



ABL&E-JASCO  
România S.R.L.



## 9<sup>th</sup> INTERNATIONAL WORKSHOP OF MATERIALS PHYSICS

14 - 16 May 2024  
www.infim.ro

Magurele, Romania

National Institute of Materials Physics



Oteteleşanu Hall

### THE PROGRAM

of the 9<sup>th</sup> edition of the

International Workshop of Materials Physics

14 May, 2024

### INVITED ORAL PRESENTATIONS

08:15	<b>Registration – Oteteleşanu Hall</b>
08:45	<b>Official opening – Lucian PINTILIE, Scientific Director of NIMP</b>
<b>Session 1: Chairman – Alexander KUHN</b>	
09:00	<b>Ifty AHMED</b> Faculty of Engineering, University of Nottingham, United Kingdom <b>Developing bioactive glasses and glass-ceramics for biomedical applications</b>
09:30	<b>Szilard FEJER</b> SC PROVITAM SRL, Romania <b>Research and development at a private healthcare institution: Challenges and opportunities</b>
10:00	<b>Raul-Augustin MITRAN</b> “Ilie Murgulescu” Institute of Physical Chemistry of the Romanian Academy, Romania <b>Synthesis and characterization of <i>trans</i>-Resveratrol cocrystals</b>
10:30	<b>Coffee Break</b>
10:45	<b>Rabah BOUKHERROUB</b> Institut d'Electronique, de Microélectronique et de Nanotechnologie (IEMN), France <b>Heat-induced controlled transdermal drug delivery for diabetes management</b>
11:15	<b>Felix SIMA</b> Centre for Advanced Laser Technologies – CETAL, Romania National Institute for Laser, Plasma and Radiation Physics – INFLPR, Romania <b>Biochips with tailored volume shapes fabricated by ultrafast laser processing for cancer research</b>
11:45	<b>Anton FICAI</b> National University of Science and Technology POLITEHNICA Bucharest, Romania <b>COLL/HA composite materials as drug-delivery systems in bone tissue engineering</b>
12:15	<b>José M.F. FERREIRA</b>

	Łukasiewicz Research Network – Institute of Microelectronics and Photonics, Warsaw, Poland; University of Aveiro, Portugal <b>Design, development and characterisation of smart synthetic bone graft materials for advanced therapies</b>
12:45	<b>Lunch</b>
<b>Session 2: Chairman – Rabah BOUKHERROUB</b>	
14:00	<b>Rasa PAULIUKAITE</b> Centre for Physical Sciences and Technology, Vilnius, Lithuania <b>Evolution of electrochemical sensors from macro to nano</b>
14:30	<b>Camelia BALA</b> Department of Analytical Chemistry, University of Bucharest, Romania <b>Surface modification for label-free sensing</b>
15:00	<b>Alexander KUHN</b> Institute of Molecular Science, University Bordeaux, France <b>Wireless Electrochemistry: From advanced materials to (bio)electroanalysis and enantioselective synthesis</b>
15:30	<b>Cecilia CRISTEA</b> “Iuliu Hațieganu” University of Medicine and Pharmacy, Romania <b>Development of innovative nano-systems for the targeted treatment of cancer</b>
16:00	<b>Coffee Break</b>
16:15	<b>Posters Session</b>
17:15	<b>Visit to NIMP’s facilities, followed by Conference Dinner (20:00)</b>

