ro ana.barar@upb.ro octavian.danila@upb.ro
P.8. S3	Design and theoretical investigations of a MAPbI ₃ /Silicon carbide fractal metasurface for photovoltaic applications	A. Bărar ^{1,2} and H. Ge ² ¹ Polytechnic University of Bucharest, Bucharest, Romania ² New York University, New York, USA Email: ana.barar@upb.ro	ana.barar@upb.ro
P.9. S4	General Characterizations As-S-Sb-Te Nanostructured Semiconductors	O. Iaseniuc ^{1,*} , M. Iovu ¹ , S. Rosoiu ² , M. Bardeanu ² , L.-B. Enache ² , G. Mihai ^{2,3} , O. Bordian ¹ , V. Verlan ¹ , I. Culeac ¹ , I. Cojocaru ¹ , M. Enachescu ^{3,4} ¹ Institute of Applied Physics, Str. Academiei 5, MD-2028 Chisinau, R. Moldova ² Center for Surface Science and Nanotechnology, University Politehnica of Bucharest Splaiul Independentei 313, 060042, Bucharest, Romania ³ S.C. NanoPRO START MC S.R.L., Mitropolit A. I. Street 40, 110310 Pitesti, Romania ⁴ Academy of Romanian Scientists, Ilfov Street, 3, 50044 Bucharest, Romania	oxana.iaseniuc@gmail.com marius.enachescu@upb.ro secretariat@aosr.ro
P.10. S4	Rashba coupling in metallic states at the Ni-doped Ge interface	D.G. Popescu ^{1,*} , L. Borcan ¹ , A. Iancu ¹ , A. Rostas ¹ , C. Ruxandra ¹ , V. Strocov ¹ , M.A. Husanu ¹ ¹ National Institute of Materials Physics, Atomistilor 405A, 077125 Magurele, Romania	dana.popescu@infim.ro
P.11. S4	Lamellar liquid crystals from luminescent palladium(II) complexes with mixed ligands	T.A. Ilincă ¹ , M. Iliș ¹ , M. Micuț ² , and V. Cîrcu ^{1*} ¹ University of Bucharest, Inorganic Chemistry Department, Bucharest, Romania Email: theodora.ilinca@drd.unibuc.ro ² University of Bucharest, Department of Physical Chemistry, Bucharest, Romania	theodora.ilinca@drd.unibuc.ro
P.12. S4	THE MAGIC OF THE CHOLESTERIC LIQUID CRYSTALS	A. Albu and V. Cîrcu [*] University of Bucharest, Romania Email: anastasia.albu@s.unibuc.ro	anastasia.albu@s.unibuc.ro
P.13. S4	Linear birefringence of uniax anisotropic inorganic crystals measured by ellipsometric means	Delia Anne Marie Androne ¹ , Cristina Nechifor ² , Mihai Postolache ³ , Dan Gheorghe Dimitriu ⁴ , Dana Ortansa Dorohoi ⁴ ¹ Faculty of Geography and Geology, Alexandru Ioan Cuza University of Iasi, 700056, Iasi, Romania ² Faculty of Machine Manufacturing and Industrial Management, Gheorghe Asachi University, 700050, Iasi, Romania ³ Faculty of Automatic Control and Computed Engineering, Gheorghe Asachi University, 700050, Iasi, Romania ⁴ Faculty of Physics, Alexandru Ioan Cuza University of Iasi, 700056, Iasi, Romania	ddorohoi@uaic.ro
P.14. S5	The study of thermal properties of conducting polymers (polypyrrole) using molecular dynamic.	S. Ammour ^{1*} , M. Hamouni ¹ and L. Bouzid ² ¹ University of Abou Bebr Belkaid, Tlemcen, Algeria Email: p.h.ammour@gmail.com ² University of science and technology, Mohamed Boudiaf, Oran, Algeria	p.h.ammour@gmail.com
P.15. S5	An overview of fusion-relevant tungsten dust synthesis via RF (13.56 MHz) plasma discharge	V. Marascu ^{1*} , C. Stancu ¹ , C. Constantin ^{1,2*} , A. Bonciu ³ , V. Satulu ¹ , and G. Dinescu ¹ ¹ Low Temperature Plasma Department, National Institute for Laser, Plasma and Radiation Physics, RO-077125, Magurele, Romania ² Faculty of Physics, University of Bucharest, RO-077125, Magurele, Romania ³ FOTOPLASMAT Department, National Institute for Laser, Plasma, and Radiation Physics, RO-077125, Magurele, Romania	valentina.marascu@inflpr.ro ; crislian.stancu@inflpr.ro ; catalin.constantin@inflpr.ro ; veronica.satulu@inflpr.ro ; gheorghe.dinescu@inflpr.ro anca.bonciu@inflpr.ro

