



The Academy of Romanian Scientists

University POLITEHNICA of Bucharest
National Center of Micro and Nanomaterials



Virtual International Scientific Conference on

**“Applications of Chemistry in Nanosciences and
Biomaterials Engineering”**

NanoBioMat 2022 – Summer Edition

22-24 June 2022

Program

The program will be published on the official webpage of AOSR and UPB on 15.06.2022 as well as in the TEAMS Class. The link for the TEAMS Class is <https://bit.ly/3O3ZzRJ>.

The topics for the conference include, but are not limited to:

- novel materials;
- surface chemistry;
- air and soil bioremediation;
- composite materials and biomaterials;
- applications of natural compounds and chemical products;
- nanomaterials and bionanomaterials for the controlled release of biologically active molecules;
- bionanoproducts for tissue engineering and regeneration;
- advanced techniques for material processing.

Deadlines:

- | | |
|--------------------------------|---------------|
| 1. Registration: | 30.05.2022 |
| 2. Abstract submission: | 05.06.2022 |
| 3. Acceptance Notification: | 10.06.2022 |
| 4. Final Program announcement: | 15.06.2022 |
| 5. Conference: | 22-24.06.2022 |

Registration:

Registration should be done using the link: <https://bit.ly/3ztUwpy>.

Registration is free for all students and postdoctoral researchers (or equivalent).

Abstract submission:

Abstract should be submitted in MS Word document, by email, to Eng. Cristina CHIRCOV (cristina.chircov@upb.ro) on or before 05.06.2022. The abstract should be 150 – 300 words and it must be submitted using the template available in the registration link.

Scientific Committee

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Program

22 June 2022

09:00-09:15 – OPENING CEREMONY

Ecaterina ANDRONESCU – President of the Scientific Committee

Adrian-Alexandru BADEA – President of The Academy of Romanian Scientists

Mihnea Cosmin COSTOIU – Rector of the University Politehnica of Bucharest

Tudor PRISECARU – President of the University Politehnica of Bucharest Senate

09:15-11:15 – PLENARY SESSION

Chairs – Aldo BOCCACCINI, Ecaterina ANDRONESCU

09:15-09:45 – *Bioactive Glasses Doped with Biologically Active Ions for Tissue Engineering.*

Prof. Aldo R. BOCCACCINI

09:45-10:15 – *Advanced Composite Materials for Low Temperature Thermochemical Energy Storage Applications.* **Prof. Luigi CALABRESE**

10:15-10:45 – *Lipid Bilayers in The Bio-Nano World: Assets and Dangers.*

Prof. Carlos MARQUES

10:45-11:15 – *Cinchona Alkaloids and Their Derivatives as Multifunctional Chiral Ligands in Asymmetric Catalysis.* **Prof. Ion NEDA**

11:15-12:30 – POSTER SESSION (I)

Chairs – Herbert Ryan MARINI, Denisa FICAI

1. *Phytotoxicity of Cd(II) and Pb(II) in Single and Binary Mixture Solutions to Lavandula Angustifolia L. Seeds Germination.* **Laura Hagiuzaleschi**, Isabela-Maria Simion, Maria Apostol, Gabriel Ciprian Teliban, Mihai Stavarache, Adrian Nazare, Raluca-Maria Hlihor
2. *Biopolymer-Based Interpenetrated Hydrogels for Wastewater Treatment.* **Iulia Elena Neblea**, Tanța-Verona Iordache, Anamaria Zaharia, Andreea Olaru, Andreea Miron, Mircea Teodorescu, Andrei Sarbu, Anita-Laura Chiriac
3. *Molecularly Imprinted Polymer Based Electrochemical Sensor for Ephedrine Hydrochloride Detection.* **Sorin-Viorel Dolana**, Elena-Bianca Stoica, Tanța-Verona Iordache, Anamaria Zaharia, Anita-Laura Chiriac, Teodor Sandu, Andrei Sârbu, Ana-Mihaela Gavrila
4. *Application of Heterogeneous and Homogeneous Photocatalysis in the Treatment of Wastewater Contaminated with Organo-Persistent Pesticides.* **Maria Drăgan**, Andreea Iacob, Oana Dragostin, Magdalena Bîrsan, Oana Ionescu, Ioana Vasincu, Maria Apotrosoaei, Florentina Lupascu, Alin Focșa, Alexandru Sava, Lenuța Profîre, Cătălina Stan

