



BraMat 2024

13TH INTERNATIONAL CONFERENCE ON MATERIALS SCIENCE & ENGINEERING

Braşov - ROMANIA
March 13 - 16, 2024

PROGRAM OVERVIEW

Conference's Partners:

Namicon, Sartorom, Struers, AMS 2000, Global Source, Nanoteam, Standard Service



Organized by

Materials Science and Engineering Faculty
Transilvania University of Brasov, Romania
and

Technical Sciences Academy of Romania – ASTR
Romanian Foundry Technical Association – ATTR
Romanian Welding Society - ASR

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Maria STOICĂNESCU

Ionuț UNCU

Conference Sections

- I. Metallic materials and composites
- II. Functional materials and nanotechnology
- III. Energy and environmental materials
- IV. Engineering applications

Hall B = room U I 6

Hall C = room U I 3

International Advisory Committee

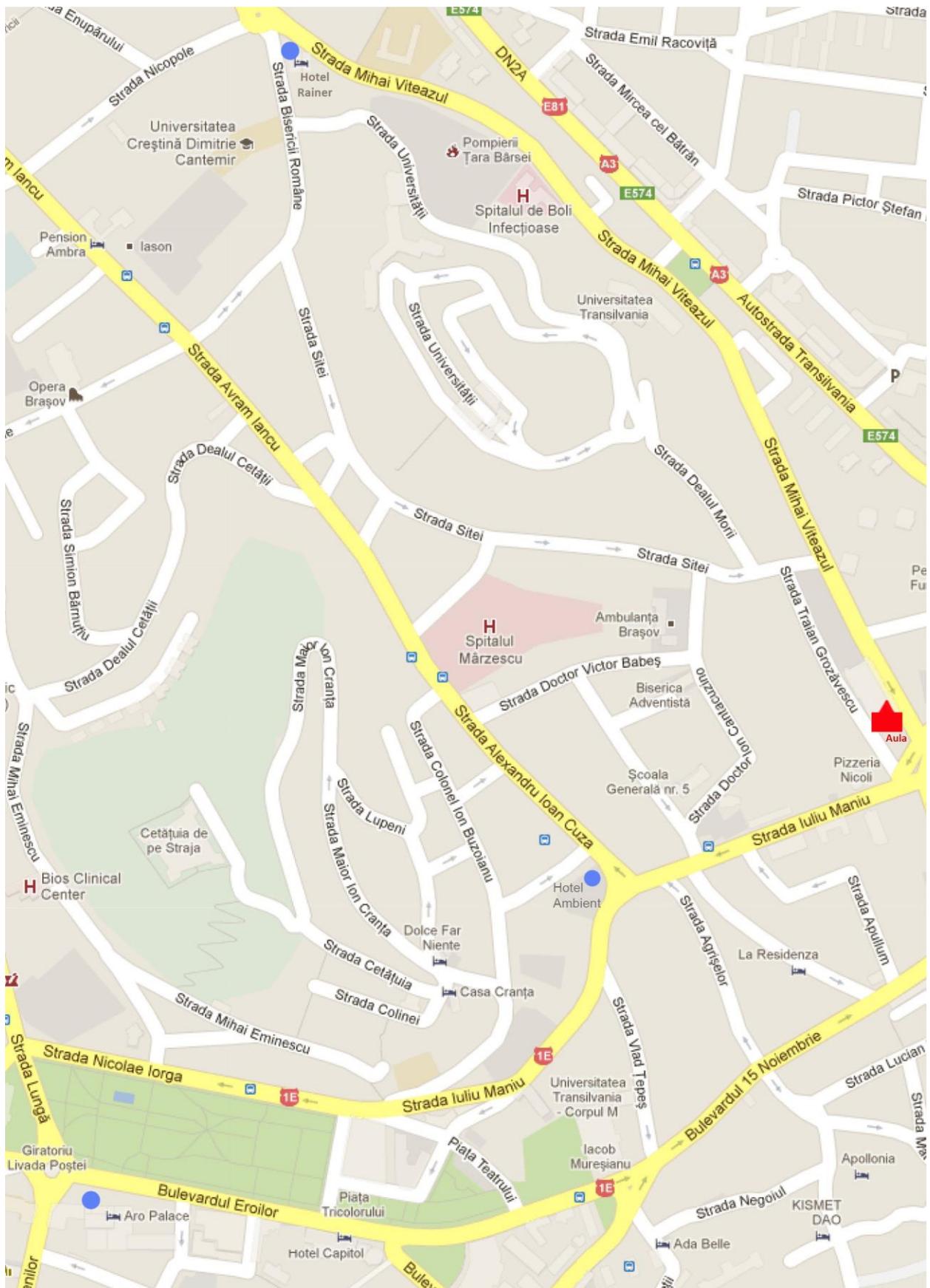
Andreas ANAYIOTOS, Cyprus University of Technology, Cyprus
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Strul MOISA, Ben-Gurion University of the Negev, Beer Sheva, Israel
Cacilda MOURA, Universidade do Minho, Braga, Portugal
Corneliu MUNTEANU, "Gheorghe Asachi" Technical University of Iași, Romania
José Luis OCAÑA MORENO, Universidad Politécnica de Madrid, Spain
Peter REM, Delft University of Technology, The Netherlands
Henrik RUDOLPH, Editor-in-Chief, Applied Surface Science - Elsevier
Eleonora SANTECCHIA, Marche Polytechnic University, Ancona, Italy
Elena SCUTELNICU, "Dunarea de Jos" University of Galati, Romania
Hassan SHIRVANI, Anglia Ruskin University, United Kingdom
Doru M. STEFANESCU, The Ohio State University, Columbus, USA
Gabriela STRNAD, George Emil Palade University of Medicine, Pharmacy, Science and Technology of Targu Mures, Romania
Michael W. TAUSCH, University of Wuppertal, Institute of Polymer Technology, Germany
Petrica VIZUREANU, "Gheorghe Asachi" Technical University of Iași, Romania
Ionelia VOICULESCU, National University of Science and Technology POLITEHNICA Bucharest, Romania
Rodica WENKERT, Soroka University Medical Centre, Beer-Sheva, Israel
Yuhou WU, Shenyang Jianzhu University, China

Conference Venue

Braşov is situated in the central part of the country being considered the second most important town in Romania. Located 160 km from Bucharest (Romania's capital), Braşov is surrounded by the Carpathian Mountains, being in the middle of the country at the crossroads of the Eastern Carpathian and the Southern Carpathians. Across the mountains to the South and East there are Wallachia and Moldavia, to the West the Banat region and to the North the rolling hills of Northern Transylvania.

The 13th International Conference of Materials Science and Engineering – BraMat 2024, will be held at Sergiu T. Chiriacescu Aula, 41A Iuliu Maniu Str., Braşov, ROMANIA.

13th International Conference on Materials Science and Engineering – BraMat 2024
PROGRAM



Program (Outline)

Wednesday, 13.03.2024

18.00: Registration (Hall H)

19.00: Welcome cocktail (Hall H)

Thursday, 14.03.2024

8.30: Registration (Hall H)

9.00: Opening ceremony (Main Hall A)

9.30: Plenary lectures 1 (Main Hall A)

11.00: Coffee break (Hall H)

11.30: Plenary lectures 2 (Main Hall A)

12.30: Lunch (Hall H)

14.00: Oral presentations 1 (Hall B)

14.00: Oral presentations 2 (Hall C)

16.00: Coffee break (Hall H)

16.15: Oral presentations 3 (Hall B)

16.15: Oral presentations 4 (Hall C)

16.15 – 18.00: Poster presentations 1 (Hall G)

9.30 – 18.00: Companies exhibitions (Hall G)

18.00: Musical moment (Main Hall A)

19.00: Cocktail (Hall H)

Friday, 15.03.2024

10.00: Plenary lectures 3 (Main Hall A)

11.30: Coffee break (Hall H)

12.00: Oral presentations 5 (Hall B)

12.00: Oral presentations 6 (Hall C)

13.30: Lunch (Hall H)

14.30: Workshop on Smart Healthcare Engineering (Hall C)

14.30 – 16.00: Poster presentations 2 (Hall G)

10.00 – 16.00: Companies exhibitions (Hall G)

19.00: Gala dinner (ARO PALACE HOTEL - night bar)

Saturday, 16.03.2024

Sightseeing program: Brasov city and Bran castle

Program (detailed)

Wednesday, 13.03.2024

18.00: Registration

19.00: Welcome cocktail (Hall H)