P.16. S5	Thermo-Mechanical Properties of Plasticized Poly(lactic acid) Films	<u>L. Benkraled</u> ^{1*} , A. Zennaki ¹ , A. Berrayah ¹ , and L. Zair ¹ ¹ Laboratoire de Recherche sur les Macromolécules (LRM), University of Tlemcen, Algeria	linabenkraled@gmail.com
P.17. S5	THE EFFECT OF ALUMINOSILICATE INDUSTRIAL WASTE ON THE PROPERTIES OF POLYPROPYLENE REINFORCED WITH GLASS FIBER	<u>George-Mihail Teodorescu</u> ¹ , Zina Vuluga ^{1*} , Andreea Ioniță ¹ , Florin Oancea ¹ , Jenica Paceagiu ² , Cristi-Andi Nicolae ¹ , Raluca Augusta Gabor ¹ ¹ INCDCP-ICECHIM Bucharest, 202 Spl. Independentei, 6 th district, Romania ² CEPROCIM S.A., 6 Preciziei, 062203, Bucharest, Romania *Corresponding author: (zvuluga@icechim.ro)	zvuluga@icechim.ro, georgemihail.teodorescu@yahoo.com
P.18. S6	Liquid Crystal based bacterial infection biosensor	Cavaco, Gonçalo ¹ ; Soares, Maria Simone ² ; Grilo, Inês R. ¹ ; Pina, Ana Sofia ³ ; Roque, Ana Cecilia ¹ ; Marques, Carlos ² ; Miragaia, Maria ³ ; Sobral, Rita G. ¹ and <u>Almeida, Pedro L.</u> ^{4,5*} ¹ UCIBIO, School of Sciences and Technology, University NOVA of Lisbon, Lisbon, Portugal ² I3N and Physics Department, Aveiro University, Aveiro, Portugal ³ ITQB, University NOVA of Lisbon, Lisbon, Portugal ⁴ I3N - CENIMAT, School of Sciences and Technology, University NOVA of Lisbon, Lisbon, Portugal ⁵ Lisbon's Superior Institute of Engineering, Polytechnic Institute of Lisbon, Lisbon, Portugal * Author for Correspondence: pla@fct.unl.pt	pla@fct.unl.pt
P.19. S6	Potential of aliphatic polyesters as hot embossing substrates	G. M. Oprica ¹ , A. N. Frone ¹ , M. Mihailescu ² , A. R. Gabor ¹ , C. A. Nicolae ¹ , and D. M. Panaitescu ^{1*} ¹ National Institute for Research and Development in Chemistry and Petrochemistry, Bucharest, Romania ² University Politehnica of Bucharest, Romania	madalina_oprica@yahoo.com mona.mihailescu@upb.ro
P.20. S6	A parallel between plasma irradiation of nanocellulose water suspensions and silane grafting as surface treatments of nanocellulose	<u>C. D. Usurelu</u> ¹ , A. N. Frone ¹ , C. A. Nicolae ¹ , A. R. Gabor ¹ , S. Vizireanu ² , V. Satulu ² , C. Stancu ² , S. M. Teodorescu ³ , and D. M. Panaitescu ^{1*} ¹ National Institute for Research and Development in Chemistry and Petrochemistry, Bucharest, Romania ² National Institute for Laser, Plasma and Radiation Physics, Ilfov, Romania ³ University Politehnica of Bucharest, Romania	catalina.usurelu@icechim.ro sorin.vizireanu@inflpr.ro mircea.teodorescu@upb.ro
P.21. S6	Albumin nanoparticles' synthesis for biomedical applications	<u>M.-E. Barbinta-Patrascu</u> , S. Iftimie, A. Balan, N. Sandu, Diana L. Stan, C. G. Chilom [*] , ¹ Faculty of Physics, University of Bucharest, Bucharest, Romania	marcela.barbinta@unibuc.ro; sorina.iftimie@fizica.unibuc.ro; adriana.balan@unibuc.ro; s.nicoleta59@yahoo.ro; claudia-gabriela.chilom@unibuc.ro
P.22. S6	Biocomposites based on Chitosan and Hydroxyethyl Cellulose- Elaboration and Characterization	Nassima CHEKROUN ^{1*} , Houcine ZIANI CHERIF ¹ ¹ Macromoleculare Research Laboratory, Department of chemistry, Faculty of Sciences, Abou Bekr Belkaid University, Tlemcen, Algeria, chekrounnassima7@gmail.com	chekrounnassima7@gmail.com
P.23. S7	Estimation of Cutting Edge Width in the case of Electrical Steels	<u>G. Paltanea</u> ¹ V. Manescu (Paltanea) ^{1*} , C. Paun ^{1,2} , and H. Gavrilă ¹ ¹ University Politehnica of Bucharest, Bucharest, Romania ² National Institute for Research and Development in Microtechnologies, Romania	gheorghe.paltanea@upb.ro, veronica.paltanea@upb.ro, pauncostel1986@yahoo.com, horia.gavrilă@upb.ro
P.24. S7	Evaluation of Intermolecular Interactions in Organic Cocrystal of 2-Nitroterephthalic Acid and 1,2-Bis(4-pyridyl)ethane Using Hirshfeld Surface Analysis	<u>D. Tapu</u> ^{1*} , E. Melnic ² , M. Fonari ² and D. Chisca ^{1,2} ¹ Ion Creangă State Pedagogical University, Faculty of Biology and Chemistry, Ion Creangă str. 1, MD-2069, Chisinau, Moldova ² Institute of Applied Physics, Academiei str. 5 MD-2028, Chisinau, Moldova	ms.dumi@inbox.ru
P.25. S7	Hirshfeld Surface Analysis of Supramolecular Synthons in Cocrystal of 2,4-Diamino-6-Phenyl-1,3,5-Triazine with Adipic Acid	<u>N. Craciun</u> ^{1,2*} , D. Chisca ^{1,2} , E. Melnic ² , and M. S. Fonari ² ¹ Ion Creangă State Pedagogical University, Faculty of Biology and Chemistry, Ion Creangă str. 1, MD-2069, Chisinau, Moldova ² Institute of Applied Physics, Academiei str. 5 MD-2028, Chisinau, Moldova	nicoleta.craciun@ifa.md
P.26.	Study of the effect of composition and the resulting physical properties of acrylic terpolymers	<u>G.F-Z. HAKEM</u> ^{1*} , D. BENDEDOUCHE ¹ , A. BOURICHE ¹ L. BEDJAOUI-ALACHAHER ¹ ¹ Laboratory of Research on Macromolecules (LRM), Faculty of Sciences, University of Abou Bekr Belkaid, 13000, Tlemcen, Algeria Email ^{1*} : ghizlenefatimazahra.hakem@univ-tlemcen.dz	ghizlenefatimazahra.hakem@univ-tlemcen.dz