14 May, 2024

## POSTER PRESENTATION SESSION

<b>P1</b>	<b><i>PCL electrospun fibers as a new biocompatible platform for ion detection</i></b> <b>Anca ALDEA<sup>1</sup>, Melania ONEA<sup>1,2</sup>, Daniela OPREA<sup>1,2</sup>, Daniel CRISAN<sup>1</sup>, Caroline SANZ<sup>1</sup></b> <sup>1</sup> National Institute of Materials Physics, 077125 Magurele, Romania <sup>2</sup> Faculty of Physics, University of Bucharest, 077125 Magurele, Romania
<b>P2</b>	<b><i>Graphene electronic devices for sensing applications</i></b> <b>Mariana Mihaela APOSTOL<sup>1,2</sup>, Elena MATEI<sup>1</sup>, Victor DICULESCU<sup>1</sup>, Ionuț ENCULESCU<sup>1</sup>, Issam BOUKHOUBZA<sup>1</sup></b> <sup>1</sup> National Institute of Materials Physics, 077125 Magurele, Romania <sup>2</sup> Faculty of Chemical Engineering and Biotechnologies, National University of Science and Technology POLITEHNICA Bucharest, 011061 Bucharest, Romania
<b>P3</b>	<b><i>Shape memory polymer nanofibres functionalized with PEDOT:PSS and Au nanoparticles for soft robotics applications</i></b> <b>Mihaela BEREGOI<sup>1</sup>, Denisa CĂLIN<sup>2</sup>, Adrian ENACHE<sup>1</sup>, Ana Maria IGNAT<sup>1,3</sup>, Ionuț ENCULESCU<sup>1</sup></b> <sup>1</sup> National Institute of Materials Physics, 077125 Magurele, Romania <sup>2</sup> Faculty of Medical Engineering, National University of Science and Technology POLITEHNICA Bucharest, 011061 Bucharest, Romania <sup>3</sup> Faculty of Physics, University of Bucharest, 077125 Magurele, Romania
<b>P4</b>	<b><i>Paper-based electrochemical device integrated with conductive submicron polymeric fibers and 3D printed channels</i></b> <b>Daciana BOTTA<sup>1,2</sup>, Mihaela BEREGOI<sup>1</sup>, Alexandru EVANGHELIDIS<sup>1</sup>, Elena MATEI<sup>1</sup>, Ionuț ENCULESCU<sup>1</sup>, Victor DICULESCU<sup>1</sup></b> <sup>1</sup> National Institute of Materials Physics, 077125 Magurele, Romania <sup>2</sup> REOROM Laboratory, National University of Science and Technology POLITEHNICA Bucharest, 060042 Bucharest, Romania
<b>P5</b>	<b><i>The effect of fullerene layer on the aggregates formation in amyloid beta Langmuir-Blodgett films</i></b> <b>Carmen BREAZU<sup>1</sup>, Oana RAȘOGA<sup>1</sup>, Marcela SOCOL<sup>1</sup>, Paul GANEA<sup>1</sup>, Teddy TITE<sup>1</sup>, Elena MATEI<sup>1</sup>, Florin STĂNCULESCU<sup>2</sup>, Anca STĂNCULESCU<sup>1</sup></b> <sup>1</sup> National Institute of Materials Physics, 077125 Magurele, Romania <sup>2</sup> Faculty of Physics, University of Bucharest, 077125 Magurele, Romania
<b>P6</b>	<b><i>Soft actuators based on polydimethylsiloxane and electrospun fiber networks</i></b> <b>Mihaela-Cristina BUNEA, Mihaela BEREGOI, Alexandru EVANGHELIDIS, Andrei GALATANU, Ionuț ENCULESCU</b> National Institute of Materials Physics, 077125 Magurele, Romania
<b>P7</b>	<b><i>Nanohybrid composites of the type TiO<sub>2</sub>/single-walled carbon nanohorns for the Amoxicillin photodegradation</i></b> <b>Radu CERCEL<sup>1,2</sup>, Andreea ANDRONE<sup>1</sup>, Cristina-Ștefania FLORICA<sup>1</sup>, Adam LORINCZI<sup>1</sup>, Constantin SERBSCHI<sup>3</sup>, Mihaela BAIBARAC<sup>1</sup></b> <sup>1</sup> National Institute of Materials Physics, 077125 Magurele, Romania <sup>2</sup> Faculty of Physics, University of Bucharest, 077125 Magurele, Romania <sup>3</sup> S.C. Bioelectronic S.R.L., 100028 Ploiesti, Romania
<b>P8</b>	<b><i>Spectroscopic studies concerning degradation of Losartan Potassium</i></b>