Thursday, 14.03.2024

8.30: Registration

Main Hall A

9.00: Opening Ceremony

9.00: Welcome messages

Professor Dr. Eng. **Ioan Vasile ABRUDAN**, Rector of Transilvania University of Braşov, ROMANIA

Professor Dr. Eng. **Alexandru PASCU**, BraMat Conference Chairman

9.20: Companies introduction

9.30: Plenary Lectures 1

Chairperson: **Daniel MUNTEANU**, Transilvania University of Braşov, ROMANIA

9.30: **P.01. Ultrasound for targeted and selective cancer therapies**

J. KOST, Ben-Gurion University of the Negev, ISRAEL

10.00: **P.02. Multilevel assessment of stent-induced inflammation in the vascular tissue and pharmacokinetic modeling to assess toxicity**

A. ANAYIOTOS, Cyprus University of Technology, CYPRUS

10.30: **P.03. Nanoarchitected thin films with tailored responses**

F. VAZ, Minho University, PORTUGAL; Transilvania University of Brasov, ROMANIA

11.00: Coffee Break (Hall H)

11.30: Plenary Lectures 2 (Main Hall A)

Chairperson: **Alexandru PASCU**, Transilvania University of Braşov, ROMANIA

11.30: **P.04. Solution deposited thin films and chemical epitaxy: a status report**

Y. GOLAN, Ben-Gurion University of the Negev, ISRAEL

12.00: **P.05. Exploring the use of AI tools for scientific publication: Advantages, disadvantages, and authorship**

H. RUDOLPH, Applied Surface Science (Elsevier), The NETHERLANDS

12.30: Lunch (Hall H)

14.00: Oral presentations 1 (Hall B)

Chairpersons: **Ion-Dragoş UȚU**, Politehnica University of Timisoara, ROMANIA

Camelia GABOR, Transilvania University of Brasov, ROMANIA

14.00: II.K.01 Metallic biomaterials for orthopedic applications: from implant failure analysis to biodegradable metallic alloys

I. ANTONIAC, I. CORNESCHI, A. ANTONIAC, A. ROBU, Faculty of Material Science and Engineering, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, ROMANIA

14.15: II.O.01. Neuromotor rehabilitation through advanced thin film dry electrode biofeedback systems

C. LOPES, A. FERREIRA, Physics Centre of Minho and Porto Universities (CF-UM-UP), University of Minho, Braga; LaPMET—Laboratory of Physics for Materials and Emergent Technologies, University of Minho, PORTUGAL

D. CARVALHO, N. AZEVEDO, Physics Centre of Minho and Porto Universities (CF-UM-UP), University of Minho, Braga, PORTUGAL

F. VAZ, Physics Centre of Minho and Porto Universities (CF-UM-UP), University of Minho, Braga, PORTUGAL; LaPMET—Laboratory of Physics for Materials and Emergent Technologies, University of Minho, Braga, PORTUGAL;

Dept. of Material Science, Transilvania University, Brasov, ROMANIA

14.30: II.O.02. An Introduction to printed synthetic cranial bone materials and their properties

T. DRAZAN, Z. JOSKA, University of Defence, Department of Mechanical Engineering, Brno, CZECH REPUBLIC

J. HRUBY, Brno University of Technology, Institute of Forensic Engineering, Brno, CZECH REPUBLIC

M. KRCHOVA, Masary University, Faculty of Medicine, Brno, CZECH REPUBLIC

14.45: II.O.03 High entropy lead-free perovskite powders and related ceramics

V.A. SURDU, M.-A. MARINIĆĂ, A.I. NICOARĂ, A.C. IANCULESCU, Department of Science and Engineering of Oxide Materials and Nanomaterials, Faculty of Chemical Engineering and Biotechnologies, National University of Science and Technology POLITEHNICA Bucharest, ROMANIA

R.-E. PĂTRU, National Institute for Materials Physics, ROMANIA

O. OPREA, Department of Inorganic Chemistry, Physical Chemistry and Electrochemistry, Faculty of Chemical Engineering and Biotechnologies, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, ROMANIA

B.Ş. VASILE, R.D. TRUŞCĂ, National Centre for Micro and Nanomaterials, National University of Science and Technology POLITEHNICA Bucharest, ROMANIA

15.00: II.O.04 Enhancing UV protection of cork and rubber by thin films via magnetron sputtering and atomic layer deposition

B. TISS, L. CUNHA, Physics Center of Minho and Porto Universities (CF-UM-UP), University of Minho, Campus of Gualtar, Braga, PORTUGAL

D. MARTÍNEZ-MARTÍNEZ, Physics Center of Minho and Porto Universities (CF-UM-UP), University of Minho, Campus of Gualtar, Braga, PORTUGAL; Department of Materials Research and Technology, Luxembourg Institute of Science and Technology (LIST), LUXEMBOURG

C. MANSILLA, CTECHnano Coatings Technologies S.L., San Sebastián, SPAIN

15.15: II.O.05

Improving mechanical wear resistance in soft materials such as cork and rubber: the role of PVD thin films

B. TISS, L. CUNHA, Physics Center of Minho and Porto Universities (CF-UM-UP), University of Minho, Campus of Gualtar, Braga, PORTUGAL

D. MARTÍNEZ-MARTÍNEZ, Physics Center of Minho and Porto Universities (CF-UM-UP), University of Minho, Campus of Gualtar, Braga, PORTUGAL; Department of Materials Research and Technology, Luxembourg Institute of Science and Technology (LIST), LUXEMBOURG

C. MANSILLA, CTECHnano Coatings Technologies S.L., San Sebastián, SPAIN

15.30: II.O.06 Study on the influence of process parameters on the wear resistance of diamond films prepared on zirconia substrates

T. ZHENG, L. ZHANG, F. LU, G. YAN, H. LU, School of Mechanical Engineering, Shenyang Jianzhu University, Shenyang, CHINA

Y. WU, H. WANG, School of Mechanical Engineering, Shenyang Jianzhu University, Shenyang; National-Local Joint Engineering Laboratory of NC Machining Equipment and Technology of High-Grade Stone, Shenyang, CHINA

X. BAI, School of Mechanical Engineering, Shenyang University of Technology, Shenyang, CHINA

15.45: II.O.07 Electro-mechanical behavior of self-sensing textile reinforced composites for in-situ structural health monitoring

S. SINGH, Z. KAMBLE, Department of Textile Technology, Dr. B. R. Ambedkar National Institute of Technology, Jalandhar, Punjab, INDIA

14.00: Oral presentations 2 (Hall C)

Chairpersons: **Strul MOISA**, Ben-Gurion University of the Negev, Beer Sheva, ISRAEL
Mihai Alin POP, Transilvania University of Brasov, ROMANIA

14.00: IV.O.01. Mechanical characterization of porous duplex stainless-steel structures fabricated by laser powder bed fusion using microhardness test and nanoindentation

K. SLEEM, A. SANTONI, M.L. GATTO, E. SANTECCHIA, S. SPIGARELLI, M. CABIBBO, Department of Industrial Engineering and Mathematical Sciences, Polytechnic University of Marche, Ancona, ITALY

14.15: IV.O.02. Evaluation of new non-sparking material based on CuAlBe

R.G. CHELARIU, R. CIMPOESU, M. BENCHEA, D.P. BURDUHOS NERGIS, B. ISTRATE, A.M. CAZAC, N. CIMPOESU, GH. BADARAU, C. BEJINARIU, "Gheorghe Asachi" Technical University from Iasi, Iasi, ROMANIA
A.M. JURCA, C.M. POPA, National Institute for Research and Development in Mine Safety and Protection to Explosion - INSEMEX, Petrosani, ROMANIA

14.30: IV.O.03. Hierarchical patterns induced by combined uv laser irradiation through phase masks and diffuse coplanar surface barrier discharge plasma

I. STOICA, C. URSU, A. IRINA BARZIC, I. SAVA, "Petru Poni" Institute of Macromolecular Chemistry, Iasi, ROMANIA

2Integrated Center of Environmental Science Studies in the North-Eastern Development Region (CERNESIM), Department of Exact Sciences and Natural Sciences, Institute of Interdisciplinary Research, Alexandru Ioan Cuza University of Iasi, Iasi, ROMANIA

I. MIHAILA, Integrated Center of Environmental Science Studies in the North-Eastern Development Region (CERNESIM), Department of Exact Sciences and Natural Sciences, Institute of Interdisciplinary Research, Alexandru Ioan Cuza University of Iasi, Iasi, ROMANIA