P.27.	Elaboration and characterization of PDLC films containing acrylic polymers	G F-Z. HAKEM ^{1*} , D. BENDEDOUCHE ¹ , A. BOURICHE ¹ , L. BEDJAOUI-ALACHAHER ¹ ¹ Laboratory of Research on Macromolecules (LRM), Faculty of Sciences, University of Abou Bekr Belkaid, 13000, Tlemcen, Algeria Email ^{1*} : ghizlenefatimazahra.hakem@univ-tlemcen.dz	ghizlenefatimazahra.hakem@univ-tlemcen.dz
P.28.	Electric properties of liquid crystals dispersed nanodiamonds	Cristina Cirtoaje, Emil Petrescu Faculty of Applied Sciences, University Politehnica of Bucharest, Bucharest, Romania	cristina.cirtoaje@upb.ro emil.petrescu@upb.ro
P.29.	ZrO ₂ for photocatalytic applications	M. Frenti ¹ , C. Mita ² , N. Cornei ² , V. Tiron ³ , G. Bulai ⁴ , M. Dobromir ³ , A.S. Doroshkevich ⁵ , D. Mardare ^{1*} , ¹ PhD student, "Alexandru Ioan Cuza" University of Iasi, Faculty of Physics, 11 Carol I Blvd., 700506 Iasi Romania ² "Alexandru Ioan Cuza" University of Iasi, Faculty of Chemistry, 11 Carol I Blvd., 700506 Iasi Romania ³ "Alexandru Ioan Cuza" University of Iasi, Research Center on Advanced Materials and Technologies, Department of Exact and Natural Sciences, Institute of Interdisciplinary Research, 700506 Iasi, Romania, ⁴ Alexandru Ioan Cuza University of Iasi, Integrated Centre for Environmental Science Studies in the North-East Development Region – CERNESIM, 11 Carol I Blvd., 700506, Iasi, Romania ⁵ Joint Institute for Nuclear Research, Str. Joliot-Curie, 6, Dubna, 141980, Russia	mariana.amarinei@student.uaic.ro, marianafrenti2009@gmail.com cmita@uaic.ro, ncornei@uaic.ro doroh@jinr.ru