	<p><b>Mădălina CHIVU<sup>1,2</sup>, Mirela PARASCHIV<sup>1,2</sup>, Ion SMARANDA<sup>1</sup>, Irina ZGURĂ<sup>1</sup>, Paul GANEA<sup>1</sup>, Bogdan CHIRICUȚĂ<sup>3</sup>, Mihaela BAIBARAC<sup>1</sup></b></p> <p><sup>1</sup>National Institute of Materials Physics, 077125 Magurele, Romania  <sup>2</sup>Faculty of Physics, University of Bucharest, 077125 Magurele, Romania  <sup>3</sup>S.C. Apel Laser S.R.L., 077135 Mogosoia, Romania</p>
<b>P9</b>	<p><b><i>BT-based piezoceramics substituted with therapeutic cations</i></b>  <b>Marius Cristian CIOANGHER<sup>1</sup>, Liviu NEDELCU<sup>1</sup>, George E. STAN<sup>1</sup>, Luminita AMARANDE<sup>1</sup>, Corneliu Florin MICLEA<sup>1</sup>, Adrian-Claudiu POPA<sup>1</sup>, Lucia Nicoleta LEONAT<sup>1</sup>, Cristina BESLEAGA<sup>1</sup>, Cezar Dragos GEAMBASU<sup>1</sup>, Vasilica TOMA<sup>1</sup>, Irina Sorina GHITA<sup>1</sup>, Robert Catalin CIOCOIU<sup>2</sup>, Constantin MARIN<sup>3</sup></b></p> <p><sup>1</sup>National Institute of Materials Physics, 077125 Magurele, Romania  <sup>2</sup>Department of Metallic Materials Science, National University of Science and Technology POLITEHNICA Bucharest, 060042 Bucharest, Romania  <sup>3</sup>“Emil Racoviță” Institute of Speleology of the Romanian Academy, 050711 Bucharest, Romania</p>
<b>P10</b>	<p><b><i>Yttrium barium copper nano oxide synthesis for biomedical utilization</i></b>  <b>Rania DAHA<sup>1</sup>, Manel BOULOU DENINE<sup>2,3</sup>, Katia DJENADI<sup>4</sup>, Stefano BELLUCCI<sup>5</sup></b></p> <p><sup>1</sup>École Nationale Supérieure des Mines et de la Métallurgie (ENSMM)-Amar Laskri, L3M, Chainz, 23000 Annaba, Algeria  <sup>2</sup>Mohamed-Cherif Messaadia University, 41000 Souk Ahras, Algeria  <sup>3</sup>LPR, Laboratory, University Badji Mokhtar, 23000 Annaba, Algeria  <sup>4</sup>Laboratoire de Biochimie Appliquée, Département des Sciences Alimentaires, Faculté des Sciences de la Nature et de la Vie, Université de Bejaia, 06000 Bejaia, Algeria  <sup>5</sup>INFN-Laboratori Nazionali di Frascati, 00044 Frascati, Italy</p>