14.45: IV.O.04. Cold spray coatings influence over the mechanical and electrochemical properties of steel substrate 52100

F.-C. LUPU, B. ISTRATE, M. BENCHEA, "Gheorghe Asachi" Technical University of Iasi, Faculty of Mechanical Engineering, Iasi, ROMANIA

C. MUNTEANU, "Gheorghe Asachi" Technical University of Iasi, Faculty of Mechanical Engineering, Iasi, ROMANIA; Technical Sciences Academy of Romania, Bucharest, ROMANIA

R. CIMPOESU, Faculty of Materials Science and Engineering, "Gheorghe Asachi" Technical University of Iasi, Iasi, ROMANIA

15.00: IV.O.05. Additive manufacturing of copper alloys

B. JÓŹWIK, Łukasiewicz Research Network — Institute of Non-Ferrous Metals, Centre of Functional Materials, Gliwice, POLAND; Silesian University of Technology, Doctoral School, Gliwice, POLAND

A. RADOŃ, M. POLAK, Łukasiewicz Research Network — Institute of Non-Ferrous Metals, Centre of Functional Materials, Gliwice, POLAND

S. TOPOLSKA, Silesian University of Technology, Faculty of Mechanical Engineering, Gliwice, POLAND

15.15: IV.O.06. The influence of Al content on the electrical, optical, thermal, mechanical and tribological response of (Ti,Al)N coatings

I. BORSAN, D. MUNTEANU, Material Science Department, Transilvania University of Brasov, Brasov, ROMANIA

F. VAZ, Physics Centre of Minho and Porto Universities (CF-UM-UP), University of Minho, Braga, PORTUGAL; LaPMET—Laboratory of Physics for Materials and Emergent Technologies, University of Minho, Braga, PORTUGAL; Material Science Department, Transilvania University of Brasov, Brasov, ROMANIA

C. LOPES, A. FERREIRA, Physics Centre of Minho and Porto Universities (CF-UM-UP), University of Minho, Braga, PORTUGAL; LaPMET—Laboratory of Physics for Materials and Emergent Technologies, University of Minho, Braga, PORTUGAL

15.30: IV.O.07. Safety engineering with the help of AI powered devices

A.S. *GOGA*, Transilvania University of Brasov, Faculty of Technological Engineering and Industrial Management, Braşov, ROMANIA

15.45: IV.O.08. Influence of processing parameters on the average diameter (d₅₀) of water atomized metal powders: a review

C.V. RIZEA, Transilvania University of Brasov; Hoeganaes Corporation Europe SA, Buzau, ROMANIA

C. SAMOILA, *M.H. TIERIAN*, Transilvania University of Brasov; Technical Sciences Academy of Romania, ROMANIA

L.S. BALTES, Transilvania University of Brasov, ROMANIA

16.00: Coffee break (Hall H)

16.15: Oral presentations 3 (Hall B)

Chairpersons: **Corneliu MUNTEANU** “Gheorghe Asachi” Technical University of Iasi, Technical Sciences Academy of Romania, ROMANIA

Daniel CRISTEA, Transilvania University of Brasov, ROMANIA

16.15: III.K.01. Hydrogen embrittlement in structural materials - theory and applications

D. ELIEZER, Ben Gurion University, Beer Sheva, ISRAEL

16.30: III.O.01. Green technology for recycling of E-waste

A. VARDANYAN, *N. VARDANYAN*, *N. ABRAHAMYAN*, *A. KHACHATRYAN*, *Z. MELKONYAN*, Scientific and Production Center “Armbiotechnology” of the National Academy of Sciences of Armenia, Institute of Microbiology, Yerevan, ARMENIA

16.45: III.O.02. Expanding photovoltaic applications with chalcogenide-based thin-film solar cells

D. CHAUMONT, *C. TAMIN*, Equipe Nanoform, Laboratoire Interdisciplinaire Carnot de Bourgogne (ICB), Université de Bourgogne, Dijon, FRANCE

17.00: III.O.03. Induced effects of nano-patterned anode on the electrical and photo-electrical properties of PTB7-Th:ICBA (1:1, wt.%) heterojunction

T. ŞUTEU, *Ş. ANTOHE*, *M.C. BĂLĂŞIN*, *S. IFTIMIE* University of Bucharest, Faculty of Physics, Magurele, ROMANIA

V.-A. ANTOHE University of Bucharest, Faculty of Physics, Magurele, ROMANIA; Université Catholique de Louvain (UCLouvain), Institute of Condensed Matter and Nanosciences (IMCN), Louvain-la-Neuve, BELGIUM

I. STAVARACHE, *O. RAŞOGA*. National Institute of Material Physics, Magurele, ROMANIA

G. SOCOL, National Institute for Lasers, Plasma and Radiation Physics, Magurele, ROMANIA

17.15: III.O.04. Examining persistent phosphor properties of materials in a laboratory environment

E.C. KARSU ASAL, Manisa Celal Bayar University, Electric and Energy Department, Manisa, TURKIYE

17.30: III.O.05. New application of zeolite materials as adsorbent of drug pollutants from wastewater

C.I. COVALIU-MIERLA, *G. PARASCHIV*, *S.S. BIRIS*, *O. PAUNESCU*, Naţional University of Science and Technology POLITEHNICA Bucharest, ROMANIA

F. PIRVU, Naţional University of Science and Technology POLITEHNICA Bucharest; National Institute for Research - Development for Industrial Ecology – ECOIND, ROMANIA

17.45: III.O.06. TiO₂ nanomaterial application for removal detergent pollutants in wastewater treatment plant technology

C.I. COVALIU-MIERLA, *A. VISAN*, *G. PARASCHIV*, Naţional University of Science and Technology POLITEHNICA Bucharest, ROMANIA

I. PAUN, Naţional University of Science and Technology POLITEHNICA Bucharest; National Institute for Research - Development for Industrial Ecology – ECOIND, ROMANIA

16.15: Oral presentations 4 (HallC)

Chairpersons: **Rodica Mariana ION**, "Valahia" University of Târgoviște, ICECHIM, ROMANIA
Liana Sanda BALTES, Transilvania University of Brasov, ROMANIA

16.15: IV.O.09. Enhanced gas and liquid sensing applications using plasmonic nanocomposite thin films

E. CIPI, F. VAZ, D. MUNTEANU, Faculty of Material Science and Engineering, Transilvania University of Brasov, Brasov, ROMANIA

F. VAZ, Physics Centre of Minho and Porto Universities (CF-UM-UP), University of Minho, Braga, PORTUGAL; LaPMET—Laboratory of Physics for Materials and Emergent Technologies, University of Minho, Braga, PORTUGAL; Material Science Department, Transilvania University of Brasov, Brasov, ROMANIA

J. BORGES, Physics Centre of Minho and Porto Universities (CF-UM-UP), University of Minho, Braga, PORTUGAL; Laboratory of Physics for Materials and Emergent Technologies, University of Minho, Braga, PORTUGAL

LAPMET, Laboratory of Physics for Materials and Emergent Technologies, University of Minho, Braga, PORTUGAL

16.30: IV.O.10. Effect of weave design and areal density on the mechanical properties of outer protective woven fabric layer of extreme cold weather clothing

R. KUMARI, R.S RENGASAMY, R. CHATTOPADHYAY, Indian Institute of Technology Delhi, Department of Textile and Fibre Engineering, New Delhi, INDIA

16.45: IV.O.11. Characterization and analysis of the microstructural changes of laser surface texturing on titanium

E.R. MOLDOVAN, L.S. BALTEȘ, C. CROITORU, E.M. STANCIU, A. PASCU, M.H. ȚIEREAN, Transilvania University of Brasov, Material Science Department, Brasov, ROMANIA

17.00: IV.O.12. Influence of thermal shock on the characteristics of plasma-sprayed Cr₂O₃ – n%TiO₂ coatings

D. CRISTIȘOR, Ș. ADRIAN, "Gheorghe Asachi" Technical University of Iasi, Department of Mechanical Engineering, Iasi, ROMANIA

C. MUNTEANU, "Gheorghe Asachi" Technical University of Iasi, Department of Mechanical Engineering, Iasi, ROMANIA; Technical Sciences Academy of Romania, Bucharest, ROMANIA

D.-L. CHICET, A. ȘUTIC, "Gheorghe Asachi" Technical University of Iasi, Department of Materials Science and Engineering, Iasi, ROMANIA