5. *The Potential of Alfalfa (Medicago Sativa L.) in Phytoremediation of Soil Contaminated with Copper Ions.* **Ionela Catalina Vasilachi**, Petronela Cozma, Mariana Diaconu, Maria Gavrilescu
6. *Effects of Heavy Metals Stress on the Growth and Development of Brassica Napus (Rapeseed) at Laboratory Scale.* **Maria Paiu**, Petronela Cozma, Ionela Cătălina Vasilachi, Mariana Minuț, Mariana Diaconu, Maria Gavrilescu
7. *The Synthesis of Novel Polyssacharide Based Nanocomposite Materials. Comparative Study of Cloisite Clay Type.* Raluca Ianchis, **Ioana Catalina Gifu**, Elvira Alexandrescu, Maria Minodora Marin, Sabina Burlacu, Catalin Mihaescu, Cristina Lavinia Nistor, Cristian Petcu
8. *Pulsed Laser Emission in Rhodamine B - Doped DNA Biopolymer.* Adrian Petris, Ileana Rau, **Petronela Gheorghe**
9. *Anticancer Activity of Cyanobacteria.* **Alina Trofim**, Cezara Bivol, Oleg Turcanu
10. *Advances in Green Synthesis of Metal Oxide Nanoparticles used in Tissue Engineering.* **Denisa-Maria Radulescu**, Ecaterina Andronescu, Alexandru-Mihai Grumezescu, Ionela Andreea Neacsu, Adrian-Ionut Nicoara
11. *Current Trends in the Synthesis of Natural Hydroxyapatite-Based Materials for Tissue Engineering.* **Diana-Elena Radulescu**, Ecaterina Andronescu, Alexandru-Mihai Grumezescu, Ionela Andreea Neacsu, Otilia Ruxandra Vasile
12. *Magnetite Microspheres for the Controlled Release of Rosmarinic Acid.* **Cristina Chircov**, Diana-Cristina Pîrvulescu, Alexandra Cătălina Bîrcă, Ecaterina Andronescu
13. *Collagen Wound Dressings Loaded with CuO- and ZnO-based Microspheres.* **Alexandra Cătălina Bîrcă**, Mihai Adrian Minculescu, Alexandru Mihai Grumezescu, Cristina Chircov, Ecaterina Andronescu
14. *Comparative Study of a Glycopeptide Antibiotic Release Behavior from Mesoporous Materials Using Different Loading Methods.* **Georgiana Dolete**, Bogdan Purcăreanu, Anton Ficaï, Dan Eduard Mihaiescu, Ovidiu Oprea, Roxana Trusca
15. *Application of Aerobic Granular Sludge Technology for Treating Aminoacids Compounds from Piggery Industry.* **Barbara Muñoz-Palazon**, Aurora Rosa-Masegosa, Lizandra Perez, Jesus Gonzalez Lopez, Alejandro Gonzalez Martinez

12:30-13:30 – LUNCH BREAK

13:30 - 16:00 – SESSION I. ADVANCED TECHNIQUES FOR MATERIAL DESIGN AND PROCESSING

Chairs – Jörg OPITZ, Ioana DEMETRESCU

- 13:30-13:45 – *Graphene-Quantum-Dots-Decorated Nickel Aluminate Spinel Binary Nanostructure as Diagnostic Tool in Electrochemical Biosensing.* **Elzbieta Regulska**, Joanna Breczko, Anna Basa, Beata Szydłowska, Katarzyna Kakareko, Alicja Rydzewska-Rosołowska, Tomasz Hryszko
- 13:45-14:00 – *Calcium Phosphate Coatings Obtained by Radiofrequency Magnetron Sputtering For Bone Tissue Engineering Applications.* **Maria E. Zarif**, Sasa A. Yehia, Bogdan Biță, Andreea Groza, Alexandru Grumezescu, Ecaterina Andronescu
- 14:00-14:15 – *An Electrically and Optically Tuned Surfactant Free Non-Aqueous Self-Stabilized Nematic Emulsions for Optical Device Applications.* **Ashok Chaudhary**, Ravi K. Shukla
- 14:15-14:30 – *Water-Soluble Schiff Base and its Corresponding Palladium Complex: Synthesis, Characterization, Oral Toxicity and Anticancer Activities.* **Khadija Khaldoune**, Ali Hasnaoui, Ali Oubella, Karima Lafhal, Larbi Elfirdoussi, Naima Fdi, Mustapha AitAli
- 14:30-14:45 – *Preparation and Wetting Mechanism of Hierarchically Textured Aluminum-Based Superhydrophobic Surfaces.* **Amani Khaskhoussi**, Luigi Calabrese, Edoardo Proverbio
- 14:45-15:00 – *Thermodynamic Approach of Curcumin and Whey Protein Binding.* **Levete Racz**, Csaba-Pal Racz, Ossi Horovitz, Aurora Mocanu, Maria Tomoaia-Cotisel
- 15:00-15:15 – *3D Printing of $Ca_{10}(PO_4)_6(OH)_2$ Obtained from Natural Sources.* **Maria-Eliza Pușcașu**, Ștefania Chiriac, Miruna-Adriana Ioța, Laura-Mădălina Cursaru, Roxana Mioara Piticescu
- 15:15-15:30 – *Bacterial Cellulose Use for Templating Growth of MOF Nanoparticles for Oxygen Reduction Reaction Electrocatalytic Activities.* **Berna Alemdag**, Aytekin Uzunoglu, Semra Unal Yildirim, Unal Sen, Mustafa Erkartal, Cem Bulent Ustundag
- 15:30-15:45 – *Magnetron Sputtered Titania and Carbon Fiber Cloth Composite and its Application in Electrochemical Supercapacitors.* **Aleksei P.Kozlov**, Ekaterina A. Arkhipova, Serguei V. Savilov
- 15:45-16:00 – *Fabrication of MOS Gas Sensors.* **Ghazala Ansari**, Vinod Kumar
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13:30 - 15:45 – SESSION II. NATURAL BIOACTIVE COMPOUNDS