<b>P11</b>	<p><b><i>Photodegradation of aspirin and atorvastatin calcium revealed by photoluminescence studies</i></b>  <b>Monica DĂESCU<sup>1</sup>, Miruna IOȚA<sup>1</sup>, Alina C. ION<sup>2</sup>, Constantin SERBSCHI<sup>3</sup>, Mihaela BAIBARAC<sup>1</sup>, Mădălina OPRICĂ<sup>1</sup>, Szilard FEJER<sup>4</sup></b></p> <p><sup>1</sup>National Institute of Materials Physics, 077125 Magurele, Romania  <sup>2</sup>Faculty of Chemical Engineering and Biotechnologies, National University of Science and Technology POLITEHNICA Bucharest, 011061 Bucharest, Romania  <sup>3</sup>S.C. Bioelectronic S.R.L., 100028 Ploiesti, Romania  <sup>4</sup>Pro-Vitam Ltd., 520032 Sfântu Gheorghe, Romania</p>
<b>P12</b>	<p><b><i>Electrospun fibrillary scaffold for electrochemical cell biomarkers detection</i></b>  <b>Adrian ENACHE<sup>1</sup>, Mihaela BEREGOI<sup>1</sup>, Daniela OPREA<sup>1,2</sup>, Mihaela Cristina BUNEA<sup>1</sup>, Monica ENCULESCU<sup>1</sup></b></p> <p><sup>1</sup>National Institute of Materials Physics, 077125 Magurele, Romania  <sup>2</sup>Faculty of Physics, University of Bucharest, 077125 Magurele, Romania</p>
<b>P13</b>	<p><b><i>Electron beam synthesis of iron oxide nanoparticles for biomedical applications</i></b>  <b>Nicursor IACOB<sup>1</sup>, Cezar COMANESCU<sup>1</sup>, Gabriela CRACIUN<sup>2</sup>, Andrei C. KUNC SER<sup>2</sup>, Cristian RADU<sup>1</sup>, Petru PALADE<sup>1</sup>, Elena MANAILA<sup>2</sup>, Gabriel SCHINTEIE<sup>1</sup>, Daniel IGHIGEANU<sup>2</sup>, Victor KUNC SER<sup>1</sup></b></p> <p><sup>1</sup>National Institute of Materials Physics, 077125 Magurele, Romania  <sup>2</sup>National Institute for Laser, Plasma and Radiation Physics, 077125 Magurele, Romania</p>
<b>P14</b>	<p><b><i>A computational perspective on the fundamental aspects of magnetic hyperthermia</i></b>  <b>Andrei C. KUNC SER<sup>1</sup>, Cristian RADU<sup>1,2</sup>, Ioana D. KUNC SER<sup>1</sup></b></p> <p><sup>1</sup>National Institute of Materials Physics, 077125 Magurele, Romania  <sup>2</sup>Faculty of Physics, University of Bucharest, 077125 Magurele, Romania</p>