17.15: IV.O.13. Elastic bi-modularity of PA12 in SLS additive manufactured parts: an adequate experimental characterization towards a trustworthy numerical simulation

M.N. BABA, S. LACHE, O. JIȚĂRAȘU, Transilvania University of Brașov, Department of Mechanical Engineering, Brașov, ROMÂNIA

M. DUGULEANĂ, Transilvania University of Brașov, Department of Automotive and Transport Engineering, Brașov, ROMÂNIA

C. HUSAR, Siemens Industry Software SRL, Brașov, ROMANIA

17.30: IV.O.14. Laser cladding of Cu-Ni alloy on S235 steel

C. IATAN, E.R. MOLDOVAN, T. MACHEDON-PISU, D. CUCULEA, G. ARDELEAN, E.M. STANCIU, A. PASCU, Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

16.15 – 18.00: Poster presentations 1 (Hall G)

II.PO.01 Comparative study of high entropy alloys MoNbTaTiZr and FeMoTaTiZr

M. LÓPEZ RÍOS, S.J. BRITO GARCÍA, University of Las Palmas de Gran Canaria, Mech. Eng. Dept., Mechanical Engineering Department, Gran Canaria, SPAIN

J.C. MIRZA ROSCA, University of Las Palmas de Gran Canaria, Mech. Eng. Dept., Mechanical Engineering Department, Gran Canaria, SPAIN; Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

I. VOICULESCU, National University of Science and Technology POLITEHNICA Bucharest, Faculty of Industrial Engineering and Robotics, Bucharest, ROMANIA

II.PO.02 Study of the corrosion behaviour of Ti-Cu electrodes for the diagnosis of musculoskeletal disorders and muscle rehabilitation

PROGRAM

A. *CAMARINHA*, Physics Centre of Minho and Porto Universities, University of Minho, Braga, PORTUGAL

A. *ALVES*, Physics Centre of Minho and Porto Universities, University of Minho, Braga, PORTUGAL

F. VAZ, Physics Centre of Minho and Porto Universities, University of Minho, Braga, PORTUGAL; LaPMET—Laboratory of Physics for Materials and Emergent Technologies, University of Minho, PORTUGAL; Dept. of Material Science, Transilvania University, Brasov, ROMANIA

C. *LOPES*, Physics Centre of Minho and Porto Universities, University of Minho; LaPMET—Laboratory of Physics for Materials and Emergent Technologies, University of Minho, Braga, PORTUGAL

II.PO.03 Lifespan and performance of Ti-Ag Dry electrodes in remote biomedical applications

D. *CARVALHO*, Physics Centre of Minho and Porto Universities, University of Minho, Braga, PORTUGAL

A. *FERREIRA*, C. *LOPES*, Physics Centre of Minho and Porto Universities, University of Minho; LaPMET—Laboratory of Physics for Materials and Emergent Technologies, University of Minho, Braga, PORTUGAL

F. VAZ, Physics Centre of Minho and Porto Universities, University of Minho; LaPMET—Laboratory of Physics for Materials and Emergent Technologies, University of Minho, Braga, PORTUGAL; Dept. of Material Science, Transilvania University, Brasov, ROMANIA

II.PO.04 ZnO-based thin films: a versatile approach to mitigating microbial transmission on common surfaces

P. *PEREIRA-SILVA*, Centre of Molecular and Environmental Biology (CBMA), Department of Biology, University of Minho, Braga, PORTUGAL; Physics Center of Minho and Porto Universities (CF-UM-UP), University of Minho, Campus de Azurém, Guimarães, PORTUGAL

J. *BORGES*, *F. VAZ*, Physics Center of Minho and Porto Universities (CF-UM-UP), University of Minho, Campus de Azurém, Guimarães, PORTUGAL

P. *SAMPAIO*, Centre of Molecular and Environmental Biology (CBMA), Department of Biology, University of Minho, Braga, PORTUGAL

II.PO.05 Chemical and electrochemical corrosion resistance of ZnTi degradable biomaterials

A.T. *SUTIC*, R. *CHELARIU*, R. *CIMPOESU*, M. *POPA*, O. *RUSU*, M.A. *BERNEVIG*, M.G. *HUTANU*, A.M. *ROMAN*, N. *CIMPOESU*, "Gheorghe Asachi" Technical University of Iasi, Faculty of Materials Science and Engineering, Iasi, ROMANIA

II.PO.06 Drug delivery systems based on the polysaccharide-modified magnetite nanoparticles – the role of the organic modifiers and synthesis method on functional properties

A. *CIURASZKIEWICZ*, Łukasiewicz Research Network — Institute of Non-Ferrous Metals, Gliwice, POLAND; Institute of Metallurgy and Materials Science, Polish Academy of Sciences, Krakow, POLAND

A. *RADOŃ*, Ł. *HAWELĘK*, T. *WARSKI*, A. *KOLANO-BURIAN*, Łukasiewicz Research Network — Institute of Non-Ferrous Metals, Gliwice, POLAND

J. *WOJEWODA-BUDKA*, Institute of Metallurgy and Materials Science, Polish Academy of Sciences, Krakow, POLAND

II.PO.07 Functional leather surface by nanomaterials application

C. *GAIDAU*, D. *SIMION*, D. *BRECHET*, C. *ALEXE*, M. *STANCA*, R. *CONSTANTINESCU*, Research and Development National Institute for Textiles and Leather-Division Leather and Footwear Research Institute, Leather Research Department, Bucharest, ROMANIA

II.PO.08 Influence of alloying microelements on titanium alloys for medical applications

I. *GHICULESCU*, M.-S. *BĂLȚATU*, M.-C. *PERJU*, Faculty of Materials Science and Engineering, "Gheorghe Asachi" Technical University of Iași, ROMANIA

P. *VIZUREANU*, Faculty of Materials Science and Engineering, "Gheorghe Asachi" Technical University of Iași; Technical Sciences Academy of Romania, Bucharest, ROMANIA

A.-V. *SANDU*, Faculty of Materials Science and Engineering, "Gheorghe Asachi" Technical University of Iași; Romanian Inventors Forum, Iasi; Academy of Romanian Scientists, Bucharest, ROMANIA

I. *BĂLȚATU*, Dunarea de Jos University of Galati, Faculty of Engineering, Galati, ROMANIA

II.PO.09 Comparative analysis of Ti₆Al₄V and Ti₁₅Mo₇Zr₅Mn alloys for orthopedic implant applications

M.-A. *MAZILU*, M.-S. *BĂLȚATU*, D.-D. *BURDUHOȘ-NERGIȘ*, Faculty of Materials Science and Engineering, "Gheorghe Asachi" Technical University of Iași, ROMANIA

PROGRAM

P. VIZUREANU, Faculty of Materials Science and Engineering, "Gheorghe Asachi" Technical University of Iași, ROMANIA; Technical Sciences Academy of Romania, Bucharest, ROMANIA

A.-V. SANDU, Faculty of Materials Science and Engineering, "Gheorghe Asachi" Technical University of Iași; Romanian Inventors Forum; Academy of Romanian Scientists, Bucharest, ROMANIA

II.PO.10 Overview on Co-Cr alloys used in medical applications

M. TOFAN, *M.S. BALTATU*, *D.C. ACHITEI*, *C.V. CIUBOTARU*, Faculty of Materials Science and Engineering, "Gheorghe Asachi" Technical University of Iași, ROMANIA

A.V. SANDU, Faculty of Materials Science and Engineering, "Gheorghe Asachi" Technical University of Iași; Romanian Inventors Forum, Iași; Academy of Romanian Scientists, Bucharest, ROMANIA

P. VIZUREANU, Faculty of Materials Science and Engineering, "Gheorghe Asachi" Technical University of Iași, Romania; Technical Sciences Academy of Romania, Bucharest, ROMANIA

II.PO.11 Functionalized albumin nanoparticles cross-linked with oxidized gellan for targeted drug delivery in brain tumor therapy

C.E. TINCU (IURCIUC), Department of Natural and Synthetic Polymers, "Cristofor Simionescu" Faculty of Chemical Engineering and Protection of the Environment, "Gheorghe Asachi" Technical University, Iași, ROMANIA; Department of Pharmaceutical Technology, Faculty of Pharmacy, "Grigore T. Popa" University of Medicine and Pharmacy, Iași, ROMANIA