Chairs – Viorel NACU, Anton FICAI

13:30-13:45 – *Determination of Total Poliphenols Content in Taraxacum Officinale Leaves.*

Ala Fulga, Valeriana Pantea

13:45-14:00 – *Therapeutic Formulations Containing Plant Secondary Metabolites Used to*

Increase the Efficiency of Antibiotics. **Cristina Teodora Dobrota**, Diana Alexandra Florea, Rahela Carpa, Gheorghe Tomoaia, Aurora Mocanu, Maria Tomoaia-Cotisel

14:00-14:15 – *Synthesis of Medicinal Plant Based Bioactive Electrospun Nanofibrous Mats and Their Effect on The Antioxidant Activity.* **Ayşe Betül Demirel**, Serap Ayaz Seyhan, Dilek Bilgiç Alkaya, Sumeyye Cesur, Oguzhan Gunduz

14:15-14:30 – *Characterization and Application of Silver Nanoparticles Decorated Electrospun Nanofiber Loaded with Naringenin.* **Ayşem Birinci**, Serap Ayaz Seyhan, Dilek Bilgiç Alkaya, Sumeyye Cesur, Oguzhan Gunduz

14:30-14:45 – *Design and Characterization of Medicinal Plant Based Nanofibers and Their Effect on The Antioxidant Activity.* **Tuğçenur Ekici**, Elif Doğrul, Dilek Bilgiç Alkaya, Serap Ayaz Seyhan, Sumeyye Cesur, Oguzhan Gunduz

14:45-15:00 – *Chitosan, Chitin from Marine Resources - Basic Bricks in The Obtaining of Multifunctional Materials.* **Oana-Maria Memecică**, Cătălina Uşurelu, Ana Maria Albu, Ileana Rău

15:00-15:15 – *Curcumin Loaded Ethyl Cellulose Microparticles on 3D Scaffolds for Diabetic Wound Healing.* **Melih Musa Ayran**, Songul Ulag, Rıdvan Yıldırım, Oguzhan Gunduz

15:15-15:30 – *Mesoporous Silica Materials Loaded with Gallic Acid with Antimicrobial Potential.* **Gabriela Petrisor**, Denisa Ficai, Ludmila Motelica, Roxana Doina Trusca, Alexandra Catalina Bîrca, Bogdan Stefan Vasile, Georgeta Voicu, Ovidiu Cristian Oprea, Augustin Semenescu, Anton Ficai, Mircea Ionut Popitiu, Irina Fierascu, Radu Claudiu Fierascu, Elena Lacramioara Radu, Lilia Matei, Laura Denisa Dragu, Ioana Madalina Pitica, Mihaela Economescu, Coralia Bleotu

15:30-15:45 – *Investigation of the Potential of Whey Protein/Vitamin E Particles Coated Whey Protein/PVA Nanofibers for the Treatment of Muscle Loss.* **Kudret Irem Deniz**, Songul Ulag, Oguzhan Gunduz

16:00 - 16:30 – BREAK

16:30 - 18:45 – SESSION III. BIOMATERIALS FOR TISSUE ENGINEERING AND REGENERATION (I)

