



# raMat 2019

**Braşov - ROMANIA**  
**March 13 - 16, 2019**

# PROGRAM

**Conference's Partners:**

**Global Source MRK, Namicon, Sartorom**



Organized by

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

**Academy of Technical Sciences of Romania – ASTR,**  
**Association for Heat Treatment and Surface Engineering – ATTIS,**  
**Romanian Foundry Technical Association – ATTR,**  
**Romanian Welding Society - ASR**

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**Ionuț ROATĂ**

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**Bela VARGA**

**Laura VELICU**

## Conference Sections

- I. Metallic materials
- II. Biomaterials
- III. Ceramics, polymers and composite materials
- IV. Surface engineering
- V. Nanomaterials
- VI. Welding engineering and safety engineering
- VII. Additive manufacturing

## Conference's Halls:

- Hall A – Alpin Hotel, room Team  
Hall B – Alpin Hotel, room Cluj  
Hall C – Alpin Hotel, room Transilvania 1  
Hall D – Alpin Hotel, room Sibiu  
Hall E – Alpin Hotel, room Transilvania 2  
Hall F – Alpin Hotel, room Transilvania 3

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**Ionelia VOICULESCU**, University Politehnica of Bucharest, Romania  
**Rodica WENKERT**, Soroka University Medical Centre, Beer-Sheva, Israel  
**Yuhou WU**, Shenyang Jianzhu University, China

## Conference Venue

**Brașov** 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), Brașov 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 11<sup>th</sup> International Conference of Materials Science and Engineering – BraMat 2019, will be held in Poiana Brasov ski resort, at Hotel Alpin Resort & Spa, Romania.

## **Program (Outline)**

### **Wednesday, 13.03.2019**

- 15:00: DHC ceremony (Aula, Brasov, 41A Iuliu Maniu Str.)
- 16:00: Registration (Aula, Brasov, 41A Iuliu Maniu Str.)
- 17:00: Plenary lectures I (Aula, Brasov, 41A Iuliu Maniu Str.)
- 19:30: Welcome cocktail (Alpin Hotel, Poiana, Gatsby restaurant)

### **Thursday, 14.03.2019**

- 8.30: Registration (Alpin Hotel, lobby)
- 9.00: Opening ceremony (Alpin Hotel, Hall A)
- 9.20: Companies Introduction (Alpin Hotel, Hall A)
- 9.30: Coffee break (Alpin Hotel, Hall A)
- 10.00: Plenary lectures II (Alpin Hotel, Hall A)
- 11.30: Coffee break (Alpin Hotel, Hall A)
- 12.00: Plenary lectures III (Alpin Hotel, Hall A)
- 13.30: Lunch (Alpin Hotel, Forest restaurant)
- 15.00: Keynote and oral presentations I (Sections I, II, III, IV) (Alpin Hotel, Halls B, C, D, E)
- 16.45: Coffee break (Alpin Hotel, Hall F)
- 17.00: Workshop on Digital Infrastructure Projects Exploring Advanced Structural Materials Data (Alpin Hotel, Hall A)
- 17.00: Poster presentations I (Alpin Hotel, Halls E, F) (Sections I, II, V)
- 9.30 - 19.00: Companies exhibitions (Alpin Hotel, lobby)
- 19.30: Camp fire and barbeque (Alpin Hotel, Tosca restaurant)

### **Friday, 15.03.2019**

- 8.30: Plenary lectures IV (Alpin Hotel, Hall A)
- 11.00: Coffee break (Alpin Hotel, Hall A)
- 11.30: Keynote and oral presentations II (Sections I, II, III, IV) (Alpin Hotel, Halls B, C, D, E)
- 13.30: Lunch (Alpin Hotel, Tosca restaurant)
- 15.00: Keynote and oral presentations III (Sections III, IV, V, VI, VII) (Alpin Hotel, Halls B, C, D, E)
- 15.30: Workshop on Materials Engineering Future (Alpin Hotel, Hall A)
- 16.15: Workshop Global Source MRK (Alpin Hotel, Hall D)
- 16.45: Coffee break (Alpin Hotel, Hall F)
- 17.00: Poster presentations II (Alpin Hotel, Halls E, F) (Sections III, IV, VI, VII)
- 9.30 - 19.00: Companies exhibitions (Alpin Hotel, lobby)
- 20.00: Gala dinner, Poster awards (Alpin Hotel, Forest restaurant)

### **Saturday, 16.03.2019**

- 10.00: Closing Ceremony (Alpin Hotel, Hall A)

## **Program (detailed)**

### **Wednesday, 13.03.2019**

16.00: Registration

#### **Aula, Brasov, 41A Iuliu Maniu Str.**

17.00: Plenary lectures I

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

17.00: **P.01. Some Old /New Thoughts on the Redesign of Engineering Studies**

*N. FINGER*, Ben-Gurion University of the Negev, Beer-Sheva, ISRAEL

17.30: **P.02. Ethics in scientific publishing**

*H. RUDOLPH*, Editor-in-Chief, Applied Surface Science - Elsevier

#### **Alpin Hotel, Poiana, Gatsby restaurant**

19.30: Welcome cocktail

### **Thursday, 14.03.2019**

#### **Alpin Hotel, lobby**

8.30: Registration

#### **Alpin Hotel, Hall A**

Opening Ceremony

9.00: Welcome messages

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

Professor Dr. Eng. **Daniel MUNTEANU**, BraMat Conference Chairman

9.20: Companies introduction

#### **Alpin Hotel, Hall A**

**10.00: Coffee Break**

#### **Alpin Hotel, Hall A**

10.00: Plenary Lectures II:

Chairperson: **Mihail IONESCU**, Australian Nuclear Science and Technology Organisation, AUSTRALIA

10.00: **P.03. Dislocations in the TEM**

*C.B. CARTER*, University of Connecticut, U.S.A.

10.30: **P.04. Innovative methods of design for additive manufacturing (DFAM) of a guideway for machine tools**

*L. IULIANO, F. CALIGNANO, M. GALATI, P. MINETOLA*, Politecnico di Torino, ITALY

11.00: **P.05. Polysaccharide carriers and ultrasound in gene therapy**

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

#### **Alpin Hotel, Hall A**

**11.30: Coffee Break**

### Alpin Hotel, Hall A

12.00: Plenary Lectures III:

Chairperson: **C. Barry CARTER**, University of Connecticut, U.S.A.

12.00: **P.06. Advanced ceramics and its application in modern mechanical engineering**

*Y. WU, S. LI*, Shenyang Jianzhu University, CHINA

12.30: **P.07. Thin films for sensing applications: from bioelectrodes to biosensors**

*C. LOPES, J. BORGES, F. VAZ*, Universidade do Minho, Braga, PORTUGAL

13.00: **P.08. Nanocomposites for photoactive materials**

*M.W. TAUSCH*, University of Wuppertal, Institute of Polymer Technology, GERMANY

### Alpin Hotel, Forest restaurant

**13.30: Lunch**

### Alpin Hotel, Hall B

15.00: Keynote and oral presentations I (Section I)

Chairpersons: **Brandusa GHIBAN**, Politehnica University of Bucharest, ROMANIA

**Afina LUPULESCU**, ASM International, U.S.A.

15.00: **I.K.01. Characterization of value-added Al-based alloy for automotive application**

*I. PETER, M. ROSSO*, Politecnico di Torino, Department of Applied Science and Technology, ITALY

*R. MOLINA*, Teksid Aluminum, Torino, ITALY

15.20: **I.K.02. Effect of heat treatment on the microstructure and microhardness of new high entropy alloys with high density**

*I. VOICULESCU*, University Politehnica of Bucharest, Materials Technology and Welding Department, ROMANIA

*V. GEANTĂ, R. ȘTEFĂNOIU*, University Politehnica of Bucharest, Engineering and Management of Metallic Materials Obtaining, ROMANIA

*A. ROTARIU*, Technical Military Academy, Bucharest, ROMANIA

*E. SCUTELNICU*, University „Dunărea de Jos” from Galați, Manufacturing Engineering Department, ROMANIA

*D. MITRICĂ*, National R&D Institute for Nonferrous and Rare Metals – IMNR, Pantelimon, Ilfov, ROMANIA

*I. MILOȘAN*, Transilvania University of Brasov, Material Science Department, ROMANIA

15.40: **I.O.01. MOCVD of Pt coatings with high surface areas on the contacts of electrophysiological diagnostic electrodes**

*S.I. DOROVSKIKH, D.B. KAL'NUI, E.V. MAXIMOVSKIY, N.B. MOROZOVA*, Nikolaev Institute of Inorganic Chemistry, SB RAS, Novosibirsk, RUSSIA

15.55: **I.O.02. Considerations regarding the structural mechanism of increasing the corrosion resistance of the high temperature working components by alloying with Mo and V**