<b>P15</b>	<p><i>Reliable evaluation of drug loading degree of Fe oxide nanoparticles by combined Mössbauer Spectroscopy and Magnetometry</i></p> <p><b>Victor KUNCSE<sup>1</sup>, Petru PALADE<sup>1</sup>, Gabriel SCHINTEIE<sup>1</sup>, Cezar COMANESCU<sup>1</sup>, Nicusor IACOB<sup>1</sup>, Luiza-Izabela TODERASCU<sup>2</sup>, Gabriel SOCOL<sup>2</sup></b></p> <p><sup>1</sup>National Institute of Materials Physics, 077125 Magurele, Romania  <sup>2</sup>National Institute for Laser, Plasma and Radiation Physics, 077125 Magurele, Romania</p>
<b>P16</b>	<p><i>Cytotoxicity and biotransformation of Cerium Oxide-Iron Oxide platform in cells cultures and murine model</i></p> <p><b>Valentin-Adrian MARALOIU<sup>1</sup>, Catalina MIHALCEA<sup>1,2</sup>, Cristian RADU<sup>1,2</sup>, Yuliia SHLAPA<sup>3</sup>, Anatolii BELOUS<sup>3</sup>, Aida SELARU<sup>4</sup>, Sorina DINESCU<sup>4</sup>, Cosmin MUSTACIOSU<sup>5</sup></b></p> <p><sup>1</sup>National Institute of Materials Physics, 077125 Magurele, Romania  <sup>2</sup>Faculty of Physics, University of Bucharest, 077125 Magurele, Romania  <sup>3</sup>V.I. Vernadsky Institute of General &amp; Inorganic Chemistry of the NAS of Ukraine, 03142 Kiev, Ukraine  <sup>4</sup>Department of Biochemistry and Molecular Biology, University of Bucharest, 050095 Bucharest, Romania  <sup>5</sup>Horia Hulubei National Institute for Physics and Nuclear Engineering, 077125 Magurele, Romania</p>
<b>P17</b>	<p><i>Optical evidence of photodegradation of azathioprine under UV irradiation in an oxygen atmosphere</i></p> <p><b>Andreea NILĂ<sup>1</sup>, Ion SMARANDA<sup>1</sup>, Corina-Mihaela MANTA<sup>2</sup>, Dumitru SAMOHVALOV<sup>2</sup>, Daniel GHERCA<sup>2</sup>, Mihaela BAIBARAC<sup>1</sup></b></p> <p><sup>1</sup>National Institute of Materials Physics, 077125 Magurele, Romania  <sup>2</sup>S.C. Sara Pharm Solutions S.R.L., 050122 Bucharest, Romania</p>
<b>P18</b>	<p><i>Antioxidant properties assessment of spring greens used in traditional Romanian green salad</i></p> <p><b>Daniela OPREA<sup>1,2</sup>, Daniel CRISAN<sup>1</sup>, Adrian ENACHE<sup>1</sup></b></p> <p><sup>1</sup>National Institute of Materials Physics, 077125 Magurele, Romania  <sup>2</sup>Faculty of Physics, University of Bucharest, 077125 Magurele, Romania</p>
<b>P19</b>	<p><i>Photoactive and magnetoactive nanocomposites for biomedical applications</i></p> <p><b>Traian POPESCU<sup>1</sup>, Ioana D. KUNCSE<sup>1</sup>, Valentin-Adrian MARALOIU<sup>1</sup>, Monica ILAȘ<sup>1</sup>, Arpad Mihai ROSTAȘ<sup>1,2</sup>, Alexandra-Corina IACOBAN<sup>1</sup>, Nicușor IACOB<sup>1</sup>, Christien Oktaviani MATEI<sup>3</sup>, Tudor SAVOPOL<sup>3</sup>, Mihaela G. MOISESCU<sup>3</sup></b></p> <p><sup>1</sup>National Institute of Materials Physics, 077125 Magurele, Romania  <sup>2</sup>National Institute of Isotopic and Molecular Technologies, 400293 Cluj-Napoca, Romania  <sup>3</sup>Department of Biophysics and Cellular Biotechnology, Carol Davila University of Medicine and Pharmacy, 050474 Bucharest, Romania</p>
<b>P20</b>	<p><i>Preparation, analysis, and antibacterial properties of magnesium doped hydroxyapatite suspensions</i></p> <p><b>Daniela PREDOI, Simona Liliana ICONARU, Steluta Carmen CIOBANU, George E. STAN</b></p> <p>National Institute of Materials Physics, 077125 Magurele, Romania</p>
<b>P21</b>	<p><i>Evaluation of shape anisotropy in nanoparticles for magnetic hyperthermia</i></p> <p><b>Cristian RADU<sup>1,2</sup>, Ioana D. KUNCSE<sup>1</sup>, Andrei C. KUNCSE<sup>1</sup></b></p> <p><sup>1</sup>National Institute of Materials Physics, 077125 Magurele, Romania  <sup>2</sup>Faculty of Physics, University of Bucharest, 077125 Magurele, Romania</p>
<b>P22</b>	<p><i>Controlling the shape and particle size distributions of magnetic nanoparticles prepared by thermal decomposition of organometallic compounds</i></p> <p><b>Gabriel SCHINTEIE, Andrei C. KUNCSE<sup>1</sup>, Nicusor IACOB, Cezar COMANESCU, Victor KUNCSE<sup>1</sup></b></p> <p>National Institute of Materials Physics, 077125 Magurele, Romania</p>
<b>P23</b>	<p><i>MgB<sub>2</sub>-based materials for biomedical applications</i></p> <p><b>Any-Cristina SERGENTU<sup>1,2</sup>, Petre BADICA<sup>1</sup></b></p>