S. VASILIU, *Ș. RACOVITĂ*, Petru Poni" Institute of Macromolecular Chemistry, Iași, ROMANIA

G. VOCHIȚA, *D. GHERGHEL*, NIRDBS - Institute of Biological Research Iași, Department of Experimental and Applied Biology, Lascar Catargi, Iași, ROMANIA

L.I. ATANASE, Faculty of Dental Medicine, "Apollonia" University of Iași, ROMANIA

M. POPA, Department of Natural and Synthetic Polymers, "Cristofor Simionescu" Faculty of Chemical Engineering and Protection of the Environment, "Gheorghe Asachi" Technical University, Iași; Faculty of Dental Medicine, "Apollonia" University of Iași; Academy of Romanian Scientists, Bucharest, ROMANIA

L. OCHIUZ, Department of Pharmaceutical Technology, Faculty of Pharmacy, "Grigore T. Popa" University of Medicine and Pharmacy, Iași, ROMANIA

II.PO.12 Sustainable composite materials from construction and demolition wastes

M. COSNITA, *C CAZAN*, Transilvania University Brasov, Renewable Energy Syst & Recycling Res Ctr & Prod D, Mechatron & Environm Dept, Brasov, ROMANIA

II.PO.13 Synthesis of nanocrystalline nickel ferrite via solution combustion method using EDTA and urea as fuel

R. ALEXANDRU, *R. LAZĂU*, *R. IANOS*, *I. RUS*, Politehnica University of Timișoara, Faculty of Industrial Chemistry and Environmental Engineering, Timișoara, ROMANIA

II.PO.14 Novel TiAg coating, a corrosion behaviour overview

M. BERTAPELLE, University of Padova, Department of information engineering, ITALY

J.C. MIRZA-ROSCA, Universidad de Las Palmas de Gran canaria, Dpto. de Ingeniería Mecánica, Campus Universitario Tafira, Las Palmas de Gran Canaria, SPAIN; Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

C. LOPES, University of Minho, Physics Centre of Minho and Porto Universities (CF-UM-UP); University of Minho, LaPMET - Laboratory of Physics for Materials and Emergent Technologies, Braga, PORTUGAL

F. VAZ, Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA; University of Minho, Physics Centre of Minho and Porto Universities (CF-UM-UP), Braga, PORTUGAL; University of Minho, LaPMET - Laboratory of Physics for Materials and Emergent Technologies, Braga, PORTUGAL

II.PO.15 Improving the surface of the endotracheal tube against biofilm formation

I. CORNESCHI, *L. POPESCU*, *A. ANTONIAC*, *V. PALTANEA*, *A. ROBU*, Faculty of Material Science and Engineering, National University of Science and Technology POLITEHNICA Bucharest, ROMANIA

L. MĂRCUȚ, *A. MOHAN*, Faculty of Medicine and Pharmacy, University of Oradea, ROMANIA

II.PO.16 Optical properties of Ni²⁺ and La³⁺ co-doped calcium aluminates

I. RUS, *R. IANOS*, *R. LAZĂU*, *I. MOLDOVAN*, *E. ANDREI*, *R. ALEXANDRU*, Politehnica University of Timișoara, Faculty of Industrial Chemistry and Environmental Engineering, Timișoara, ROMANIA

II.PO.17 Thermal spray deposition on polymeric materials – a review

M. FARCAȘ, B. ISTRATE, "Gheorghe Asachi" Technical University of Iasi, Department of Mechanical Engineering, Iasi, ROMANIA

D.-L. CHICET, M. AXINTE, "Gheorghe Asachi" Technical University of Iasi, Department of Materials Science and Engineering, Iasi, ROMANIA

C. MUNTEANU, "Gheorghe Asachi" Technical University of Iasi, Department of Mechanical Engineering, Iasi, ROMANIA; Technical Sciences Academy of Romania, Bucharest, ROMANIA

II.PO.18 Properties of composite materials from rubber, HDPE, and PP waste with outdoor applications

C. CAZAN, M. COSNITA, Transilvania University of Brasov, Product Design, Mechatronics and Environment Department, Brasov, ROMANIA

III.PO.01. Structural, magnetic, and thermomagnetic properties of Co₂FeAl/(W,Ti) thin films: The role of non-ferromagnetic metal thickness

G. SIQUEIRA, Physics Centre of Minho and Porto Universities (CF-UM-UP), University of Minho, PORTUGAL

C. LOPES, A. FERREIRA, Physics Centre of Minho and Porto Universities (CF-UM-UP), University of Minho, PORTUGAL; LaPMET - Laboratory of Physics for Materials and Emergent Technologies, University of Minho, PORTUGAL

M. CORREA, Physics Centre of Minho and Porto Universities (CF-UM-UP), University of Minho, 4710057, PORTUGAL; Physics Department, Federal University of Rio Grande do Norte, Natal, BRAZIL

F. VAZ, Physics Centre of Minho and Porto Universities (CF-UM-UP), University of Minho, PORTUGAL; LaPMET - Laboratory of Physics for Materials and Emergent Technologies, University of Minho, PORTUGAL; Material Science Department, Transilvania University of Brasov, Brasov, ROMANIA

III.PO.02. Eco-friendly magnetic-carbon-based composites for the removal of emerging pharmaceutical pollutants from water

A.A. ȘĂULEAN, E. MATEI, M. RÂPĂ, A.M. PREDESCU, C. PREDESCU, G. COMAN, A.-C. BERBECARU, National University of Science and Technology POLITEHNICA Bucharest, Faculty of Materials Sciences and Engineering, Bucharest, ROMANIA

A. ORDACE, G. VLAD, D. VÂJU, ICPE Bistrița, Bistrița, ROMANIA

III.PO.03. The influence of paraffin oil content on the properties of styrene butadiene styrene composites with *Chlorella vulgaris* biomass

M. BUMBAC, Valahia University of Targoviste, Faculty of Science and Arts, Targoviste, ROMANIA

C.M. NICOLESCU, C.S. GHERGHINOIU, Valahia University of Targoviste, Institute of Multidisciplinary Research for Science and Technology, Targoviste, ROMANIA

T. ZAHARESCU, Valahia University of Targoviste, Institute of Multidisciplinary Research for Science and Technology, Targoviste, ROMANIA; National Institute for Electrical Engineering, Advanced Research (INCDIE ICPE CA), Bucharest, ROMANIA

C. BUMBAC, E. MANEA, National Research and Development Institute for Industrial Ecology-ECOIND, Bucharest, ROMANIA

B.C. SERBAN, O. BUIU, IMT Bucharest, National Institute for Research and Development in Microtechnologies, Voluntari, ROMANIA

III.PO.04. Plastic marine debris as a worldwide environmental challenge

M. RÂPĂ, E. MATEI, A. G. DINCĂ, C. PREDESCU, Faculty of Materials Science and Engineering, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, ROMANIA

E.M. CÂRSTEA, National Institute of R&D for Optoelectronics INOE 2000, Magurele, ROMANIA

N. SLAVU, Faculty of Power Engineering, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, ROMANIA

III.PO.05. Structural consequences of styrene block copolymers on polymer composites properties with *Arthrospira platensis* biomass

C.M. NICOLESCU, C.S. GHERGHINOIU, I.V. GURGU, Valahia University of Targoviste, ICSTM, Targoviste, ROMANIA

M. BUMBAC, Valahia University of Targoviste, Faculty of Science and Arts, Targoviste, ROMANIA

T. ZAHARESCU, Valahia University of Targoviste, ICSTM, Targoviste, ROMANIA; National Institute for Electrical Engineering, Advanced Research, Bucharest, ROMANIA

C. *BUMBAC*, E.E. *MANEA*, National Research and Development Institute for Industrial Ecology-ECOIND, Bucharest, ROMANIA
B.C. *SERBAN*, O. *BUIU*, IMT Bucharest, National Institute for Research and Development in Microtechnologies, Voluntari, ROMANIA

III.PO.06. Influence of styrene block copolymers structure on properties of composites with *Chlorella vulgaris* biomass

M. *BUMBAC*, Valahia University of Targoviste, Faculty of Science and Arts, Targoviste, ROMANIA
C.M. *NICOLESCU*, C.S. *GHERGHINOIU*, I.V. *GURGU*, Valahia University of Targoviste, ICSTM, ROMANIA
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C. *BUMBAC*, E.E. *MANEA*, National Research and Development Institute for Industrial Ecology-ECOIND, Bucharest, ROMANIA
B.C. *SERBAN*, O. *BUIU*, IMT Bucharest, National Institute for Research and Development in Microtechnologies, Voluntari, ROMANIA