Chairs – Oguzhan GUNDUZ, Maria TOMOAI A-COTIȘEL

- 16:30-16:45 – *Production of 3D Printed Dental Membrane Scaffold Reinforced with Pomegranate Extract.* **Hatice Karabulut**, Songul Ulag, Oguzhan Gunduz
- 16:45-17:00 – *Nanocomposites Based on Hydroxyapatite and Vitamins.* **Alexandra Avram**, Aurora Mocanu, Ossi Horovitz, Gheorghe Tomoiaia, Sorin Riga, Maria Tomoiaia-Cotisel
- 17:00-17:15 – *New Innovative Dressing with Self-Adapting and Self-Healing Properties for Chronic Wounds Treatment.* **Simona Tatarusanu**, Florentina Lupascu, Alexandru Sava, Bianca-Stefania Profire, Andreea Iacob, Anca Rusu, Paula Stamate, Andra Manaila, Lenuta Profire
- 17:15-17:30 – *Novel Bioactive Chitosan-PEO-Based Nanofibers for Wound Healing Applications: An In Vivo Study.* **Oana Maria Ionescu**, Andreea Teodora Iacob, Francesca Floris, Alessia Farci, Teodora Hanghichel, Ioannis Gardikiotis, Irina-Draga Căruntu, Simona Giușcă, Lenuța Profire
- 17:30-17:45 – *Dox Loaded PVA Tumor Dressing for Cancer Therapy.* **Gözde Çelik**, Ahsen Yilmaz, Yağmur Şimşek, Cem Bülent Üstündağ
- 17:45-18:00 – *Production and Characterisation of PVA/Whey Protein/Hydroxyapatite/Gentamicin Loaded Scaffolds for Bone Tissue Engineering Applications.* **Tufan Arslan Tut**, Sumeyye Cesur, Oguzhan Gunduz
- 18:00-18:15 – *Design and Fabrication of Metformin-Loaded Tri-Layer PCL/PVA/PCL Scaffolds for Chronic Wound Healing.* **Sena Harmanci**, Sumeyye Cesur, Oguzhan Gunduz, Cem Bulent Ustundag
- 18:15-18:30 – *Biomimetic Chitosan/PEO Nanofibers as Non-Cytotoxic Wound Dressings.* **Andreea-Teodora Iacob**, Oana-Maria Ionescu, Teodora Iurașcu, Maria Apotrosoaei, Florentina Lupașcu, Ioana Vasincu, Alexandru Sava, Maria Drăgan, Dan Lupașcu, Lenuța Profire
- 18:30-18:45 – *Composite Coatings with Graphene Oxide for Dental and Orthopedic Implants.* **Radu Nartiță**, Daniela Ioniță, Marius Enachescu, Ioana Demetrescu

16:30 - 19:00 – SESSION IV. ENVIRONMENTAL APPLICATIONS OF MATERIALS AND NANOMATERIALS

Chairs – Serguei SAVILOV, Ovidiu OPREA

- 16:30-16:45 – *A Sustainable Solution: Biological Treatment of Morpholine and its Derivatives (MAID) in Environment.* **Rupak Kumar**
- 16:45-17:00 – *CO₂ Capture Performance of Sulfur and Oxygen Doped Carbons Derived from a Molecular Precursor.* **Ali Can Zaman**
- 17:00-17:15 – *Sustainability Analysis of Cr(VI) Removal from Wastewaters Using Saccharomyces Cerevisiae.* **Cătălina Filote**, Mihaela Roșca, Isabela Maria Simion, Raluca Maria Hlihor
- 17:15-17:30 – *Statistical and Soft Computing Approaches for the Evaluation and Optimization of Bioremediation Processes.* **Mihaela Roșca**, Raluca-Maria Hlihor, Petronela Cozma, Isabela-Maria Simion, Maria Gavrilescu
- 17:30-17:45 – *Sampling Devices Used to Collect Indoor Airborne Viruses.* Diana Mariana Cocârță, **Anca Cristina Gogoncea**, Mariana Prodana, Ioana Demetrescu, Constantin Streche, Adrian Alexandru Badea
- 17:45-18:00 – *Nanomaterials as Efficient Sorbents for the Development of Sustainable Analytical Methods.* **Bárbara Socas Rodríguez**, Ruth Rodríguez-Ramos, Adrián Conde-Díaz, Álvaro Santana-Mayor, Antonio V. Herrera-Herrera, Miguel Ángel Rodríguez-Delgado
- 18:00-18:15 – *Study of Nickel, Copper and Silver Co-Doped ZnO Based Nanocrystalline DMS.* **Shaveta Thakur**
- 18:15-18:30 – *Glass Fabrics Functionalisation for the Development of High Performance Sandwich Structures.* **George-Valentin Săftoiu**, Carolina Constantin, Adrian-Ionuț Nicoară, George Pelin, Anton Fikai
- 18:30-18:45 – *Recent Advances in the Application of Nanobiotechnology for Sustainable Use of Bioresources: A Sine Qua Non for the Ever-Increasing Global Population.* **Charles Oluwaseun Adetunji**
- 18:45-19:00 – *Air and Soil Bioremediation.* **Gori Goyal**

23 June 2022

09:00 - 11:30 – SESSION V. DRUG DELIVERY APPLICATIONS OF NANOMATERIALS AND BIOMATERIALS

Chairs – Carlos MARQUES, Victor FRUTH-OPRIŞAN

09:00-09:15 – *The Influence of Coordinative Compounds, Thiosemicarbaside Derivates on the Thiol-Disulfide Groups in Human Red Blood Cells.* **Valeriana Pantea**, Evelina Lesnic, Ala Fulga

09:15-09:30 – *Non-Pressurized Topical Spray.* **Neelam Pawar**

09:30-09:45 – *Antibacterial Ability of Poly Lactic Acid Microspheres Loaded with Hydroxyapatite and Vancomycin.* **Gertrud-Alexandra Paltinean**, Sorin Rapuntean, Gheorghe Tomoiaia, Sorin Riga, Aurora Mocanu, Maria Tomoiaia-Cotisel