*C. DUMITRU, A. GHINEA*, Uttis Industries SRL, Vidra, ROMANIA

*H. FAWZI*, Politehnica University of Bucharest, ROMANIA

*C. PUSCASU, M. GRIGORESCU*, INCDT-COMOTI, Bucharest, ROMANIA

16.10: **I.O.03. Estimation of the structural evolution of refractory steel spare parts during the successive carburizing**

*L. DRUGA, C. DUMITRU*, Uttis Industries SRL, Vidra, ROMANIA

*M. COJOCARU, H. FAWZI*, Politehnica University of Bucharest, ROMANIA

16.25: **I.O.04. Shear, tensile and fatigue performance of L-PBF A357.0 parts in the as-built condition**

*A. GATTO, E. BASSOLI, L. DENTI, A. SOLA, E. TOGNOLI*, Università di Modena e Reggio Emilia Dipartimento DIEF, Modena, ITALY

*A. COMIN*, Maserati S.p.A., Modena, ITALY

**16.40: I.O.05. Influence of the heat treatment parameters on the wear behaviour of the UNS S32760 super duplex stainless steel**

*C. TEISANU*, University of Craiova, Automotive, Transportation and Industrial Engineering Department, ROMANIA

*O. GINGU*, University of Craiova, Engineering and Management of Technological Systems Department, Drobeta Turnu Severin, ROMANIA

*D. COJOCARU*, Politehnica University of Bucharest, Metallic Materials Processing and Eco-Metallurgy Department, ROMANIA

*N. CIOATERA*, University of Craiova, Department of Chemistry, ROMANIA

*A. LETRONG*, University of Bourgogne, Institut Supérieur de l'Automobile et des Transports, Nevers, FRANCE

### Alpin Hotel, Hall E

**15.00: Keynote and oral presentations I (Section II)**

*Chairpersons: Eleonora SANTECCHIA*, Università Politecnica delle Marche, Ancona, ITALY

*Aurel CRISAN*, Transilvania University of Brasov, ROMANIA

**15.00: II.K.01. Technologies for bone reconstruction biomaterials using ceramics from natural sources and porogen agents**

*F. MICULESCU*, Politehnica University of Bucharest, Faculty of Materials Science and Engineering, Metallic, Department of Metallic Materials Science, Physical Metallurgy, ROMANIA.

**15.20: II.O.01. Evaluation on the electrocorrosion of Cr-based dental alloys**

*B.M. ACHIMESCU, M. BUCIUMEANU*, "Dunărea de Jos" University of Galați, Faculty of Engineering, ROMANIA

*A.M. CANTARAGIU* "Dunărea de Jos" University of Galați, Cross-Border Faculty, ROMANIA

**15.35 II.O.02. Structural and topographic mapping as assesment method of some alloplastic biocomposites in-vitro mechanical response**

*O. GINGU, C. NICOLICESCU, G. BUCSE, G. SIMA*, University of Craiova, Engineering and Management of Technological Systems Department, Drobeta Turnu Severin, ROMANIA

*C. TEISANU*, University of Craiova, Automotive, Transportation and Industrial Engineering Department, ROMANIA

**15.50: II.O.03. Hierarchical micro/nano modified threaded surfaces with TiO<sub>2</sub> nanostructures for medical implants**

*G. STRNAD, R. CAZACU*, University of Medicine, Pharmacy, Sciences and Technology of Targu Mures, Faculty of Engineering, ROMANIA

*L. JAKAB-FARKAS*, Sapiientia University of Cluj Napoca, Faculty of Technical and Human Sciences, Targu Mures ROMANIA

*C. PETROVAN*, University of Medicine, Pharmacy, Sciences and Technology of Targu Mures, Faculty of Dental Medicine, ROMANIA

*A. FEIER, O. RUSSU*, University of Medicine, Pharmacy, Sciences and Technology of Targu Mures, Faculty of Medicine, ROMANIA

**16.05: II.O.04. Metal complexes as antitumor agents: design, structure-activity relationship and perspective**

*M. F. ZALTARIOV*, "Petru Poni" Institute of Macromolecular Chemistry, Iasi, ROMANIA

**16.20: II.O.05. Miniaturized biosensing platforms for toxic compounds and their metabolites detection**

*A.M. GURBAN, M. DONI*, National Research & Development Institute for Chemistry and Petrochemistry-ICECHIM, Biotechnology Department, Biosensors Laboratory, Bucharest, ROMANIA

*P. EPURE*, EPI-SISTEM SRL, 145 Bvd. Brasovului, Sacele, Brasov, ROMANIA

**16.35: II.O.06. Engineered macroporous biomaterials with tuned swelling and chelating properties**

*M. V. DINU, I. A. DINU, M. M. LAZAR, E. S. DRAGAN*, "Petru Poni" Institute of Macromolecular Chemistry, Iasi, ROMANIA

### Alpin Hotel, Hall C

**15.00: Oral presentations I (Section III)**

*Chairpersons: Ionel CHICINAȘ*, Technical University of Cluj-Napoca, ROMANIA

**Cătălin CROITORU**, Transilvania University of Brasov, ROMANIA

**15.00: III.O.01. Polymeric membranes with self-indicator properties for separation efficiency**

*S. NITU, O.S. SERBANESCU, A.M. PANDELE, S.I. VOICU*, University Politehnica of Bucharest, Advanced Polymer Materials Group, ROMANIA

*F. MICULESCU*, University Politehnica of Bucharest, Faculty of Materials Science, ROMANIA

*V.K. THAKUR*, University of Cranfield, School of Aerospace, Transport and Manufacturing, UNITED KINGDOM

**15.15: III.O.02. Investigating the effect of graphene oxide on the mechanical properties of injectable bone substitutes**

*Ö. DEMIR OĞUZ, D. EGE*, Boğaziçi University, Institute of Biomedical Engineering, Istanbul, TURKEY

**15.30: III.O.03. Effect of different surface treatments of date palm seed on mechanical and physical properties of thermoplastic polyurethane/date palm seed composites**

*S. SISMANOGLU, U. TAYFUN, Y. KANBUR*, Karabuk University, Metallurgical and Materials Engineering Department, TURKEY

**15.45: III.O.04. Removal of heavy metal ions from multi-component aqueous solutions by eco-friendly biocomposites**

*M.M. LAZAR, I.A. DINU, M.V. DINU*, "Petru Poni" Institute of Macromolecular Chemistry, Department of Functional Polymers, Iasi, ROMANIA

**16.00: III.O.05. Monitoring the effect of silica fume on the porous structure of cement paste via low field NMR relaxometry**

*I. ARDELEAN, A. CRETU, C. CADAR, C. BADEA*, Technical University of Cluj-Napoca, Department of Physics and Chemistry, ROMANIA

**16.15: III.O.06. The effect of fine aggregates in fly ash-based geopolymers**

*D.D. BURDUHOS NERGIS, P. VIZUREANU*, Gheorghe Asachi Technical University of Iasi, Faculty of Materials Science and Engineering, ROMANIA

**16.30: III.O.07. Waste minimization in water purification processes by reusing the copper (II)-loaded biosorbents as catalysts in degradation of organic pollutants**

*M.V. DINU, M.M. LAZAR, E.S. DRAGAN, I.A. DINU*, "Petru Poni" Institute of Macromolecular Chemistry, Department of Functional Polymers, Iasi, ROMANIA

## Alpin Hotel, Hall D

**15.00: Keynote and oral presentations I (Section IV)**

*Chairpersons: Luis CUNHA*, Center of Physics of Universities of Minho and Porto, PORTUGAL

*Rodica Mariana ION*, National Institute of Research and Development for Chemistry and Petrochemistry, Bucharest, Valahia University, Targoviste, ROMANIA

**15.00: IV.K.01 Influence of the testing environment on the biodegradation for various magnesium alloys potentially used as implant materials**

*I. ANTONIAC*, University Politehnica of Bucharest, Faculty of Material Science and Engineering, ROMANIA

**15.20: IV.O.01. Microstructure and tribological properties of Al<sub>2</sub>O<sub>3</sub> coatings prepared by air plasma spraying**

*C. BEJINARIU, C.D. FLOREA, N. CIMPOESU*, "Gheorghe Asachi" Technical University of Iasi, Materials Science and Engineering Faculty, ROMANIA

*C. MUNTEANU, V. PALEU, C. STAMATE, B. ISTRATE, C. CIRLAN PALEU*, "Gheorghe Asachi" Technical University of Iasi, Mechanical Faculty, ROMANIA

**15.35: IV.O.02. Semi-empirical methods for estimation/anticipation of the behavior at the thermochemical processing of metal matrices**