III.PO.07. Preparation and characterization of microalgae polylactic acid composites using *Chlorella vulgaris* biomass

C.M. *NICOLESCU*, C.S. *GHERGHINOIU*, I.V. *GURGU*, Valahia University of Targoviste, ICSTM, Targoviste, ROMANIA
M. *BUMBAC*, Valahia University of Targoviste, Faculty of Science and Arts, Targoviste, ROMANIA
T. *ZAHARESCU*, Valahia University of Targoviste, ICSTM, Targoviste, ROMANIA; National Institute for Electrical Engineering, Advanced Research, Bucharest, ROMANIA
C. *BUMBAC*, E.E. *MANEA*, National Research and Development Institute for Industrial Ecology-ECOIND, Bucharest, ROMANIA
B.C. *SERBAN*, O. *BUIU*, IMT Bucharest, National Institute for Research and Development in Microtechnologies, Voluntari, ROMANIA

III.PO.08. Silsesquioxanes as key elements in new polysulfone-based membranes. Design, characterization and perspectives for environmental applications

A. *BARGAN*, G. *ȘTIBIANU*, M. *DASCĂLU*, A. *BELE*, A. *SOROCEANU*, A.-M. *MACSIM*, Department of Inorganic Polymers, "Petru Poni" Institute of Macromolecular Chemistry, Iasi, ROMANIA

III.PO.09. Ionic liquids as green extractants for muconic acid separation

A.C. *BLAGA*, A. *TUCALIUC*, L. *KLOETZER*, E.N. *DRAGOI*, "Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Organic, Biochemical and Food Department, Iasi, ROMANIA

III.PO.10. Electrochemical properties of electrolytes for lithium recovery

A.-I. *MATEI*, S.A. *FIRONDA*, National R&D Institute for Nonferrous and Rare Metals – IMNR, Pantelimon, ROMANIA; National University of Science and Technology POLITEHNICA Bucharest, ROMANIA
M. T. *OLARU*, A.M.J. *POPESCU*, B.-A. *ȘERBAN*, I.-C. *BADEA*, National R&D Institute for Nonferrous and Rare Metals – IMNR, Pantelimon, ROMANIA

III.PO.11. Innovative concepts in developing new materials with reduced environmental impact for lithium – ion batteries

A.-I. *MATEI*, I. *ANASIEI*, National R&D Institute for Nonferrous and Rare Metals IMNR, 102 Biruinței, Pantelimon, Ilfov, ROMANIA; National University of Science and Technology POLITEHNICA Bucharest, Bucharest, ROMANIA
B.-A. *ȘERBAN*, I.-C. *BADEA*, M.-T. *OLARU*, M. *GHIȚĂ*, M. *BURADA*, National R&D Institute for Nonferrous and Rare Metals IMNR, Pantelimon, ROMANIA

III.PO.12. Predicting microstructure of multi-principal component alloys with hydrogen storage potential

S.A. *FIRONDA*, I. *ANASIEI*, National R&D Institute for Nonferrous and Rare Metals IMNR, Pantelimon, Ilfov, ROMANIA; National University of Science and Technology POLITEHNICA Bucharest, Faculty of Materials Science and Engineering, Bucharest, ROMANIA
I.-C. *BADEA*, B.-A. *ȘERBAN*, D. *MITRICĂ*, National R&D Institute for Nonferrous and Rare Metals IMNR, Pantelimon, ROMANIA

III.PO.13. Potential application of brine from reverse osmosis plants as thermal energy storage systems

J.C. LOZANO-MEDINA, F. LEÓN-ZERPA, C.J. SÁNCHEZ MORALES, Department of Process Engineering, University of Las Palmas de Gran Canaria, SPAIN

J.C. MIRZA-ROSCA, Department of Mechanical Engineering, University of Las Palmas de Gran Canaria, SPAIN; Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

C.A. MENDIETA-PINO, Institute of Environmental Studies and Natural Resources (IUNAT), University of Las Palmas de Gran Canaria, SPAIN

III.PO.14. Structural, magnetic, magnetocaloric and electric properties of printable perovskite type structures of $\text{Pr}_{2/3}(\text{Sr}_{1-x}\text{Ba}_x)\text{MnO}_3$ manganites

A. BEZERGHEANU, C.B. CIZMAS, M. VOLMER, Transilvania University of Brasov, Dep. Electrical Engineering & Applied Physics, Brasov, ROMANIA

9.300 – 18.00: Companies exhibitions (Hall G)

18.00: Musical moment (Main Hall A)

19.00: Cocktail (Hall H)

Friday, 15.03.2024

Main Hall A

10.00: Plenary Lectures 3

Chairperson: Mircea Horia Tierean, Transilvania University of Braşov, ROMANIA

10.00: P.06. Exciting and promising new class of materials for the future: High Entropy Alloys

J.C. MIRZA-ROSCA, Las Palmas de Gran Canaria University, Las Palmas, SPAIN; Transilvania University of Brasov, ROMANIA

10.30: P.07. Microfluidic systems in medical applications

C. POPA, Technical University of Cluj-Napoca, ROMANIA

11.00: P.08. Materials circularity for cultural heritage buildings restoration with reduced environmental impacts

R.M. ION, INCDPCP – ICECHIM Bucharest; Valahia University, Targoviste, ROMANIA

11.30: Coffee break (Hall H)

12.00: Oral presentations 5 (Hall B)

Chairpersons: Petrică VIZUREANU, “Gheorghe Asachi” Technical University of Iasi; Technical Sciences Academy of Romania, ROMANIA

Ioana POPESCU, Transilvania University of Brasov, ROMANIA

12.00: I.O.01. EIS study of HEA doped B_4C ceramic in artificial sea water

A.D. RICO-CANO, Universidad de Las Palmas de Gran Canaria, SPAIN

J.C. MIRZA-ROSCA, Universidad de Las Palmas de Gran Canaria, SPAIN; Transilvania University of Brasov, ROMANIA

B.C. OCAK, G. GOLLER, Istanbul Technical University, TURKEY

12.15: I.O.02. Geometry of thermal exchange in heating furnaces for plastic deformation of steel

D. CONSTANTINESCU, National University of Science and Technology POLITEHNICA; SNSIM – National Society for Environment Science and Engineering, ROMANIA

12.30: I.O.03. Antimicrobial materials with printable features for the fabrication of implantable devices

A.C. MOCANU, F. MICULESCU, S.I. VOICU, M.A. PANDELE, S. DONDEA, S.A. LĂPTOIU, National University of Science and Technology POLITEHNICA Bucharest, ROMANIA

12.45: I.O.04. Mg biodegradable materials - present studies and future research directions in terms of alloying elements

B. ISTRATE, "Gheorghe Asachi" Technical University of Iasi, ROMANIA

C. MUNTEANU, "Gheorghe Asachi" Technical University of Iasi; Technical Sciences Academy of Romania, ROMANIA

13.00: I.O.05. Characterization of some rhenium INCONEL superalloys made in a vacuum induction furnace and cast in argon atmosphere

A.C. BERBECARU, G. COMAN, S. CIUCĂ, I.A. GHERGHESCU, E. MATEI, M. SOHACIU, A. PREDESCU, A. GRECU, C. PREDESCU, National University of Science and Technology POLITEHNICA Bucharest, ROMANIA

13.15: IV.O.15. Ni-based alloy soft magnetic composite compacts with alumina matrix prepared by mechanical alloying and reaction spark plasma sintering

T.F. MARINCA, B.V. NEAMȚU, F. POPA, V.C. PRICĂ, A.N. SECHEL, I. CHICINAȘ, Materials Science and Engineering Department, Technical University of Cluj-Napoca, Cluj-Napoca, ROMANIA

12.00: Oral presentations 6 (Hall C)

Chairpersons: **Florin MICULESCU**, National University of Science and Technology POLITEHNICA Bucharest, ROMANIA

Cătălin CROITORU, Transilvania University of Brasov, ROMANIA

12.00: II.O.08 Preliminary results on the obtaining of ceramic layers through APS from YSZ (38% yttria) powders

I. ADOMNITEI, M. AXINTE, M. LUȚCANU, G. BĂDĂRĂU, M.G. HUTANU, A.-M. ROMAN, D.L. CHICET, N. CIMPOESU, "Gheorghe Asachi" Technical University of Iasi, Faculty of Materials Science and Engineering, Iasi, ROMANIA