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<b>P24</b>	<b><i>Effects of pH and UV radiation on the optical properties of folic acid in phosphate buffer solutions</i></b> <b>Ion SMARANDA<sup>1</sup>, Andreea NILA<sup>1</sup>, Mihaela BAIBARAC<sup>1</sup>, Constantin SERBSCHI<sup>2</sup></b> <sup>1</sup> National Institute of Materials Physics, 077125 Magurele, Romania <sup>2</sup> S.C. Bioelectronic S.R.L., 100028 Ploiesti, Romania
<b>P25</b>	<b><i>Ferromagnetic shape memory ribbons as potential active elements in stent-type medical devices</i></b> <b>Mihaela SOFRONIE<sup>1</sup>, Felicia TOLEA<sup>1</sup>, Bogdan POPESCU<sup>1</sup>, Mugurel TOLEA<sup>1</sup>, Mihaela VALEANU<sup>1</sup>, Alexandrina NAN<sup>2</sup>, Alexander BUNGE<sup>2</sup>, Rodica TURCU<sup>2</sup>, Alexandru CHIRIAC<sup>3</sup></b> <sup>1</sup> National Institute of Materials Physics, 077125 Magurele, Romania <sup>2</sup> National Institute for Research and Development of Isotopic and Molecular Technologies, 400293 Cluj-Napoca, Romania <sup>3</sup> University of Medicine and Pharmacy Grigore T. Popa, 700115 Iasi, Romania
<b>P26</b>	<b><i>Copper &amp; Gallium co-substituted bioactive glasses: Path towards durable dental implant coatings</i></b> <b>George E. STAN<sup>1</sup>, Teddy TITE<sup>1</sup>, Adrian-Claudiu POPA<sup>1</sup>, Maria-Iuliana CHIRICA<sup>1</sup>, Cristina BESLEAGA<sup>1</sup>, George LUNGU<sup>1</sup>, Irina ZGURA<sup>1</sup>, Catalin NEGRILA<sup>1</sup>, Daniel CRISTEA<sup>2</sup>, Cristiana TANASE<sup>3</sup>, José M.F. FERREIRA<sup>4</sup></b> <sup>1</sup> National Institute of Materials Physics, 077125 Magurele, Romania <sup>2</sup> Transilvania University of Brasov, 500068 Brasov, Romania <sup>3</sup> “Victor Babeş” National Institute of Pathology, 050096 Bucharest, Romania <sup>4</sup> CICECO—Aveiro Institute of Materials, Department of Materials and Ceramics Engineering, University of Aveiro, 3810-193 Aveiro, Portugal
<b>P27</b>	<b><i>The potential applications of the polyaniline/carbon nanoparticles composites in the azathioprine detection</i></b> <b>Adelina UDRESCU, Mihaela BAIBARAC, N'Ghaya TOULBE, Elena MATEI</b> National Institute of Materials Physics, 077125 Magurele, Romania
<b>P28</b>	<b><i>Composites based on reduced graphene oxide for medical applications</i></b> <b>Mirela VĂDUVA, Mihaela BAIBARAC</b> National Institute of Materials Physics, 077125 Magurele, Romania
<b>P29</b>	<b><i>Composites based on biogenic Silver, Gold, Silver Chloride and Zinc Oxide Structures as green multifunctional platforms for biomedical applications</i></b> <b>Irina ZGURA<sup>1</sup>, Monica ENCULESCU<sup>1</sup>, Valentin-Adrian MARALOIU<sup>1</sup>, Cosmin ISTRATE<sup>1</sup>, Raluca NEGREA<sup>1</sup>, Liviu NEDELCU<sup>1</sup>, Nicoleta BADEA<sup>2</sup>, Camelia UNGUREANU<sup>2</sup>, Marcela-Elisabeta BARBINTA-PATRASCU<sup>3</sup>, Mihaela BACALUM<sup>4</sup></b> <sup>1</sup> National Institute of Materials Physics, 077125 Magurele, Romania <sup>2</sup> Faculty of Chemical Engineering and Biotechnologies, National University of Science and Technology POLITEHNICA Bucharest, 011061 Bucharest, Romania <sup>3</sup> Faculty of Physics, University of Bucharest, 077125 Magurele, Romania <sup>4</sup> Department of Life and Environmental Physics, Horia Hulubei National Institute for Physics and Nuclear Engineering, 077125 Magurele, Romania
<b>P30</b>	<b><i>Nanostructured human serum albumin as drug delivery carrier to cancer cells</i></b> <b>Claudia. G. CHILOM<sup>1</sup>, Sorina IFTIMIE<sup>1</sup>, Adriana E. BALAN<sup>1</sup>, Teodor A. ENACHE<sup>2</sup>, Daniela OPREA<sup>1,2</sup>, Monica ENCULESCU<sup>2</sup></b> <sup>1</sup> Faculty of Physics, University of Bucharest, 077125 Magurele, Romania <sup>2</sup> National Institute of Materials Physics, 077125 Magurele, Romania