*A. GHINEA, M. COJOCARU*, Politehnica University of Bucharest, ROMANIA

*L. DRUGA*, Uttis Industries SRL, Vidra, ROMANIA



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**15.50: IV.O.03. Tribological characterization of phosphate conversion coating and rubber paint coating deposited on carbon steel carabiners surfaces**

*D. P. BURDUHOS-NERGIȘ, N. CIMPOEȘU, P. VIZUREANU, C. BACIU, C. BEJINARIU*

Technical University “Gheorghe Asachi” Iasi, Faculty of Materials Science and Engineering, ROMANIA

**16.05: IV.O.04. Fabrication and characterization of polymer based nano thin films for harmful organic vapor detection**

*Y. ACIKBAS, G. TETIK*, Usak University, Department of Materials Science and Nanotechnology Engineering, TURKEY

*S. BOZKURT*, Usak University, Vocational School of Health Services, Usak, TURKEY, Usak University, Scientific Analysis Technological Application and Research Center, TURKEY

*R. CAPAN, M. ERDOGAN, C. OZKAYA*, University of Balikesir, Department of Physics, Faculty of Science, TURKEY

**16.20: IV.O.05. Synergistic effect of graphene oxide and SiO<sub>2</sub> nanostructures in the epoxy nanocomposite coatings**

*C.M. DAMIAN, M.I. NECOLAU, I. NEBLEA*, Advanced Polymer Materials Group, University Politehnica of Bucharest, ROMANIA

*E. VASILE*, University Politehnica of Bucharest, ROMANIA

*H. IOVU*, Advanced Polymer Materials Group, University Politehnica of Bucharest, Bucharest, Academy of Romanian Scientist, Bucharest, ROMANIA

**16.35: IV.O.06. Wear behaviour of different DLC coatings applied on hardened AISI 52100 steel by PVD magnetron sputtering**

*D. FELDIOREAN, L. BALTES, A. OLAH, M. TIEREAN*, Transilvania University of Brasov, Material Engineering and Welding Department, ROMANIA

*D. CRISTEA, D. MUNTEANU*, Transilvania University of Brasov, Material Science Department, ROMANIA

**Alpin Hotel, Hall F**

**16.45: Coffee Break**

**Alpin Hotel, Hall A**

**17.00: Workshop on Digital Infrastructure Projects Exploring Advanced Structural Materials Data**

**17.00: W.1. CEN/WS METEDA - data formats in practice - demonstration using the ISO 12106 data formats for creep-fatigue**

*T. AUSTIN*, European Commission JRC, The NETHERLANDS

**17.30: W.2. The path to standardization - ensuring the long term prospects for formats for engineering materials data**

*A. LUPULESCU*, ASM International, Materials Headquarters, Ohio, U.S.A.

**18.00: W.3. CEN/WS NATEDA - description of the new CEN Workshop**

*T. AUSTIN*, European Commission JRC, The NETHERLANDS

**Alpin Hotel, Halls E and F**

17.00: Poster presentations I

**Section I**

**I.PO.01. Characteristics of low density high entropy alloys before and after heat treatment processing**

*C. I. BANICA, D. MITRICA, B. CARLAN, D. VONICA, M. BURADA*, National R&D Institute for Nonferrous and Rare Metals – IMNR, Advanced and Nanostructured Materials Laboratory, Pantelimon, Ilfov, ROMANIA

*M. T. OLARU*, National R&D Institute for Nonferrous and Rare Metals – IMNR, Center HighPTMet , Pantelimon, Ilfov, ROMANIA

*D. DUMITRESCU, M. GHITA*, National R&D Institute for Nonferrous and Rare Metals – IMNR, Metal Resource Valorisation Technologies Laboratory, Pantelimon, Ilfov, ROMANIA

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V. GEANTA, I. VOICULESCU, R. STEFANOIU, University Politehnica of Bucharest, Obtaining and Refining of Metallic Alloys Laboratory - ERAMET, ROMANIA

V. BADILITA, L. E. BARBULESCU, L. LICU, National R&D Institute for Nonferrous and Rare Metals – IMNR, Analysis Laboratory, Pantelimon, Ilfov, ROMANIA

**I.PO.02. Structural, magnetic and electrical properties in manganite of  $\text{Pr}_{2/3}(\text{Sr}_{1-x}\text{Ba}_x)_{1/3}\text{MnO}_3$  and  $(\text{La}_{1-x}\text{Pr}_x)_{2/3}\text{Ba}_{1/3}\text{MnO}_3$  type,  $x=0.2, 0.4, 0.6, 0.8$**

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

**I.PO.03. Variation of damping behaviour of T105Mn120 castings, used for railway safety systems, as an effect of extreme loading condition**

V. BULBUC, The National Railway Company CFR SA, Regional Branch of Passenger Rail Iași, Iași, ROMANIA

B. PRICOP, M. POPA, N. CIMPOEȘU, L.G. BUJOREANU, "Gheorghe Asachi" Technical University of Iași, Faculty of Materials Science and Engineering, ROMANIA

F. MAXIM, SC IUS SA, Brașov, ROMANIA

**I.PO.04. Simulation of the microwave field influence on wastes melting**

B.A. CĂRLAN, D.V. DUMITRESCU, D. MITRICĂ, M. BURADA, I. CONSTANTIN, M.T. OLARU, National R&D Institute for Nonferrous and Rare Metals – IMNR, Pantelimon, Ilfov, ROMANIA

F.M. DRĂGOESCU, S.C. Claudiu Toprom S.R.L., Bucharest, ROMANIA

**I.PO.05. Characterization of  $\text{Mg}_2\text{Si}$  obtained by mechanical alloying. The influence of process agent control**

V. CEBOTARI, V. MACARI, T. MARINCA, F. POPA, N.A. SECHEL, I. CHICINAS, Technical University of Cluj-Napoca, Materials Sciences and Engineering Department, ROMANIA

**I.PO.06. Obtaining of bulk amorphous steel with low carbon content using industrial ferroalloys**

C. CODREAN, D. BUZDUGAN, C. OPRIS, P. HIDIDIȘ, V.A. ȘERBAN, University Politehnica Timisoara, Material Engineering and Manufacturing Department, ROMANIA

**I.PO.07. Synthesis of amorphous  $\text{Fe}_{38.5}\text{Co}_{38.5}\text{Nb}_7\text{B}_{15}\text{Cu}_1$  powders via wet and dry mechanical alloying and its structural and thermal characterisation**

A. COTAI, B.V. NEAMȚU, F. POPA, T.F. MARINCA, I. CHICINAS, Technical University of Cluj-Napoca, Materials Sciences and Engineering Department, ROMANIA

**I.PO.08. Influence of intercritical quenching on the structure and mechanical properties of a dual-phase steel with low manganese content**

C. DULUCHEANU, T.L. SEVERIN, A. POTORAC, L. IRIMESCU, University "Stefan cel Mare" of Suceava, Faculty of Mechanical Engineering, Mechatronics and Management & Research Center MANSID, ROMANIA

**I.PO.09. Aluminium cable waste melting in microwave field**

D.V. DUMITRESCU, M. BURADA, I. CONSTANTIN, D. MITRICA, M.T. OLARU, B.A. CARLAN, National R&D Institute for Nonferrous and Rare Metals, Pantelimon, ROMANIA

F.M. DRAGOESCU, S.C. Claudiu Toprom S.R.L., Bucharest, ROMANIA

F. COSMULESCU, S.C. Cosfel Actual S.R.L., Bucharest, ROMANIA

S. CIPRIAN, B. VĂLCAN, Environmental Health Center, Cluj Napoca, ROMANIA

**I.PO.10. High entropy alloys for military domain from AlCrFeMnNi system microalloyed with Ti and Zr**

V. GEANTA, R. STEFANOIU, University Politehnica of Bucharest, Engineering and Management of Metallic Materials Obtaining, ROMANIA

I. VOICULESCU, University Politehnica of Bucharest, Materials Technology and Welding Department, ROMANIA

I. MILOSAN, T. BEDO, Transilvania University of Brasov, Material Science Department, ROMANIA

A. ROTARIU, Technical Military Academy, Bucharest, ROMANIA

D. MITRICĂ, National R&D Institute for Nonferrous and Rare Metals – IMNR, Pantelimon, Ilfov, ROMANIA

A.D. JIANU, Karlsruhe Institute of Technology, Karlsruhe, GERMANY

**I.PO.11. Structural investigations of brown band of Aluminum 3003/Al 4xxx clad materials**

PROGRAM

B. GHIBAN, C. NATRA, University Politehnica Bucharest, Metallic Material Science Department, Faculty of Materials Science and Engineering, ROMANIA

**I.PO.12. Behaviour of Inconel 718 superalloy at severe deformation**

B. GHIBAN, C.M. GURAGATA, N. SERBAN, University Politehnica Bucharest, Metallic Material Science Department, Faculty of Materials Science and Engineering, ROMANIA