1. S1 Synthesis and characterization of functional materials
2. S2 Nanomaterials, metamaterials and nanoelectronics
3. S3 Materials for Sustainable Energy
4. S4 Electronic, photonic and optoelectronic materials
5. S5 Materials science
6. S6 Biomaterials and organic materials
7. S7 Methods for material characterization
8. S8 Materials science education

FRIDAY, November 11

9:45 Test connection

10:00-11:00 Session 4 Invited communications

		Chairs : Camelia Stanciu : Andrei Dragulinescu : Viorel Circu
16	10:00-10-30	I.9. At the Frontier Between Materials Science and Biotechnology: Nanomaterials Phytosynthesis I. Fierascu ^{1,2} , R.C. Fierascu ^{1,3*} , A.M. Baroi ^{1,2} , R.I. Matei (Brazdis) ^{1,3} , T. Fistos ^{1,3} , I.C. Fierascu ^{1,2} , I. Chican ¹ , and I.S. Hosu ¹ ¹ National Institute for Research & Development in Chemistry and Petrochemistry - ICECHIM Bucharest, Romania Email: irina.fierascu@icechim.ro , fierascu.radu@icechim.ro , anda.baroi@icechim.ro , roxanda.brazdis@icechim.ro , toma.fistos@icechim.ro , irina-elena.chican@icechim.ro , ioana.hosu@icechim.ro ² University "Politehnica" of Bucharest, Romania ³ University of Agronomic Sciences and Veterinary Medicine of Bucharest, Romania ⁴ University of Medicine and Pharmacy "Carol Davila", Romania Email: ioana.fierascu@drd.umfcd.ro