15 May, 2024

## INVITED ORAL PRESENTATIONS

<b>Session 3: Chairman – José M.F. FERREIRA</b>	
09:00	<b>Fabiana ARDUINI</b> Department of Chemical Science and Technologies, University of Rome “Tor Vergata”, Italy <b>Paper-based printed electrochemical (bio)sensors as smart and sustainable point-of-care devices</b>
09:30	<b>Antonia PAJARES VICENTE</b> Department of Mechanical, Energy and Materials Engineering, University of Extremadura, Spain <b>Improving the mechanical performance of bioceramic scaffolds for biomedical applications</b>
10:00	<b>Pedro MIRANDA GONZÁLEZ</b> Department of Mechanical, Energy and Materials Engineering, University of Extremadura, Spain <b>Leveraging the high resolution of digital light processing in the additive manufacturing of high-performance composites for biomedical applications</b>
10:30	<b>Mihaela MOISESCU</b> Department of Biophysics and Cellular Biotechnology, Faculty of Medicine, University of Medicine and Pharmacy „Carol Davila”, Romania <b>Nano-biomaterials’ interactions with cells: Challenges and opportunities</b>
11:00	<b>Coffee Break</b>
11:15	<b>Lucian BAIÁ</b> Faculty of Physics, Babes-Bolyai University, Romania <b>Composites based on biopolymers-bioactive glasses/glass-ceramics containing Cu and Au for tissue engineering applications</b>
11:45	<b>Jeroen VAN DEN BEUCKEN</b> Radboud University Medical Centre, Netherlands <b>Steering biological processes to stimulate bone formation</b>
12:15	<b>Daniela-Cristina BERGER</b> National University of Science and Technology POLITEHNICA Bucharest, Romania <b>Biocomposites based on functionalised mesoporous silica</b>
12:45	<b>Lunch</b>
<b>Session 4: Chairman – Jeroen VAN DEN BEUCKEN</b>	
14:00	<b>Stefano BELLUCCI</b> INFN—Laboratori Nazionali di Frascati, Italy <b>Nanomaterials for health science applications</b>
14:30	<b>Monica BAIÁ</b> Faculty of Physics, Babes-Bolyai University, Romania <b>Raman and SERS investigations on pharmaceuticals</b>
15:00	<b>Josef JAMPÍLEK – on-line presentation</b> Faculty of Science, Palacky University in Olomouc, Czech Republic

	<b>Drug delivery nanosystems for modern targeted therapy</b>
15:30	<b>Coffee Break</b>
16:00	<b>Simion AȘTILEAN</b> Faculty of Physics, Babes-Bolyai University, Romania <b>Plasmonic-based nanoplatfoms for light-activated therapy, bioimaging and sensing</b>
16:30	<b>Orlando FATIBELLO-FILHO</b> – <i>on-line presentation</i> Department of Chemistry, São Carlos Federal University, Brazil <b>Modified electrodes with nanostructured carbon and/or metallic composites for applications in electroanalysis</b>
17:00	<b>Commute to the Hotel Moxy</b>
18:30	<b>Sightseeing tour of Bucharest starting from Hotel Moxy, followed by Conference Dinner (20:00)</b>



16 May, 2024

## INVITED ORAL PRESENTATIONS

<b>Session 5: Chairman – Simion AȘTILEAN</b>	
09:00	<b>Mihaela DONI</b> National Institute for Research & Development in Chemistry and Petrochemistry, Romania <b>Biosensing approaches for development of innovative analytical systems for agriculture, food and environmental fields</b>
09:30	<b>Gabriela GRAZIANI</b> Polytechnic University of Milan, Italy <b>Nanostructured antibacterial films by Ionized Jet Deposition: An overview</b>
10:00	<b>Monica FLORESCU</b> Department of Fundamental, Prophylactic and Clinical Disciplines, Faculty of Medicine, Transilvania University of Brașov, Romania <b>Functional nanostructured materials for biomedical applications</b>
10:30	<b>Coffee Break</b>
11:00	<b>Marc Lamy DE LA CHAPELLE</b> Université du Mans, France; Babes-Bolyai University, Romania <b>Detection, identification and structural study of biomolecules by Surface Enhanced Raman Spectroscopy</b>
11:30	<b>Mariana Carmen CHIFIRIUC</b> Faculty of Biology, University of Bucharest, Romania <b>Novel therapeutic approaches for the management of malignant wounds</b>
12:00	<b>Casan-Pastor NIEVES</b> – <i>on-line presentation</i> Institute of Materials Science of Barcelona, Spain <b>Redox gradients in materials and unwired bipolar electrodes in neural systems</b>
12:30	<b>CONCLUDING REMARKS</b>
13:00	<b>Lunch</b>