**I.PO.13. Microbiologically influenced corrosion evaluation device**

B. GHIBAN, University Politehnica Bucharest, Metallic Material Science Department, Faculty of Materials Science and Engineering, ROMANIA

M. ANDREI, OMV Petrom SA, Institute for Research and Technology ICPT Câmpina, Câmpina, ROMANIA

**I.PO.14. Heat treatment behavior of steels used for alternator shafts**

B. GHIBAN, D.T. BRAN, University Politehnica Bucharest, Metallic Material Science Department, Faculty of Materials Science and Engineering, ROMANIA

**I.PO.15. Influence of some REOs on the zirconia stabilization process**

A.N. GHITA, A.E. SLOBOZEANU, S.N. VALSAN, V.D. DRĂGUȚ, National Research & Development Institute for Non-Ferrous and Rare Metals – IMNR, Pantelimon, Ilfov County, ROMANIA

A.N. GHITA, A.E. SLOBOZEANU, I. CSAKI, C. PREDESCU, University Politehnica of Bucharest, Faculty of Materials Science and Engineering, ROMANIA

**I.PO.16. Copper-mining tailings from Sasca Montana: mineralogical context; bioprocessing; critical metals assessment**

M. GHITA, A.G. VATUI, S.N. VALSAN, D.C. MIHAIESCU, A.N. GHITA, National Research & Development Institute for Non-Ferrous and Rare Metals – IMNR, Pantelimon, Ilfov County, ROMANIA

A. BUTU, S. RODINO, National Institute of Research and Development for Biological Sciences, Bucharest, ROMANIA

**I.PO.17. Heat transfer in the ingot mold of continuous casting**

K. HAMLAOUI, H. BENDJAMA, H. TAYOUB, K. SLIMANI, S. AOUABDI, Research Center in Industrial Technologies CRTI, Algiers, ALGERIA

**I.PO.18. Synthesis and thermoelectric properties of  $\text{Na}_{2+x}\text{Al}_{2+x}\text{Sn}_{4-x}$  with disordered Na atoms in a tunnel structure**

M. KANNO, T. YAMADA, H. YAMANE, IMRAM, Tohoku University, JAPAN

**I.PO.19. Investigation of the surface treatment of aluminum alloys for various coatings**

A. MATEI, V. ȚUCUREANU, O. TUTUNARU, B. C. ȚÎNCU, M. AVRAM, National Institute for Research and Development in Microtechnologies IMT-Bucharest, ROMANIA

**I.PO.20. Effect of titanium surface roughness modified by hydroxyapatite coating**

F. MOHAMMED ALQASIM, I. CIUCA, A.H. ALAA, University Politehnica of Bucharest, Faculty Material Science and Engineering, ROMANIA

B.S. VASILE, R. TRUSCA, University Politehnica of Bucharest, Faculty of Applied Chemistry and Materials Science, ROMANIA

**I.PO.21. Morphological analyses of W/CU functional graded materials obtained by conventional and spark plasma sintering**

C. NICOLICESCU, V.H. NICOARĂ, University of Craiova, Engineering and Management of the Technological Systems Department, Drobeta-Turnu Severin, ROMANIA

F. POPA, T.F. MARINCA, Technical University of Cluj-Napoca, Department of Materials Science and Engineering, ROMANIA

**I.PO.22. Recovery of precious metals from flotation tailings using ionic liquids**

M.T. OLARU, M. BURADA, M. GHITA, D.V. DUMITRESCU, D. MITRICA, B.A. CARLAN, National R&D Institute for Nonferrous and Rare Metals, Pantelimon, ROMANIA

**I.PO.23. Some structural effects related to the abnormal grain growth in FeMnAlNi shape memory alloys**

*M. POPA, E. MIHALACHE, B. PRICOP, L.G. BUJOREANU*, "Gheorghe Asachi" Technical University of Iași, Faculty of Materials Science and Engineering, ROMANIA

*V.D. COJOCARU*, Politehnica University of Bucharest, Faculty of Materials Science and Engineering, ROMANIA

**I.PO.24. Holding-temperature effects on thermally and stress induced martensitic transformations related to strain sweep behaviour**

*M. POPA, N.M. LOHAN, B. PRICOP, L.G. BUJOREANU*, "Gheorghe Asachi" Technical University of Iași, Faculty of Materials Science and Engineering, ROMANIA

*F. POPA*, Technical University from Cluj-Napoca, Faculty of Materials Science and Engineering, ROMANIA

**I.PO.25. Surface engineering of thermal sprayed Ni-Al coatings through solar heat treatment**

*I.C. ROATA, C. CROITORU, A. PASCU, E.M. STANCIU*, Transilvania University of Brasov, Materials Engineering and Welding Department, ROMANIA

*I. HULKA*, Research Institute of Renewable Energy – ICER, Politehnica University of Timisoara, ROMANIA

*D. CRISTEA*, Transilvania University of Brasov, Material Science Department, ROMANIA

*I. PETRE*, Transilvania University of Brasov, Department of Engineering and Industrial Management, ROMANIA

**I.PO.26. Heat and thermochemical treatments of austenitic steels and their influence on corrosion resistance**

*M. STOICANESCU, I. GIACOMELLI, V. COMICI*, Transilvania University of Brasov, Material Science Department, ROMANIA

*A. ZARA*, Environmental Protection Agency of Brasov, ROMANIA

**I.PO.27. Magnetic and structural properties of electrodeposited Fe/Pt nano-multilayers: the influence of Pt thickness**

*D. TANASE*, "Spiru Haret" Computer Science College, Physics Department, Suceava, ROMANIA

*S.I. TANASE*, "Alexandru cel Bun" College, Physics Department, Gura Humorului, ROMANIA

*V. GEORGESCU*, "Alexandru Ioan Cuza" University, Faculty of Physics, Iasi, ROMANIA

**I.PO.28. Microstructure, phase transformations and properties' evaluation of Al-Si-Ni metastable alloys**

*A. NITOI, T. BEDO, B. VARGA, M.A. POP, C. GABOR, I. GHIUTA, D. CRISTEA, D. MUNTEANU*, Transilvania University of Brasov, Material Science Department, ROMANIA

**I.PO.29. Effect of temperature on hard magnetic ferrites characteristics**

*M.D. CALIN, E. HELEREA, G. ANGHEL*, Transilvania University of Brasov, Electrical Engineering and Applied Physics Department, ROMANIA

## Section II

**II.PO.01. On constitutive equations in thermo-electro-viscoelasticity**

*A. MONTANARO*, University of Padova, Department of Mathematics 'Tullio Levi-Civita', ITALY

**II.PO.02. Modification of silk as magnesium and strontium releasing materials for bone tissue engineering**

*C. TANSAKUL, S. ARUNLIMSAWAT*, Prince of Songkla University, Faculty of Science, Department of Chemistry, Hat Yai, Songkhla, THAILAND

*C. MEESANE*, Prince of Songkla University, Institute of Biomedical Engineering, Faculty of Medicine, Hat Yai, Songkhla, THAILAND

**II.PO.03. Electrochemical behavior and structural characterization of new Ti-based alloys**

*P. VIZUREANU, A.V. SANDU, D.C. ACHITEI*, "Gheorghe Asachi" Technical University of Iași, Faculty of Materials Science and Engineering, ROMANIA

Centre of Excellence Geopolymer & Green Technology School of Materials Engineering, University Malaysia Perlis, MALAYSIA

*M.S. BALATU, C. NEJNERU*, "Gheorghe Asachi" Technical University of Iași, Faculty of Materials Science and Engineering, ROMANIA

*I. VOICULESCU*, University Politehnica of Bucharest, ROMANIA

**II.PO.04. Hot rolling effects on the microstructure and chemical properties of NiTiTa alloys**

*N.M. LOHAN, B. PRICOP, M. POPA, E. MIHALACHE, N. CIMPOEȘU, R. CIMPOEȘU, L.G. BUJOREANU*, "Gheorghe Asachi" Technical University of Iași, Faculty of Materials Science and Engineering, ROMANIA  
*B. ISTRATE*, "Gheorghe Asachi" Technical University of Iași, Faculty of Mechanical Engineering, ROMANIA

**II.PO.05. Mechanical properties of Ti-Mo-Si alloys**

*C.A. TUGUI, M.S. BALTATU, C. NEJNERU*, "Gheorghe Asachi" Technical University of Iași, Faculty of Materials Science and Engineering, ROMANIA  
*M.C. PERJU, P. VIZUREANU*, "Gheorghe Asachi" Technical University of Iași, Faculty of Materials Science and Engineering, ROMANIA  
Centre of Excellence Geopolymer & Green Technology School of Materials Engineering, University Malaysia Perlis, MALAYSIA,  
*M.M ABDULLAH*, Centre of Excellence Geopolymer & Green Technology School of Materials Engineering, University Malaysia Perlis, MALAYSIA