09:45-10:00 – *Pharmaceutical Approaches of Nanobodies.* **Marina Ionela Ilie**, Adrian Siluan Ivan, Doina Drăgănescu, Bruno Ştefan Velescu, Denisa Ioana Udeanu, Andreea Letiţia Arsene

10:00-10:15 – *Exosomes in Neuroscience as Biomaterials.* **Jale Odabaşı Bağcı**, Şule Aydın Türkoğlu, Esra Cansever Mutlu

10:15-10:30 – *Novel Highly Efficient Multi-Target Nanoparticles in Type 2 Diabetes Mellitus.* **Florentina Geanina Lupaşcu**, Andreea Teodora Iacob, Ioana Vasincu, Maria Apotrosoaei, Georgiana Tauşer, Maria Drăgan, Magdalena Bârsan, Alin Focşa, Alexandru Sava, Andra Ababei, Simona Tătăruşanu, Profire Lenuţa

10:30-10:45 – *Preparation of Tretinoin Nanocrystals Loaded Gel for Improvement of Dermal Permeation and Anti-Cancer Activity.* Akash Sharma, **Manish Kumar**

10:45-11:00 – *Drug Designing for More Potent Drug Towards H1N1 Influenza Virus.* **Aakanksha Yadav**

11:00-11:15 – *Phytochemical and Pharmacological Evaluation of Myricaria Germanica from Northern Himalayan Region of India.* **Nissar Ahmad**, Saima Shafi, W.Y. Raja, D. Tewari, Z.A. Bhat

11:15-11:30 – *Formulation of Capsaicin Nanoparticles: Potential Uses in Food, Pharmacy and Medicine Applications.* **Moncef Chouaibi**

11:30-12:30 – POSTER SESSION (II)**Chairs – Esra Cansever MUTLU, Andreea-Teodora IACOB**

1. *The Synthesis of Novel Polyssacharide Based Nanocomposite Materials. the Study of Inorganic Filler Concentration.* **Raluca Ianchis**, Ioana Catalina Gifu, Elvira Alexandrescu, Maria Minodora Marin, Sabina Burlacu, Catalin Mihaescu, Cristina Lavinia Nistor, Cristian Petcu
2. *Novel Nanocomposites Based on Mesoporous Titania/Acrylonitrile Obtained by Host-Guest Method.* **Andreea Miron**, Tanta-Verona Iordache, Sorin-Viorel Dolana, Marinela Dumitru, Ana-Mihaela Gavrilă, Anamaria Zaharia, Horia Iovu, Anita-Laura (Radu) Chiriac
3. *Influence of CaCO₃ Addition on Alkali Activated Materials.* **Adrian-Ionuț Nicoară**, Adelina Carmen Ianculescu
4. *Molecularly Imprinted Supermacroporous Cryogels for Penicillin G Adsorption.* **Marinela Victoria Dumitru**, Tanta-Verona Iordache, Miron Andreea, Teodor Sandu, Sorin Viorel Dolana, Horia Iovu, Andrei Sarbu, Anita-Laura (Radu) Chiriac
5. *MAPLE-Coatings from Bioglasses and Antibiotics for Improved Implant Surfaces.* **Irina Negut**, Carmen Ristoscu, Tatiana Tozar, Valentina Grumezescu, Mihaela Dinu, Anca Constantina Parau, Marcela Popa, Miruna S. Stan
6. *Phosphatic Nanomaterials with High Performances for Organic Pollutants Adsorption.* **Roxana Ioana Brazdis**, Sorin-Marius Avramescu, Irina Fierascu, Anda Maria Baroi, Toma Fistos, Radu Claudiu Fierascu
7. *Potential Antimicrobial Apatitic Materials Improved with Different Metals for Heritage Science.* **Toma Fistos**, Roxana Ioana Brazdis, Anda Maria Baroi, Irina Fierascu, Lia-Mara Ditu, Valentin Raditoiu, Radu Claudiu Fierascu
8. *Innovative Drug-Delivery Scaffolds Used for Post Operatory Infections Treatment.* **Adrian Moraru**, Ana-Maria Pușcașu, Cristina Chircov, Alexandra Cătălina Bîrcă, Adrian Surdu, Vladimir Lucian Ene, Ionela Neacșu
9. *Prevention and Treatment of Nosocomial Infections: Review.* **Marian Rașcov**, Ecaterina Andronescu, Anton Fikai, Ovidiu Cristian Oprea
10. *Development of New Zinc Oxide Antiseptics for the Clinical Treatment of Wounds.* **Irina Elena Doicin**, Ionela Andreea Neacsu, Vladimir Lucian Ene, Bogdan Stefan Vasile, Ecaterina Andronescu
11. *Thiol-Disulfide Groups in Patients with Pulmonary Tuberculosis.* **Evelina Lesnic**, Valeriana Pantea
12. *Barrier Performance of Spray Coated Nanocellulose Film.* **Kirubanandan Shanmugam**

13. *Magnetic Core-Shell Nanoparticles Obtained Through Different Synthesis Methods.* **Dan**