17	10:30-11	<p>I.10. Pincer Complexes of Gold(III): Organometallic Chemistry, Liquid Crystals, Photophysics and OLEDs</p> <p>Alice J. McEllin¹, Rachel R. Parker¹, Rachel F. Stracey¹, Denghui Liu², Xiankang Yu², Xinrui Chen², Xinagbing Zhen³, Adrian C. Whitwood¹, J. A. Gareth Williams⁴, Yafei Wang², Jason M. Lynam¹ and <u>Duncan W. Bruce</u>^{1*}</p> <p>¹ Department of Chemistry, University of York, YORK YO10 5DD UK; E-mail: duncan.bruce@york.ac.uk;</p> <p>² School of Materials Science & Engineering, Changzhou University, CHANGZHOU 213164, PR CHINA;</p> <p>³ Department of Materials Science and Engineering, University of Sheffield, Sheffield, UK;</p> <p>⁴ Department of Chemistry, Durham University, South Road, DURHAM, DH1 3LE UK.</p>
----	----------	--

11:00-13:15 Session 5: Oral communications

		<p>Chairs : Camelia Stanciu : Andrei Dragulinescu</p>
18	11:00 - 11:15	<p>O.8. Structure–property relationships in photopolymerizable systems : Effect of composition and resulting physical properties of acrylates based copolymers</p> <p><u>D. Bendeddouche</u>^{1*}, G F-Z. HAKEM¹, U. MASCHKE², L. BEDJAOU-ALACHAHER¹</p> <p>¹ Laboratory of Research on Macromolecules (LRM), Faculty of Sciences, University of Abou Bekr Belkaïd Tlemcen, 13000, Tlemcen, Algeria Email^{1*}: djazia.bendeddouche@univ-tlemcen.dz</p> <p>² University of Lille, CNRS, INRAE, Centrale Lille, UMR 8207 - UMET - Materials and Transformations Unit, Lille, France</p>
19	11:15- 11:30	<p>O.9. Corrosion protection of metallic substrates by silane-based coatings</p> <p><u>D. Bala</u>^{1,*}, A. Sfetcu¹, M.A. Tănase^{1,2}, L.O. Cintează¹</p> <p>¹University of Bucharest, Faculty of Chemistry, Department of Physical Chemistry, 4-12 Regina Elisabeta, 030018 Bucharest, Romania ²INCDCP-ICECHIM Bucharest, 202 Spl. Independentei, 6th district, Romania dbala@gw-chimie.math.unibuc.ro, alexandru.sfetcu@s.unibuc.ro, maria.a.tanase@gmail.com, ocinteza@gw-chimie.math.unibuc.ro</p>
20	11:30- 11:45	<p>O.10. Physical and chemical properties of cyano-containing polyimide/azo-chromophore systems designed for flexible electronic products</p> <p><u>I. Stoica</u>^{1*}, E.-L. Epure², A. I. Barzic¹, M. Asandulesa¹, C. Ursu¹, I. Mihaila³, A.-D. Diaconu¹, I. Sava¹</p> <p>¹“Petru Poni” Institute of Macromolecular Chemistry, Iasi-700487, Romania ² Faculty of Chemical Engineering & Environmental Protection, “Gheorghe Asachi” Technical University, Iasi - 700050, Romania ³Integrated Center of Environmental Science Studies in the North-Eastern Development Region (CERNESIM), “Alexandru Ioan Cuza” University of Iasi, Iasi - 700506, Romania, e-mail: stoica_iuliana@icmpp.ro</p>
21	11:45- 12:00	<p>O.11. Technology for obtaining the amorphous luminophore composition As₂S₃:Eu(DBM)₃Phen</p> <p>M. Iovu^a, V. Verlan^{a*}, O. Bordian^a, I. Culeac^a, <u>A. A. Popescu</u>^{b*}, and D. Savastru^b</p> <p>^a) Institutul de Fizică Aplicată, Str. Academiei 5, MD-2028 Chisinau, R. Moldova ^b) Institutul National de Cercetare-Dezvoltare pentru Optoelectronica INOE 2000, Str. Atomistilor 409, Magurele, Romania. *) Author for Correspondence: vverlan@gmail.com; apopescu@inoe.ro;</p>