**II.PO.06. Preliminary tests for new Ti-Mo-Si alloys as potential biomaterials**

*I. BĂLTATU, C.A. TUGUI*, "Gheorghe Asachi" Technical University of Iași, Faculty of Materials Science and Engineering, ROMANIA  
*P. VIZUREANU, A.V. SANDU, D.C. ACHITEI, M.C. PERJU*, "Gheorghe Asachi" Technical University of Iași, Faculty of Materials Science and Engineering, ROMANIA  
Centre of Excellence Geopolymer & Green Technology School of Materials Engineering, University Malaysia Perlis, MALAYSIA  
*A. SAVIN*, National Institute of R&D for Technical Physics, NDT Department, Iasi, ROMANIA

**II.PO.07. Novel films based on xanthan / polyvinyl alcohol impregnated with antioxidant agents for food industry**

*N. FIFERE, I.E. RASCHIP, M.V. DINU*, "PetruPoni" Institute of Macromolecular Chemistry, Iasi, ROMANIA  
*C.E. LUCHIAN, A. POPIRDA*, "Ion Ionescu de la Brad" University of Agricultural Sciences and Veterinary Medicine, Iasi, ROMANIA

**I.PO.08. Characterization and biodegradation behaviour of new collagen/hydroxiapatite/magnesium composites for bone tissue engineering**

*A. ANTONIAC, E. VASILE, C. TECU, C. MILEA, I. ANTONIAC*, University Politehnica of Bucharest, Faculty of Material Science and Engineering, ROMANIA  
*V. SACELEANU*, University Lucian Blaga, Sibiu, ROMANIA  
The National Research & Development Institute for Textiles and Leather, Bucharest, ROMANIA

**II.PO.09. Influence of gadolinium in biodegradable magnesium based alloys**

*O.D. POPESCU, C. MUNTEANU, B. ISTRATE, Ș. LUPESCU*, "Gheorghe Asachi" Technical University of Iași, Mechanical Engineering, Mechatronics and Robotics Department, ROMANIA  
*B. OPRIȘAN*, Gr.T. Popa Medicine University of Iași, Faculty of General Medicine, ROMANIA

**II.PO.10. Design and in vitro evaluation of hydrogels films based on gellan/ albumin/pectin with curcumin immobilized having applications in wound healing**

*C.E. IURCIUC (TINCU)*, „Grigore T. Popa” University of Medicine and Pharmacy, Faculty of Pharmacy, Department of Pharmaceutical Technology, ROMANIA  
"Apollonia" University, Faculty of Dental Medicine, Iași, ROMANIA  
"Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Protection of the Environment, Department of Natural and Synthetic Polymers, ROMANIA  
*L. OCHIUZ*, „Grigore T. Popa” University of Medicine and Pharmacy, Faculty of Pharmacy, Department of Pharmaceutical Technology, Iași, ROMANIA  
*M. POPA*, "Apollonia" University, Faculty of Dental Medicine, Iași, ROMANIA  
"Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Protection of the Environment, Department of Natural and Synthetic Polymers, ROMANIA  
Academy of Romanian Scientists, Bucuresti, ROMANIA

**II.PO.11. Obtaining, structural analysis and biocompatibility test of some Mg-Ca-Y biodegradable alloys**

PROGRAM

S.C. LUPESCU, C. MUNTEANU, B. ISTRATE, "Gheorghe Asachi" Technical University of Iași, Faculty of Mechanical Engineering Department, ROMANIA

D.M. VLAD, „Grigore T. Popa” University of Medicine and Pharmacy Iasi, Faculty of General Medicine, ROMANIA

D. LUCA, "Gheorghe Asachi" Technical University of Iași, Faculty of Material Science and Engineering, ROMANIA

**II.PO.12. Deposition of a composite zinc oxid/PLGA coating on AZ31 Mg alloy for increased biocompatibility and antibacterial activity**

A.M. NEGRESCU, R. ION, M. POPA, L. MĂRUȚESCU, M. COSTACHE, A. CÂMPEAN, Faculty of Biology, Bucharest University, ROMANIA

A. GEBAUR, Politehnica University of Bucharest, Advance Polymer Materials Group, ROMANIA

**II.PO.13. Titania nanotube spacing tunes macrophage inflammatory response**

M. NECULA, R. ION, A. CIMPEAN, University of Bucharest, Department of Biochemistry and Molecular Biology, ROMANIA

A. MAZARE, P. SCHMUKI, University of Erlangen-Nuremberg, Department of Materials Science, Erlangen, GERMANY

**II.PO.14. Electrochemical characterization of ZnMg-Ca biodegradable alloy**

S. POPESCU (DOBRIȚĂ), S. STANCIU, R. CIMPOEȘU, N. CIMPOEȘU, Technical University “Gheorghe Asachi” from Iași, Materials Science and Engineering Faculty, ROMANIA

B. ISTRATE, "Gheorghe Asachi" Technical University of Iași, Mechanical Faculty, ROMANIA

G. ZEGAN, “Grigore T. Popa” University of Medicine and Pharmacy, Faculty of Dental Medicine, Iasi, ROMANIA

**II.PO.15. Antimicrobial behaviour of the nanocomposite material for stereolithographed dentures**

E.E. TOTU, A.C. NECHIFOR, L. BUCIUMAN, C. CRISTEA, GH. NECHIFOR, University Politehnica of Bucharest, Faculty of Applied Chemistry and Material Science, ROMANIA

C.M. CRISTACHE, Carol Davila University of Medicine and Pharmacy, Faculty of Midwifery and Medical Assisting (FMAM), Department of Dental Techniques, Bucharest, ROMANIA

I. ISILDAK, Department of Bioengineering, Faculty of Chemical and Metallurgical Engineering, Yildiz Technical University, Esenler- Istanbul, TURKEY

**II.PO.16. Innovative hybrid material with synergic bioaction and enhanced regenerative properties**

E.E. TOTU, A.C. NECHIFOR, D. PETRE, Faculty of Applied Chemistry and Material Science, University Politehnica of Bucharest, ROMANIA

R.M. BUGA, Faculty of Electronics, Telecommunications and Information Technology, University Politehnica of Bucharest, ROMANIA,

Center for Microscopy-Microanalysis and Information Processing, University Politehnica of Bucharest, ROMANIA

C.M. CRISTACHE, Department of Dental Techniques, Faculty of Midwifery and Medical Assisting (FMAM), University of Medicine and Pharmacy “Carol Davila”, Bucharest, ROMANIA

**II.PO.17. The effect of alloying elements on the biologic safety of different Ni-Cr dental materials for prosthodontic restoration**

M.G. FALCON, J.C. MIRZA ROSCA, Las Palmas de Gran Canaria University, SPAIN

M. TIHEREAN, A. PASCU, Transilvania University of Brașov, ROMANIA

**Section V**

**V.PO.01. Thin films of Au-Al<sub>2</sub>O<sub>3</sub> for plasmonic sensing**

D.I. MEIRA, R.P. DOMINGUES, M.S. RODRIGUES, J. BORGES, F. VAZ, Centro de Física, Universidade do Minho, Braga, PORTUGAL

**V.PO.02. Development of plasmonic thin films composed of noble metal nanoparticles embedded in a dielectric matrix to enhance Raman signals of biomolecules**

D. COSTA, J. OLIVEIRA, M.S. RODRIGUES, J. BORGES, C. MOURA, P. SAMPAIO, F. VAZ, Universidade do Minho, Braga, PORTUGAL

**V.PO.03. Photocatalytic degradation of vincristine under light irradiation**

*M.E. GRIGORE, R.M. ION, R.M. GRIGORESCU, L. IANCU, P. GHIOCA, E.R. ANDREI, G. RADU, M. FILIPESCU, A.A. SORESCU, A. NUTA, S.M. DONCEA*, INCDP-ICECHIM Bucharest, ROMANIA

**V.PO.04. Stone consolidation with carbonated hydroxyapatite**

*L. IANCU, R.M. ION, A. SORESCU*, INCDP-ICECHIM Bucharest, Valahia University, Targoviste, ROMANIA

*R. GRIGORESCU, P. GHIOCA, M. GRIGORE, R. ANDREI, G. RADU, M. FILIPESCU*, INCDP-ICECHIM Bucharest, ROMANIA

*S. TEODORESCU, D. DULAMA, I. GHEBOIANU, R. STIRBESCU*, Valahia University, Institute of Multidisciplinary Research for Science and Technology, Targoviste, ROMANIA

**V.PO.05. Banana tree nectar - mediated synthesis of silver nanoparticles**

*N.M. ŞTIRBESCU, S. TEODORESCU, R.L. OLTEANU, R.M. ŞTIRBESCU*, Valahia University of Targoviste, ROMANIA