Adrian Vasile, Bogdan Stefan Vasile, Anton Ficai

14. *Antimicrobial Activity of Cinnamaldehyde Schiff Bases.* **Neetu Singh**

15. *Application of Nanomaterials in Food: Processing and Characteristics.* **Mohammad Zarein**

12:30 - 13:30 – LUNCH BREAK

13:30 - 15:30 – SESSION VI. CONTROLLED RELEASE OF ACTIVE SUBSTANCES FOR BIOMEDICAL APPLICATIONS

Chairs – Domenico LOMBARDO, Lenuța PROFIRE

13:30-13:45 – *Controlled Release of Drugs from Three-Dimensional Scaffolds Containing Drug-Loaded Photocatalytic Bismuth Ferrite Nanoparticles.* **Sule Ilgar**, Songul Ulag, Oguzhan Gunduz, Cem Bulent Ustundag, Musa Turker

13:45-14:00 – *The Effect of Crosslinking Time on the Release of Gentamicin from Nanofibers.* **Esra Pilavci**, Sumeyye Cesur, Elif Ilhan, Mustafa Sengor, Ewa Kijeńska-Gawrońska, Oguzhan Gunduz

14:00-14:15 – *Release Profile of Some Cyclodextrin-Ibuprofen Derivatives Complexes - In Vivo Study.* **Ioana-Mirela Vasincu**, Maria Apotrosoaei, Florentina Lupașcu, Andreea Iacob, Maria Drăgan, Alexandru Sava, Gabriela Dumitrița Stanciu, Anca-Roxana Petrovici, Narcisa Marangoci, Mariana Pinteală, Lenuța Profire

14:15-14:30 – *New Nitric Oxide-Releasing Indomethacin Derivatives: Synthesis and Biological Evaluation.* **Alexandru Sava**, Andreea Iacob, Ioana Vasincu, Florentina Lupascu, Maria Apotrosoaei, Alin Focsa, Maria Dragan, Alina Panainte, Nela Bibire, Frederic Buron, Sylvain Routier, Lenuța Profire

14:30-14:45 – *Nanostructured Drug Delivery Systems in Oncotherapy.* **Paul Adrian Tărăbuță**, Anton Ficai

14:45-15:00 – *Fluconazole and Cinnamaldehyde Loaded-Multilayer Elektrospun Nanofibers for the Treatment of Fungal Keratitis.* **Elif Ilhan**, Sumeyye Cesur, Faik Nuzhet Oktar, Oguzhan Gunduz

15:00-15:15 – *Graphene-Based Drug Loaded Drug Delivery System for Cancer Treatment.* **Reyhan Yanıkoğlu**, Fatih Çiftçi, Zeynep Karavelioğlu, Rabia Çakır Koç, Cem Bülent Üstündağ

15:15-15:30 – *Bioactive Organometallics.* **Irina-Gabriela Voinea**

13:30-16:00 – SESSION VII. ADVANCED BIOMEDICAL APPLICATIONS

Chairs – Luigi CALABRESE, Maria GAVRILESCU

13:30-13:45 – *Structural Analysis of Dibenzepine and Butyrophenone Derivatives in the Context of Ventral Striatum Abnormalities in Schizophrenia.* **Łukasz Grabowski**

13:45-14:00 – *Advanced Oxidation Protein Products Variation in Experimental Ovarian Torsion.* **Cornelia Lazăr**, Olga Tagadiuc, Silvia Stratulat

14:00-14:15 – *Bismuth Nitrate Added Polymer-Based Strain Sensors for Biomedical Applications.* **Merve Sırtıkara**, Mustafa Şengör

14:15-14:30 – *Application of Gold Nanoparticles.* **Rahul Kanaoujiya**, Shekhar Srivastava

14:30-14:45 – *Physicochemical Properties of Shea Butter Oil and Its Application.* **Maurice Jemkur**, Shoge Monsurat

14:45-15:00 – *Polymorphism Genetics Aspect; The Challenging of Personalized Medicine in Indonesia.* **Syahrul Tuba**, Rifly Aprianto, Gilang Bhakti Nusantara, Raja Rajendra, Fatkhu Rahman

15:00-15:15 – *Synthesis and Biomedical Application of Metal Nanoparticles.* **Mittal Thakkar**

15:15-15:30 – *Synthesis of Copper Nanoparticles from Origanum Species.* **Dhivya A. Sasikala**

15:30-15:45 – *Applications of Ceria Nanoparticles.* **Aasma Bibi**, Humaira Razzaq

15:45-16:00 – *Graphene as Smart Material.* **Abullais Nehal Ahmed**

15:30 - 16:00 – BREAK

16:00 - 18:50 – SESSION VIII. MATERIALS AND NANOMATERIALS FOR ADVANCED APPLICATIONS

Chairs – Cem Bulent USTUNDAG, Radu FIERASCU

16:00-16:20 – *The Role of Micro- and Nanoparticles in Stratospheric Ozone Depletion.* **Serguei V. Savilov**, Natalia E. Strokova, Natalia N. Kuznetsova