C. MUNTEANU, "Gheorghe Asachi" Technical University of Iasi; Technical Sciences Academy of Romania, ROMANIA

B. ISTRATE, M. BENCHEA, "Gheorghe Asachi" Technical University of Iasi-Romania, Faculty of Mechanical Engineering, Iasi, ROMANIA

S. MOGA, National University of Science and Technology POLITEHNICA Bucharest - Regional Research Center - Development for products, processes and innovative materials for the automotive industry (CRC&D-Auto), Pitesti, ROMANIA

12.15: II.O.09 Conjugated polymers derived from triphenylamine-based star-shaped oligomers: synthesis, characterization, porosity, and nitroaromatic derivatives detection

L. VĂCĂREANU, A.-I. GAVRIL, A.-E. BEJAN, "Petru Poni" Institute of Macromolecular Chemistry, Electroactive Polymers and Plasmochemistry Laboratory, Iasi, ROMANIA

12.30: II.O.10 Electrical and dielectric properties of layered oxyhalides

A. RADON, A. CIURASZKIEWICZ, Ł. HAWELĘK, P. WŁODARCZYK, Łukasiewicz Research Network - Institute of Non-Ferrous Metals, Gliwice, POLAND

D. ŁUKOWIEC, Silesian University of Technology, Faculty of Mechanical Engineering, Gliwice, POLAND

12.45: II.O.11 From concept to reality: exploring the synthesis of versatile hyperbranched polymers with ProDOT moieties

A.-I. GAVRIL, R.-D. RUSU, M.-D. DAMACEANU, "Petru Poni" Institute of Macromolecular Chemistry, Romanian Academy, Electroactive Polymers and Plasmochemistry Department, Iasi, ROMANIA

13.00: II.O.12 Design and development of silica aerogel embedded thermal liner for Extreme Heat Protective Clothing

T. DAS, A. DAS, R. ALAGIRUSAMY, Department of Textile and Fibre Engineering, Indian Institute of Technology Delhi, New Delhi, INDIA

13.15: II.O.13 Study of Fe₅₀Mn₃₅Sn₁₅ Heusler compound formation by mechanical alloying

F. POPA, T.F. MARINCA, B.V. NEAMȚU, N.A. SECHEL, I. CHICINAȘ, Materials Science and Engineering Department, Technical University of Cluj-Napoca, Cluj-Napoca, ROMANIA

13.30: Lunch (Hall H)

14.30: Workshop on Smart Healthcare Engineering (Hall C)

14.30 – 16.00: Poster presentations 2 (Hall G)

I.PO.01. In situ fabrication of NPC/RGO composite by dealloying and microwave-assisted hydrothermal method

S. AMBRUȘ, P. HIDIDIȘ, C. CODREAN, I. HULKA, Politehnica University of Timisoara, ROMANIA
C. ORHA, C. BANDAS, C. LAZAU, M. NICOLAESCU, National Institute for Research and Development in Electrochemistry and Condensed Matter, Timisoara, ROMANIA

I.PO.02. Electrochemical behaviour and interfacial contact resistance of NiCr/Ti coatings

D.N. AVRAM, N. VASZILCSIN, A. KELLENBERGER, M.L. DAN, I. HULKA, N. RUDENKO, Politehnica University of Timisoara, ROMANIA
A. PASCU, E.M. STANCIU, Transilvania University of Brasov, ROMANIA

I.PO.03. Wettability characterization of MDF composite materials used for industrial products

D. BĂILĂ, National University of Science and Technology POLITEHNICA Bucharest, ROMANIA
R. ŁABUDZKI, Poznan University of Technology, Poznań, POLAND
I. FODCHUK, Chernivtsi National University Yuri Fedkovych, Chernivtsi, UKRAINE
M. BONILLA, Edibon International S.A., Mostoles, SPAIN

I.PO.04. Fabrication of titanium/titanium dioxide/reduced graphene oxide electrode by a facile spin-coating method for the electrooxidation process of doxorubicin

C. BANDAS, National Institute for Research and Development in Electrochemistry and Condensed Matter Timisoara, ROMANIA
M.I. MORARIU (POPESCU), National Institute for Research and Development in Electrochemistry and Condensed Matter Timisoara; Politehnica University of Timisoara, ROMANIA
M. NICOLAESCU, C. ORHA, National Institute for Research and Development in Electrochemistry and Condensed Matter Timisoara, ROMANIA
A. POP, N. DUTEANU, Politehnica University of Timisoara, ROMANIA
C. LAZAU, National Institute for Research and Development in Electrochemistry and Condensed Matter Timisoara, ROMANIA

I.PO.05. Influence of process parameters on abrasion resistance of FeNiCrSiB-WC+TiC depositions obtained by arc spraying process

E. LEVARDA, C.D. CÎRLAN, V. PALEU, ST. L. TOMA, "Gheorghe Asachi" Technical University of Iasi, ROMANIA

I.PO.06. Fe₃₅Co₂₀Ni₂₀Si₁₀Mo₈Cu₇ soft magnetic high entropy alloys obtained by mechanical alloying

E. KARAÇAY, T.F. MARINCA, F. POPA, B.V. NEAMȚU, C.V. PRICĂ, I. CHICINAȘ, Technical University of Cluj-Napoca, ROMANIA

I.PO.07. Influence of deposition parameters on the microstructure and corrosion resistance of Co-based coatings manufactured by laser cladding

I. HULKA, M.L. DAN, D.N. AVRAM, I.D. UTU, V. UNGUREANU, Politehnica University of Timisoara, ROMANIA
E.M. STANCIU, A. PASCU, Transilvania University of Brasov, ROMANIA

I.PO.08. Experimental research on the obtaining and characterization of hardox high strength steels

A.E. ONICI, R. ȘTEFĂNOIU, V. GEANTĂ, I. VOICULESCU, National University for Science and Technology POLITEHNICA Bucharest, ROMANIA

I.PO.09. Invar/Graphene oxide type composites obtained by spark plasma sintering

C.V. PRICA, N.A. SECHEL, T.F. MARINCA, F. POPA, V. POPESCU, Technical University of Cluj-Napoca, ROMANIA
D. PRODAN, "Raluca Ripan" Institute for Research in Chemistry, Cluj-Napoca, ROMANIA
I. CHICINAȘ, Technical University of Cluj-Napoca, ROMANIA

I.PO.10. The duplex stainless steel pipes E.N. 1.4462 in orbital welding

N. SFINTES, T. MACHEDON-PISU, I.C. ROATA, Transilvania University of Brasov, ROMANIA

I.PO.11. Changing of the mechanical characteristics of SAE1006 steel wires by "HOT-DIP" thermal galvanizing

M. TINTELECAN, I.M. SAS-BOCA, D.A. ILUȚIU-VARVARA, Technical University of Cluj-Napoca, ROMANIA
M. DAN, Wire Industry, Campia Turzii, ROMANIA
O. RODRIGUEZ-ALABANDA, University of Córdoba, Córdoba, SPAIN
G.A.S. MARTÍNEZ, Federal University of Itajubá-UNIFEI, Itajubá, BRAZIL

I.PO.12. Design, manufacturing, microstructure and surface properties of brazed Co-based composite coatings reinforced with WC particles

I. ANGHEL (PETCULESCU), I.D. UTU, I. HULKA, Politehnica University of Timisoara, ROMANIA
G. MARGINEAN, Westphalian University of Applied Sciences Gelsenkirchen Bocholt Recklinghausen, Gelsenkirchen, GERMANY

IV.PO.01. Research on tribological properties of gradient tin film coated on Si₃N₄ substrate

H. WANG, C. SIBO, G. YAN, Y. WU, J. TIAN, Shenyang Jianzhu University, School of Mechanical Engineering, Shenyang, CHINA

IV.PO.02. Preparation and mechanical properties of diamond films on Si₃N₄ substrate

G. YAN, H. WANG, Faculty of Mechanical Engineering, Shenyang Jianzhu University, Shenyang, CHINA; Joint International Research Laboratory of Modern Construction Engineering Equipment and Technology, Shenyang Jianzhu University, Shenyang, CHINA
Y. YANG, Y. WU, Joint International Research Laboratory of Modern Construction Engineering Equipment and Technology, Shenyang Jianzhu University, Shenyang, CHINA
D. CRISTEA, Materials Science and Engineering Faculty, Transilvania University, Brasov, ROMANIA

IV.PO.03. Microhardness evaluation and differential scanning calorimetry analysis on recycled, crushed and heat-treated glass (RCTG)