22	12:00-12:15	<p>O.12. Light-emitting materials based on nematic liquid crystals doped with double cyclopalladated complexes</p> <p><u>Daiana G. Mitrea</u>¹, Monica Iliș¹, Doina Mănăilă-Maximean², Viorel Cîrcu^{1*}</p> <p>¹Department of Inorganic Chemistry, University of Bucharest, Bucharest, Romania Email: daiana.mitrea@drd.unibuc.ro, * viorel.circu@chimie.unibuc.ro</p> <p>²Department of Physics, University Politehnica of Bucharest, Bucharest, Romania</p>
23	12:15-12:30	<p>O.13. Features of self-pulsating InGaN lasers</p> <p><u>E. Grigoriev</u>[*], S.Rusu, V.Tronciu</p> <p>Department of Physics, Technical University of Moldova, Chisinau Moldova [*]Email: eugeniu.grigoriev@fiz.utm.md</p>
24	12:30-12:45	<p>O.14. Design and Simulations of Perovskite-Based Solar Cells with Efficiencies Over 30%</p> <p>S. H. M. A. Hussein^{1,2}, <u>A. Drăgulescu</u>^{3*}</p> <p>¹ Faculty of Engineering in Foreign Languages, Politehnica University of Bucharest, 1-3 Iuliu Maniu Blvd., Spl. Independenței 313, sector 6, RO-060032, Bucharest, Romania ² ARRK Research & Development SRL, Str. Fabricii De Chibrituri 13-21, Cluj-Napoca, Cluj, Romania; Email: seifhesham96@gmail.com ³ Department of Electronic Technology and Reliability, Politehnica University of Bucharest, 1-3 Iuliu Maniu Blvd., Spl. Independenței 313, sector 6, RO-060032, Bucharest, Romania Email: dragulinescu@yahoo.com</p>
25	12:45-13:00	<p>O.15. Nanoscale Imaging of Polymer Coated Gold Nanoparticles with Scattering-type Scanning Near-Field Optical Microscopy</p> <p>Stefan G. Stanciu¹, Denis E. Tranca¹, Giulia Zampini², Radu Hristu¹, George A. Stanciu¹, Xinzhong Chen^{3,4}, Mengkun Liu^{3,4}, Harald A. Stenmark⁵, and Loredana Latterini²</p> <p>¹Center for Microscopy-Microanalysis and Information Processing, Politehnica University of Bucharest, Romania., ²Department of Chemistry, Biology and Biotechnology, Perugia University, Italy. ³Department of Physics and Astronomy, Stony Brook University, Stony Brook, New York, USA. ⁴National Synchrotron Light Source II, Brookhaven National Laboratory, Upton, New York, USA. ⁵Department of Molecular Cell Biology, Institute for Cancer Research, Oslo University Hospital, Oslo Norway sgstanciu@gmail.com</p>
26	13:-13:15	<p>O.16. Rheological aspects on some hydrogels e-beam crosslinked</p> <p>T. Staicu¹, M. Demeter², M. Ilis³, V. Circu³, and <u>M. Micutz</u>^{1*}</p> <p>¹ Department of Physical Chemistry, University of Bucharest, 4-12 Regina Elisabeta Blvd, Bucharest 030018, Romania Email: teos@gw-chimie.math.unibuc.ro; micutz@gw-chimie.math.unibuc.ro ² National Institute for Lasers, Plasma and Radiation Physics (INFLPR), Atomîștilor 409, 077125, Măgurele, Romania Email: maria.dumitrascu@inflpr.ro ³ Department of Inorganic Chemistry, University of Bucharest, 4-12 Regina Elisabeta Blvd, Bucharest 030018, Romania Email: monica.ilis@g.unibuc.ro; viorel.circu@g.unibuc.ro</p>

Thank you for your participation!