*R.M. ION*, ICECHIM Bucharest, Valahia University of Targoviste, ROMANIA

**V.PO.06. Organic – inorganic nanomaterials from green synthesized noble metallic nanoparticles and macrocyclic compounds**

*A.A. SORESCU, R.M. ION*, ICECHIM Bucharest, Valahia University, Targoviste, ROMANIA

*A. NUTA*, ICECHIM Bucharest, The Romanian Academy “Stefan S. Nicolau” Institute of Virology, Bucharest, ROMANIA

*S.G. NITU, M. GHIUREA, M. GRIGORE*, National Research & Development Institute for Chemistry and Petrochemistry – ICECHIM Bucharest, ROMANIA

**V.PO.07. “Green” alternatives for the obtaining of metallic nanoparticles: phytosynthesis and radiation assisted method**

*R.C. FIERASCU, I. FIERASCU, R. SOMOGHI*, National Institute for Research & Development in Chemistry and Petrochemistry – ICECHIM Bucharest, ROMANIA

*E.M. LUNGULESC, N. NICULA*, National Institute for R&D in Electrical Engineering ICPE – CA, Bucharest, ROMANIA

*L.M. DITU*, University of Bucharest, Microbiology Dept, ROMANIA

*C. UNGUREANU*, Fac. of Applied Chemistry and Material Science, University Politehnica of Bucharest, ROMANIA

*A.N. SUTAN, L.C. SOARE*, Dept. of Natural Sciences, University of Pitesti, ROMANIA

**V.PO.08. Overview on the use of apatitic materials for environmental applications**

*R.C. FIERASCU*, National Institute for Research & Development in Chemistry and Petrochemistry – ICECHIM Bucharest, ROMANIA

*R.I. BRAZDIS, A.M. BAROI, T. FISTOS*, National Institute for Research & Development in Chemistry and Petrochemistry – ICECHIM Bucharest, University of Bucharest, Chemistry Dept, ROMANIA

**V.PO.09. Hybrids nanomaterials: oxide and exoenzymes synthesized by halophilic bacteria with applications in agriculture**

*A. BADEA (CIOACA), V. LAZAR*, Fac. of Biology, University of Bucharest, ROMANIA

*S. NEAGU, M. ENACHE*, Institute of Biology Bucharest, Romanian Academy, Bucharest, ROMANIA

**V.PO.10. Compositional and optical properties of oxide thin films grown by radio frequency magnetron sputtering deposition**

*P. PREPELITA (GAROI), D. CRACIUN, F. GAROI, V. CRACIUN*, National Institute for Laser, Plasma and Radiation Physics, Magurele, ROMANIA

*I. STAVARACHE*, National Institute of Materials Physics, Magurele, ROMANIA

*B. SBARCEA*, ICPE-CA, Bucharest, ROMANIA

**V.PO.11. LDHs-type materials for phosphates retention from wastewater**

*O.D. ORBULEȚ, C. BOBIRICĂ, C. MODROGAN, C. ORBECI, D. MADELENE, L. BOBIRICĂ, A.I. PITIC*, University Politehnica of Bucharest, Analytical Chemistry and Environmental Engineering Dept, ROMANIA

**V.PO.12. Use of nano-anatase in degradation of heterocyclic dyes from waters**

*C.I. TARCEA, E. MATEI, A.M. PREDESCU, M. RAPA, A. TURCANU*, Politehnica University of Bucharest, Materials Science and Engineering Faculty, ROMANIA

**V.PO.13. UV protective characteristics of TiO<sub>2</sub>/SiO<sub>2</sub>/graphene oxide-coated leather samples**

*A.O. MATEESCU, G. MATEESCU, I. BURDUCEA, P. MEREUTA*, Horia Hulubei National Institute for Research and Development in Physics and Nuclear Engineering, Magurele, ROMANIA

*M.C. ROSU, M. COROS, C. SOCACI, A. TURZA*, National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, ROMANIA

*C. GAIDAU, L. CHIRILA, A. POPESCU*, National Research & Development Institute for Textiles and Leather, Bucharest, ROMANIA

**V.PO.14. Fluorescent silica hybrid film-forming materials based on salicyldazine**

*V. RADITOIU, G.C. ISPAS, A. RADITOIU, F.M. RADULY, V. PURCAR, A. FRONE, R. MANEA, L.E. WAGNER*, National Research and Development Institute for Chemistry and Petrochemistry – ICECHIM, Bucharest, ROMANIA

*M. ANASTASESCU*, Institute of Physical Chemistry “Ilie Murgulescu” of Romanian Academy, Bucharest, ROMANIA

**V.PO.15. Anti-reflective and hydrophobic films obtained from sol-gel silica materials with long alkyl chains**

*V. RADITOIU, R. MANEA, V. PURCAR, A. RADITOIU, F.M. RADULY, A. FRONE, R. SOMOGHI, G.C. ISPAS, L.E.*

*WAGNER*, National Research and Development Institute for Chemistry and Petrochemistry – ICECHIM, Bucharest, ROMANIA

*M. ANASTASESCU*, Institute of Physical Chemistry “Ilie Murgulescu” of Romanian Academy, Bucharest, ROMANIA

**V.PO.16. Synthesis and characterisation of composites membranes based on carbon nanotubes or graphene oxide with silver nanoparticles**

*A.G. VĂTUI (MOISE), S.N. VÂLSAN, C. FRĂȚILĂ, M. GHIȚĂ, D.C. MIHĂIESCU*, National Research & Development Institute for Non-Ferrous and Rare Metals (INCDMNR-IMNR), Ilfov, ROMANIA

*C. PREDESCU*, Faculty of Materials Science and Engineering, Bucharest, ROMANIA

**V.PO.17. Overview on orthodontic coatings**

*V. SUCIU, D. MUNTEANU*, Transilvania University of Brasov, Materials Science and Engineering Faculty, ROMANIA

**Alpin Hotel, Tosca restaurant**

**19.30: Camp fire and barbeque**

**Friday, 15.03.2019**

**Alpin Hotel, Hall A**

8.30: Plenary Lectures IV:

*Chairperson: Filipe VAZ*, Minho University, Braga, PORTUGAL

8.30: **P.09. Beyond joining metals; friction stir welding (FSW) of light weight alloys with superior properties**

*L. RAJAPAKSHA*, University of Peradeniya, SRI LANKA

9.00: **P.10. Materials databases and data management - best practices**

*A. LUPULESCU*, ASM International, U.S.A.

9.30: **P.11. Ancient building materials: archaeometric studies, conservation and restoration solutions**

*R.M. ION*

National Institute for Research and Development in Chemistry and Petrochemistry, Bucharest, ROMANIA

Valahia University of Targoviste, ROMANIA

10.00: **P.12. A Decade of CEN Workshops on Engineering Materials Data**

*T. AUSTIN*, European Commission JRC, The NETHERLANDS

*A. LUPULESCU*, ASM International, Materials Headquarters, Ohio, U.S.A.

10.30: **P.13. Materials for generation 4 nuclear reactors**

*M. IONESCU, O. MURANSKY, D. BHATTACHARYYA, M. SALEH, A. XU, P. BENDEICH, W. PAYTEN, H. ZHU, Z. WANG,*

*M. QIN, L. EDWARDS*, Australian Nuclear Science and Technology Organisation, AUSTRALIA



## Alpin Hotel, Hall A

### 11.00: Coffee Break

## Alpin Hotel, Hall B

### 11.30: Keynote and oral presentations II (Section I)

Chairpersons: **Victor GEANTĂ**, Politehnica University of Bucharest, ROMANIA  
**Cornel SAMOILĂ**, Transilvania University of Brasov, ROMANIA

### 11.30: I.K.03. Hydrogen embrittlement in structural materials: theory and applications

*D. ELIEZER*, Ben-Gurion University of the Negev, ISRAEL

### 11.50: I.O.06. Effect of titanium in the nucleation process of spheroidal and compacted graphite cast iron

*G. ALONSO*, *R. SUAREZ*, Fundación Azterlan, Durango (Bizkaia), SPAIN  
*D.M. STEFANESCU*, Ohio State Univ., Columbus, Ohio and Univ. of Alabama, Tuscaloosa, Alabama, USA  
*A. CRISAN*, Transilvania University of Brasov, Material Science Department, ROMANIA

### 12.05: I.O.07. Transform induced plasticity steels used in automotive industry

*C. PANTILIMON*, *A. BERBECARU*, *S. CIUCA*, *M. SOHACIU*, *G. COMAN*, *C. PREDESCU*, University Politehnica of Bucharest, Faculty of Material Science and Engineering, Bucharest, ROMANIA  
*G. REUMONT*, Polytech Lille, Villeneuve-d'Ascq, FRANCE