C. EPURE, B. ISTRATE, Mechanical Engineering, Mechatronics and Robotics Department, "Gheorghe Asachi" Technical University of Iasi, ROMANIA
C. MUNTEANU, Mechanical Engineering, Mechatronics and Robotics Department, "Gheorghe Asachi" Technical University of Iasi, 700050 Iasi, ROMANIA; Technical Sciences Academy of Romania, Bucharest, ROMANIA
N.M. LOHAN, Faculty of Materials Science and Engineering, Department of Materials Engineering and Industrial Safety, "Gheorghe Asachi" Technical University of Iasi, ROMANIA

IV.PO.04. Current issues and potential advances of 3D printing in medical field

A. ILEANA (BLĂJAN), D. BLĂJAN, I. CIUCĂ, A.-I. BIȚA, I. ANTONIAC, National University of Science and Technology POLITEHNICA Bucharest, Metallic Materials Science and Physical Metallurgy Department, Bucharest, ROMANIA

IV.PO.05. Aspects regarding the welding of dissimilar joint of hardox 400 steel

M.D. TURCANU, ȘT. CRĂCIUN, I. VOICULESCU, National University of Science and Technology POLITEHNICA Bucharest Faculty of Industrial Engineering and Robotics, ROMANIA

IV.PO.06. Dissimilar welding of duplex 2505 and S275 J2 steels

A.-M. TUDOR, ȘT. CRĂCIUN, I. VOICULESCU, National University of Science and Technology POLITEHNICA Bucharest Faculty of Industrial Engineering and Robotics, București, ROMANIA

IV.PO.07. The effect of protrusions number at projection welding process

A.-V. OPREA, I.M. VASILE, I. VOICULESCU, National University for Science and Technology POLITEHNICA Bucharest, Industrial Engineering and Robotics Faculty, Bucharest, ROMANIA

R. CIOCOIU, National University for Science and Technology POLITEHNICA Bucharest, ROMANIA, Materials Science Faculty, Bucharest, ROMANIA

IV.PO.08. Comparative analysis of deposits characteristics made by welding with three different processes using the same filler metal

ȘT. CRĂCIUN, M.-D.L ȚURCANU, I. VOICULESCU, National University for Science and Technology POLITEHNICA Bucharest, ROMANIA

IV.PO.09. Evaluation of surgical instruments produced by additive manufacturing from medical, materials, production and economic points of view

D. BLĂJAN, A. ILEANA (BLĂJAN), I. CIUCĂ, A.-I. BIȚA, I. ANTONIAC, National University of Science and Technology POLITEHNICA Bucharest, Metallic Materials Science and Physical Metallurgy Department, Bucharest, ROMANIA

IV.PO.10. New medium entropy alloy deposition achieved by TIG cladding

G. SIMION, E. SCUTELNICU, "Dunarea de Jos" University of Galati, Department of Manufacturing Engineering, Galati, ROMANIA

J.M. MIRZA ROSCA, University of Las Palmas de Gran Canaria, Mech. Eng. Dept., Mechanical Engineering Department, Campus Universitario de Tafira, Edif.Ingenieria, Gran Canaria, SPAIN

I. VOICULESCU, National University for Science and Technology POLITEHNICA Bucharest, Faculty of Industrial Engineering and Robotics, Bucharest, ROMANIA

IV.PO.11. Advanced technologies and materials for obtaining sound insulation panels

M.A. POP, S. MATEI, Department of Materials Science, Transilvania University of Brasov, ROMANIA

S.M. ZAHARIA, Department of Manufacturing Engineering, Transilvania University of Brasov, ROMANIA

M. COȘNIȚĂ, Department of Product Design, Mechatronics and Environment, Transilvania University of Brasov, ROMANIA

C. CROITORU, Materials Engineering and Welding Department, Transilvania University of Brasov, ROMANIA

C. SPÎRCHEZ, Wood Processing and Design Wooden Product Department, Transilvania University of Brasov, ROMANIA

IV.PO.12. Best practices for the design, planning, and justification of training plans for the promotion of entrepreneurship and innovation in SMES

C.A. MENDIETA-PINO, Institute of Environmental Studies and Natural Resources (IUNAT), University of Las Palmas de Gran Canaria, Campus de Tafira, SPAIN

J.C. LOZANO-MEDINA, F. LEÓN-ZERPA, Department of Process Engineering, University of Las Palmas de Gran Canaria, SPAIN

P. M. VASCO MARIANO, Universidade Zambeze, MOZAMBIQUE

J.C. MIRZA ROSCA, Department of Mechanic Engineering, University of Las Palmas de Gran Canaria, SPAIN; Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

IV.PO.13. Methodology to prevent legionellosis, as an environmental disease, cause by bacteria of the genus legionella. Application for a course of hospital engineering

F. LEÓN-ZERPA, J.C. LOZANO-MEDINA, Department of Process Engineering, University of Las Palmas de Gran Canaria, SPAIN

N. CHIRINZA PENICELA, Universidade Zambeze, Unizambeze, MOZAMBIQUE

J.C. MIRZA-ROSCA, Department of Mechanic Engineering, University of Las Palmas de Gran Canaria, SPAIN; Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

C.A. MENDIETA-PINO, Department of Process Engineering, University of Las Palmas de Gran Canaria; Institute of Environmental Studies and Natural Resources (IUNAT), University of Las Palmas de Gran Canaria, Campus de Tafira, SPAIN

IV.PO.14. The celestial iron in the bronze age

S. MOISA, Ben-Gurion University of the Negev, Beer Sheva, ISRAEL

IV.PO.15. Using artificial intelligence for prediction of electrical characteristics of materials

S. MOISA, Ben-Gurion University of the Negev, Beer Sheva, ISRAEL

D. ROSENBERG, Transilvania University of Brasov, Automation and Information Technology Department, Brasov, ROMANIA

PROGRAM

IV.PO.16. Solar ageing effects on aluminium coatings for enhanced aerospace durability

I.C. ROATA, C. CROITORU, I. PLAMADIALA, Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

IV.PO.17. Influence of the laser power on the laser cladding geometry and mechanical properties

D.C. CUCULEA, G.L. ARDELEAN, C.C. MICU, C. IATAN, A. PASCU, Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

IV.PO.18. Welding of airbag inflators using laser and friction welding

G.L. ARDELEAN, D.C. CUCULEA, C.C. MICU, C. IATAN, A. PASCU, Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

J.C. MIRZA ROSCA, Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA; University of Las Palmas de Gran Canaria, Mech. Eng. Dept., Mechanical Engineering Department, Campus Universitario de Tafira, Edif.Ingenieria, Gran Canaria, SPAIN

IV.PO.19. Research on mechanised plasma gouging of weldable construction steels

T. MACHEDON-PISU, A. OLAH, Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

M. MACHEDON-PISU, Transilvania University of Brasov, Electronics and Computer Department, Brasov, ROMANIA

IV.PO.20. SSM.ro - A new software platform in the field of occupational health and safety system (OHS)

P.I. MUREȘAN, I. MILOSAN, Faculty of Materials Science and Engineering, Department of Materials Science, Transilvania University of Brasov, ROMANIA

IV.PO.21. Accelerated aging and characterization of borophosphate glasses for enhanced solar panel performance

C. CROITORU, I.C. ROATA, I. PLAMADIALA, Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

IV.PO.22. Improvement of the desorption adsorption diffusion process in 3D printed nickel-plated parts through concentrated solar treatment

M.A. POP, C. GABOR, T. BEDO, V. GEAMAN, Department of Materials Science, Transilvania University of Brasov, ROMANIA

IV.PO.23. Protection of functional textiles to UV radiation emitted by welding plasma

C.C. MICU, D.C. CUCULEA, G.L. ARDELEAN, Transilvania University of Brasov, Materials Engineering and Welding Department, ROMANIA

IV.PO.24. NiCrAlY laser cladding reinforced with carbon nanotubes

A. PASCU, E. STANCIU, C. CROITORU, E. MOLDOVAN, I.C. ROATĂ, M.H. ȚIEREAN, Transilvania University of Brasov, Materials Engineering and Welding Department, ROMANIA

I. HULKA, Politehnica University Timisoara, Renewable Energy Res Inst ICER, Timisoara, ROMANIA

10.00 – 16.00: Companies exhibitions (Hall G)

19.00: Gala dinner (ARO PALACE HOTEL - night bar)

Saturday, 16.03.2024

Sightseeing program: Brasov city and Bran castle