16:20-16:35 – *Barrier Performance of Spray Coated Nanocellulose Film.* **Kirubanandan Shanmugam**

16:35-16:50 – *Lipid Membrane Hydroperoxidation Favor Ion Permeability.* **Eulalie Lafarge**, Pierre Muller, André Schroder, Jan Behrends, Ekaterina Zaitseva, Carlos Marques

16:50-17:05 – *DLP 3D Printing of GelMA Microneedles.* **Dilruba Baykara**, Tuba Bedir, Elif Ilhan, Cem Bulent Ustundag, Oguzhan Gunduz

17:05-17:20 – *Indazole as an Inhibitor of Brass Corrosion in Chloride Solution 1 M HCl:*

Electrochemical/Surface Studies. **Zakia Aribou**, Nidal Khemmou, Moussa Ouakki, Sara Sibous, Rida Alah Belakhmima, Abdelaziz Souzi, Mohamed Ebn Touhami

17:20-17:35 – *Bioinformatics Investigation of Mercury Methylating in Mycobacterium.*

Henry Njoku

17:35-17:50 – *Conversion of Zeolite- X into Various Ion Exchanged Forms and Investigation of Their Catalytic Efficiency as Green Heterogeneous Catalyst for the Synthesis of 5-Substituted 1H-Tetrazole Derivatives.* **Sami Ullah bhat**

17:50-18:05 – *Mechanically Robust Smart Hydrogel for Dye Removal of Pesticides.* **Aabid**

Hussian Shalla, Riyaz Ahmad Bhat

18:05-18:20 – *The Enhancement of The Performance of Photovoltaic Parameters of NiOx Thin Films Assisted Silicon Solar Cell through Down Shifting.* **Chandra Kumar**, Antonio Zarate, Arturo Martinez

18:20-18:35 – *Study of Nanocrystallin Superconductors.* **Sumit Kumar Gupta**

18:35-18:50 – *Air and Soil Bioremediation.* **Anamika Gautam**

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09:00 - 11:00 – SESSION IX. BIOMATERIALS FOR TISSUE ENGINEERING AND REGENERATION (II)

Chairs – Heiko FRANZ, Radu PITICESCU

09:00-09:15 – *Fabrication of PLA/PVA/Graphene Oxide Nanofibers for Biomedical Applications.*

Fatih Altun, Mustafa Şengör, Songul Ulag, Oguzhan Gunduz

09:15-09:30 – *Biocompatible Coatings with Antimicrobial Properties on Stainless Steel Supports.*

Maxim Maximov, Roxana Trusca, Anton Ficai

09:30-09:45 – *Production of Antimicrobial Manganese Loaded Hydroxyapatite/Sodium Alginate Bone Scaffolds with Additive Manufacturing.* **Muge Koyun**, Selin Yasar, Elif Ilhan, Nazmi Ekren, Bilal Cinici, Oguzhan Gunduz

09:45-10:00 – *Production of 3D-printed PVA-Sodium Alginate-GelMA based Wound Dressing Scaffolds for the Treatment of Burns.* **Muhammet Sefa Izgordu**, Songul Ulag, Oguzhan Gunduz

10:00-10:15 – *Cerium-substituted Hydroxyapatite for Bone Regeneration.* **Alexandra-Cristina Burdusel**, Ecaterina Andronescu, Alexandru-Mihai Grumezescu, Anton Ficai, Alina Maria Holban

10:15-10:30 – *Morphology, Structural and Thermal Degradable Properties of Carboxymethyl Cellulose/CuO Nanoparticles.* **Win Pa Pa Phy**, Yamin Thet, May Thazin Kyaw, Ngwe Sin, Aung Than Htwe

10:30-10:45 – *Three-Dimensional Polycaprolactone Scaffold Combined with Tetracycline-Loaded Electrospray Particles.* **Rabia Betul Sulutas**, Sumeyye Cesur, Oguzhan Gunduz

10:45-11:00 – *Retinoids for Dermatological Applications – Cosmetic Formula with Retinol Impregnated in Bioglass – Overview of Skin Aspect Improvement on Patient with Acne.* **Ioana Lixandru Matei**

11:00-12:00 – POSTER SESSION (III)