### 12.20: I.O.08. Investigation of the electroless nickel plated SiC particles in SAC305 solder matrix

*M.K. PAL*, *G. GERGELY*, *D.K. HORVÁTH*, *Z. GÁCSI*, University of Miskolc, Faculty of Materials Science and Engineering, Institute of Physical Metallurgy, Metal forming and Nanotechnology, Miskolc, HUNGARY

### 12.35: I.O.09. Oxide nanomaterials: synthesis, mechanistic studies and technological innovation in wastewater treatment by flotation

*C. I. COVALIU*, *G. PARASCHIV*, Politehnica University of Bucharest, ROMANIA  
*A. DOGEANU*, Technical University of Civil Engineering, Bucharest, ROMANIA

### 12.50: I.O.10. Thermal conductivity and stresses in steels

*D. CONSTANTINESCU*, Politehnica University of Bucharest, Materials Science and Engineering, ROMANIA

### 13.05: I.O.11. Bismuth based MOFs/nano-composites for versatile applications

*M. IMRAN*, *S. IRAM*, Institute of Chemistry, University of the Punjab, Lahore, PAKISTAN

### 13.20: I.O.12. Effect of welding speed on weld seam, microstructure and microhardness in laser welding of carbon 45 steel

*M.K. UMAR*, Bauchi State University, Gadau, Department of Chemistry, Bauchi State, NIGERIA  
*H. LIJIA*, Liaoning University of Technology, School of Materials Science and Engineering, Jinzhou, CHINA

## Alpin Hotel, Hall E

### 11.30: Keynote and oral presentations II (Section II)

Chairpersons: **Joseph KOST**, Ben-Gurion University of the Negev, Beer-Sheva, ISRAEL  
**Maria STOICANESCU**, Transilvania University of Brasov, ROMANIA

### 11.30: II.K.02. Porous titanium implants: a versatile solution for any bone defect reconstruction?

*J.C. MIRZA ROSCA*, Las Palmas de Gran Canaria University, SPAIN  
*D. MONOPOLI*, Tecnological Institute of Canarias, Las Palmas, SPAIN  
*L. BALTES*, *E.M. STANCIU*, Transilvania University of Brasov, ROMANIA

### 11.50: II.O.07. Optimizing the conditions for obtaining Xanthan based biomaterials using the freeze-thawing method

*I.E. RASCHIP*, *M.V. DINU*, *N. FIFERE*, "Petru Poni" Institute of Macromolecular Chemistry, Iasi, ROMANIA

**12.05: II.O.08. Effect of processing parameters on the morphology, surface and mechanical properties of sintered ceramics prepared from fish bone**

A. MAIDANIUC, University Politehnica of Bucharest, Faculty of Materials Science and Engineering, Department of Metallic Materials Science, Physical Metallurgy, ROMANIA

S.C. Nuclear NDT Research & Services S.R.L, Bucharest, ROMANIA

M. MICULESCU, T.M. BUTTE, L.M. BOLDU, R.C. CIOCOIU, F. MICULESCU, University Politehnica of Bucharest, Faculty of Materials Science and Engineering, Department of Metallic Materials Science, Physical Metallurgy, ROMANIA

G.E. STAN, National Institute of Materials Physics, Laboratory of Multifunctional Materials and Structures, Măgurele-Ilfov, ROMANIA

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

**12.20: II.O.09. Synthesis and characterization of biocompatible polymer-ceramic film structures as favorable interface in guided bone regeneration**

C.A. DASCĂLU, A. MAIDANIUC, University Politehnica of Bucharest, Department of Metallic Materials Science, Physical Metallurgy, ROMANIA

S.C. Nuclear NDT Research&Services S.R.L, Bucharest, ROMANIA

I.V. ANTONIAC, F. MICULESCU, University Politehnica of Bucharest, Department of Metallic Materials Science, Physical Metallurgy, ROMANIA

A.M. PANDELE, S.I. VOICU, University Politehnica of Bucharest, Department of Analytical Chemistry and Environmental Engineering, Advanced Polymer Materials Group, ROMANIA

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

G.E. STAN, National Institute of Materials Physics, Laboratory of Multifunctional Materials and Structures, Măgurele-Ilfov, ROMANIA

A. CÎMPEAN, V. MITRAN, University of Bucharest, Department of Biochemistry and Molecular Biology, ROMANIA

**12.35: II.O.10. Internal and external surface features of newly developed porous ceramics with random interconnected 3d channels by fibrous sacrificial porogen method**

A.C. MOCANU, A. MAIDANIUC, University Politehnica of Bucharest, Department of Metallic Materials Science, Physical Metallurgy, ROMANIA

S.C. Nuclear NDT Research&Services S.R.L, Bucharest, ROMANIA

M. MICULESCU, R.C. CIOCOIU, F. MICULESCU, University Politehnica of Bucharest, Department of Metallic Materials Science, Physical Metallurgy, ROMANIA

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

S.I. VOICU, A.M. PANDELE, University Politehnica of Bucharest, Department of Analytical Chemistry and Environmental Engineering, Advanced Polymer Materials Group, ROMANIA

M. IONITA, University Politehnica of Bucharest, Faculty of Medical Engineering, Advanced Polymer Materials Group, ROMANIA

G.E. STAN, National Institute of Materials Physics, Laboratory of Multifunctional Materials and Structures, Măgurele-Ilfov, ROMANIA

**12.50: II.O.11. Microstretch elastic materials with thermal and mass diffusion**

A. CHIRILĂ, M. MARIN, Transilvania University of Braşov, Department of Mathematics and Computer Science, ROMANIA

**Alpin Hotel, Hall C**

**11.30: Oral presentations II (Section III)**

*Chairpersons:* **Michael TAUSCH**, Bergische Universität Wuppertal, GERMANY

**Ioan ARDELEAN**, Technical University of Cluj-Napoca, ROMANIA

**11:30: III.O.08. Preparation and characterization of soft magnetic composites based on Fe fibers**

B.V. NEAMTU, A. OPRIŞ, Technical University of Cluj-Napoca, Materials Science and Engineering Department, ROMANIA

P. PSZOLA, Advanced Development Group Brose Fahrzeugteile GmbH & Co. KG., Würzburg, GERMANY

PROGRAM

*F. POPA, T.F. MARINCA, I. CHICINAȘ*, Technical University of Cluj-Napoca, Materials Science and Engineering Department, ROMANIA

**11.45: III.O.09. Ni<sub>3</sub>Fe/Fe<sub>3</sub>O<sub>4</sub> nanocomposites obtained by reactive spark plasma sintering**

*T.F. MARINCA, B.V. NEAMȚU, F. POPA, I. CHICINAȘ*, Technical University of Cluj-Napoca, ROMANIA

**12.00: III.O.10. Transmission electron microscopy observations on interface microstructure of magnesium/ceria composites**

*K. MATUS, M. PAWLYTA, B. TOMICZEK*, Silesian University of Technology, Institute of Engineering Materials and Biomaterials, Gliwice, POLAND

**12.15: III.O.11. Characterization of relaxor behaviour of Ba<sub>6</sub>GaNb<sub>9</sub>O<sub>30</sub> tetragonal tungsten bronze ceramics by means of broadband dielectric and resonant ultrasound spectroscopy**

*A. ROTARU*, University of Craiova, Faculty of Horticulture, ROMANIA

INFLPR-National Institute for Laser, Plasma and Radiation Physics, Bucharest, ROMANIA

University of Cambridge, Department of Earth Science, UNITED KINGDOM

*E. PALAIMIENE, J. BANYS*, Vilnius University, Faculty of Physics, Vilnius, LITHUANIA

*M. CARPENTER*, University of Cambridge, Department of Earth Science, UNITED KINGDOM

*F.D. MORRISON*, EaStCHEM Research School of Chemistry, University of St Andrews, UNITED KINGDOM

**12.30: III.O.12. Effect of molten salt synthesis conditions on the particle size of La<sub>1-x</sub>Sr<sub>x</sub>Mn<sub>1-y</sub>Fe<sub>y</sub>O<sub>3</sub> perovskites**

*R. MEIR, L. VRADMAN*, Ben-Gurion University of the Negev, Blechner Center for Industrial Catalysts and Process Development, Chemical Engineering Department, Beer-Sheva, ISRAEL

*J. ZANA*, Nuclear Research Center Negev, Chemistry Department, Beer-Sheva, ISRAEL

*M. HERSKOWITZ*, Ben-Gurion University of the Negev, Blechner Center for Industrial Catalysts and Process Development, Chemical Engineering Department, Beer-Sheva, ISRAEL