Chairs – Vladimir BAULIN, Bogdan Stefan VASILE

1. *Molecularly Imprinted Surfaces Doped with Conductive Polymers for Lipopolysaccharide Recognition.* **Ana-Lorena Neagu**, Bianca-Elena Stoica, Ana-Mihaela Gavrilă, Andreea Miron, Sorin Dolana, Andrei Sarbu, Horia Iovu, Tanta-Verona Iordache
2. *Design and In Vitro Evaluation of New Electrospun Nanofibers Based on Chitosan/Polyvinyl Alcohol for Wound Healing.* **Teodora Iuraşcu**, Teodora A. Iacob, Alexandru Sava, Oana M. Ionescu, Lenuţa Profire
3. *The Influence of Nanomaterials on the Grapevine Stomata.* **Daniela-I. Sărdărescu**, Diana E. Vizitiu, Radu C. Fierăscu, Irina Fierăscu, Liliana C. Soare, Camelia Ungureanu, Elena C. Buciumeanu, Anda M. Baroi
4. *Chitosan/Hydroxyapatite Based Composite Structures for Bone Cancer Treatment.* **Alina Florentina Vladu**, Ludmila Motelica, Alexandra Ene, Ecaterina Andronescu, Ionela Neacsu, Anton Ficai
5. *Bee Derived Products and Their Applications in Skin Tissue Engineering.* **Corina Dana Dumitru**, Ionela Andreea Neacsu, Alexandru Mihai Grumezescu, Ecaterina Andronescu, Denisa Ficai
6. *Coordination Compounds of Cu(II) and Bi(III) with Ethylenediaminetetraacetate Ions and 2-Acetylpyridine Thiosemicarbazones.* **Elena Neguta**, Greta Balan, Aurelian Gulea, Ion Bulimestru
7. *Black Phosphorus: Properties, Synthesis, and Applications.* **Andra-Maria Sîrmon**, Ecaterina Andronescu, Ionela-Andreea Neacşu, Vasile-Adrian Surdu, Alexandru Mihai Grumezescu
8. *Optimization of Alginate Micro/Nanoparticles Preparation by Emulsification/Internal Gelation Method Using Box-Behnken Design.* **Naima Faghmous**, Djallel Bouzid

9. *Formulation and Characterization of Topical Niosomal Gel containing Aceclofenac and Serratiopeptidase.* **Rama Shukla**
10. *Analysis of Upconversion Luminescence in $Y_2O_3:Er, Yb$ Phosphors.* **Liviu Dudaș**, Angela Enachi, Daniela Berger, Cristian Matei
11. *Gelatin Cryogels in Wound Healing: Properties and Synthesis.* **Daniela Alina Ionita**, Ecaterina Andronescu, Ionela Andreea Neacsu, Vasile Adrian Surdu, Alexandru Mihai Grumezescu
12. *Structural, Impedance and Dielectric Behavior of Strontium Hexa Ferrites for Energy Applications.* **Muhammad Salman Habib**, Muhammad Asif Rafiq
13. *Experimental Study of ZnO /Porous Silicon Nanocomposites Prepared by Électro Déposition Technique.* **Naceur Selmane**, Ali Cheknane
14. *Climate Variability Over Northwest Himalayan Region.* **Neha**, R. K. Dogra, N. Kumar
15. *Graphene.* **Rahul Kanaoujiya**

12:00 - 13:00 – LUNCH BREAK

**13:00 - 16:00 – Fate of ESKAPE Bacteria from Hospital to Water Bodies – Lessons from
RADAR Project**

Chairs – Carmen CHIFIRIUC

1. *Fate of the Bacterial Load from Hospitals to WWTP and Natural Aquatic Bodies.* **Vaideanu M.**, Banciu A., Stoica C., Gheorghe S., Lucaciu I., Nita-Lazar M.
2. *Emerging Antimicrobial Nanotechnologies.* Denisa Ficai, Georgiana Dolete, Alexa Croitoru, Marcela Popa, Laura Boanță, Dan Eduard Mihaescu, **Anton Ficai**, Ecaterina Andronescu, Mariana-Carmen Chifiriuc
3. *Evaluation of Antioxidative Status in *Carassius Gibelio* Collected from Bucharest Lakes.* **Alistar Cristina F.**, Ionela C. Nica, Sorina N. Voicu, Nicolai Craciun, Miruna S. Stan, Anca Dinischiotu
4. *Abundance of ESKAPE Bacteria in Municipal Waste Waters and Receiving Water Bodies.* **Popa Marcela**, Nita-Lazar M., Marutescu Luminita, Gheorghe Irina, Czobor Ilda, Popa Laura, Mariana Carmen Chifiriuc
5. *Phenotypic Evaluation of the Enterobacteriales Antibigram - Lessons for Practice through the RADAR Project.* Codiță Irina, Cristea Daniela, Dinu Sorin, Dragomirescu Cerasella Cristina, Drăgulescu Carmina, Lixandru Brândușa, Militaru Cornelia, **Muntean Andrei-Alexandru**, Muntean Mădălina-Maria, Oprea Mihaela, Preda Mădălina, Usein Codruța, Prof. Dr. Mircea Ioan POPA

6. *Extended Genotypic Analysis of ESKAPE Resistome in Clinical and Environmental Samples.*

Marius Surleac, **Ilda Czobor Barbu**, Irina Gheorghe, Simona Paraschiv, Mariana Carmen Chifiriuc, Dan Oțelea

16:00-16:30 – CLOSING CEREMONY