**12.45: III.O.13. Effect of polarity on the matrix-filler interaction of calcium carbonate filled composite**

*Y. YURKIN, A. BURKOV*, Vyatka State University, Building Structures and Machines Department, Kirov, RUSSIA

*V. CHERKASOV*, Ogarev Mordovia State University, Applied Mechanics Department, Saransk, RUSSIA

**13.00: III.O.14. Acoustic emission NDT & health monitoring of composite materials and structures**

*D. PAPASALOUROS, A. ANASTASOPOULOS, E. CHEILAKOU, D. KOUROUSIS*, Mistras Group Hellas ABEE, Athens, GREECE

**13.15: III.O.15. Retention of Cr (VI) ions from water using polymeric hybrid**

*C. I. COVALIU, G. PARASCHIV, L. DIACONU*, Politehnica University of Bucharest, ROMANIA

## Alpin Hotel, Hall D

**11.30: Keynote and oral presentations II (Section IV)**

*Chairpersons: Andrea GATTO*, Università degli Studi di Modena e Reggio Emilia, ITALY

*Costică BEJINARIU*, "Gheorghe Asachi" Technical University of Iași, ROMANIA

**11.30: IV.K.02. Deposition characterization and properties of Zr oxynitrides: a critical review**

*L. CUNHA, C.I. DA SILVA OLIVEIRA, D. MARTÍNEZ-MARTÍNEZ*, Center of Physics of Universities of Minho and Porto, PORTUGAL

**11.50: IV.O.07. Strategies to escape the chemical and color restrictions observed in The Zr-O-N system**

*C.I. DA SILVA OLIVEIRA, L. CUNHA, D. MARTÍNEZ-MARTÍNEZ, C. MANSILLA, S. CARVALHO*, Center of Physics of Universities of Minho and Porto, PORTUGAL

*E. ALVES*, Instituto de Plasmas e Fusão Nuclear, Instituto Superior Técnico, Universidade de Lisboa, PORTUGAL

*N.P. BARRADAS*, Centro de Ciências e Tecnologias Nucleares, Instituto Superior Técnico, Universidade de Lisboa, PORTUGAL

*M. APREUTESEI*, INSA de Lyon, MATEIS Laboratory, Villeurbanne, FRANCE

**12.05: IV.O.08. Mechanical properties and wear behavior of multi-layer diamond films on cobalt-cemented tungsten carbide**

PROGRAM

G. YAN, Y. WU, D. ZHAO, Faculty of Mechanical Engineering, Shenyang Jianzhu University, Shenyang, Joint International Research Laboratory of Modern Construction Engineering Equipment and Technology, Shenyang Jianzhu University, CHINA

F. LU, Joint International Research Laboratory of Modern Construction Engineering Equipment and Technology, Shenyang Jianzhu University, CHINA

L. LIU, Z. YUAN, Shenyang National Laboratory for Materials Science, Institute of Metal Research, Chinese Academy of Sciences, CHINA

D. CRISTEA, D. MUNTEANU, Transilvania University of Brasov, Materials Science Department, ROMANIA

M. TIHEREAN, Transilvania University of Brasov, Materials Engineering and Welding Department, ROMANIA

**12.20: IV.O.09. Induction hardening applied to light gauge steel of metallic profiles for eco-buildings**

M. ILIESCU, D. CĂPĂȚINĂ, C. FRENȚ (RADU), L. VLĂDĂREANU, Institute of Solid Mechanics, Romanian Academy, Robotics and Mechatronics Department, Bucharest, ROMANIA

M. PURCĂREA, M.M. ROȘU, Politehnica University of Bucharest, Manufacturing Engineering Department, ROMANIA

E.M. STANCIU, Transilvania University of Brasov, Materials Engineering and Welding Department, ROMANIA

**12.35: IV.O.10. Antimicrobial materials based on biguanide derivative complexes with Co(II) and Zn(II): synthesis, characterization and thin film deposition by maple technique**

A. ROTARU, University of Craiova, Faculty of Horticulture, ROMANIA

INFLPR-National Institute for Laser, Plasma and Radiation Physics, Magurele, ROMANIA

A. MATEI, A. ANDREI, A. VLAD, M. DINESCU, INFLPR-National Institute for Laser, Plasma and Radiation Physics, Magurele, ROMANIA

R. OLAR, M. BADEA, University of Bucharest, Faculty of Chemistry, ROMANIA

C.G. DANILIU, Westfälische Wilhelms-Universität Münster, Münster, GERMANY

C.M. CHIFIRIU, University of Bucharest, Faculty of Biology, ROMANIA

L. CALU, National Institute R&D for Biological Sciences, Bucharest, ROMANIA

**12.50: IV.O.11. Pulsed laser deposition of zirconium and hafnium oxide films for fs-laser mirrors**

D. CRACIUN, S. IRIMICIUC, G. DORCIOMAN, I. ANGHEL, P. GAROI, National Institute for Lasers, Plasma and Radiation Physics, Magurele, ROMANIA

V. CRACIUN, National Institute for Lasers, Plasma and Radiation Physics, Magurele, Extreme Light Infrastructure-Nuclear Physics, Magurele, ROMANIA

A. M. ROSTAS, A. C. GALCA, National Institute for Materials Physics, Magurele, ROMANIA

B. HODOROABA, Physics Faculty, University of Bucharest, Magurele, ROMANIA

O. UTEZA, Laboratoire LP3, Université de Marseille, Campus de Luminy, Marseille, FRANCE

**13.05: IV.O.12. Solid/binder interface and thermal debinding of hydroxyapatite-based medium pressure injection moulding feedstocks**

G. SIMA, O. GINGU, University of Craiova, Engineering and Management of Technological Systems Department, Drobeta Turnu Severin, ROMANIA

N. CIOATERA, University of Craiova, Department of Chemistry, ROMANIA

P. ROTARU, University of Craiova, Department of Physics, ROMANIA

B. SCHAEFFER, B. DAIGUEBONNE, University of Bourgogne, Institut Supérieur de l'Automobile et des Transports, Nevers, FRANCE

**13.20: IV.O.13. Fabrication and characterization of INGAP/INGAAS high-electron-mobility transistor with gas-on-insulator structure**

C.Y. KAO, L.T. CHUNG, K.W. LEE, Department of Electronic Engineering, I-Shou University, TAIWAN

Y.H. WANG, Institute of Microelectronics, Department of Electrical Engineering, National Cheng-Kung University, TAIWAN

**Alpin Hotel, Tosca restaurant**

**13.30: Lunch**

**Alpin Hotel, Hall C**

15.00: Oral presentations III (Section III)

Chairpersons: **Timothy AUSTIN**, European Commission JRC, The NETHERLANDS  
**Yuriy YURKIN**, Vyatka State University, RUSSIA

15.00: **III.O.16. Preparation and characterization of some complexes of ketoprofen and hydroxypropyl beta cyclodextrin**

M. STAMATE, Grigore T. Popa University of Medicine and Pharmacy, Faculty of Pharmacy, Iasi, ROMANIA  
C. STAMATE, "Gheorghe Asachi" Technical University of Iași, Faculty of Mechanics, ROMANIA  
A. BUJOR, C. GAFITANU, L. OCHIUZ, Grigore T. Popa University of Medicine and Pharmacy, Faculty of Pharmacy, Iasi, ROMANIA

15.15: **III.O.17. Impact of compaction on the mechanical property of circular concrete**

A. VAHIDI, A.T. GEBREMARIAM, F. DI MAIO, P. REM, Delft University of Technology, Recycling Laboratory, Department of Engineering Structures, Faculty of Civil Engineering and Geosciences, The NETHERLANDS

15.30: **III.O.18. Copper ions removal from wastewater using two adsorbant nanomaterials**

C. I. COVALIU, O. STOIAN, S.I. VOICU, G. PARASCHIV, H. IOVU, Politehnica University of Bucharest, ROMANIA  
G.A. CATRINA (TRAISTARU), INCD ECOIND, Bucharest, ROMANIA

15.45: **III.O.19. A study on the thermoelasticity of three-phase-lag dipolar materials with voids**

L. CODARCEA-MUNTEANU, M. MARIN, Transilvania University of Brasov, Department of Mathematics and Computer Science, ROMANIA

16.00: **III.O.20. Delamination assessment of curved composite laminates based on finite element analysis**

M.N. BABA, Transilvania University of Brasov, Department of Mechanical Engineering, ROMANIA

16.15: **III.O.21. Structural evolution and applications of MOFs and ZIFs synthesized via a reaction diffusion process at room temperature**

M. HMADEH, M. AMMAR, R. DOUIHY, M. AL-GHOUL, American University of Beirut, Department of Chemistry, Beirut, LEBANON

## Alpin Hotel, Hall D

15.00: Oral presentations III (Section IV)

Chairpersons: **Andreas ANAYIOTOS**, Cyprus University of Technology, CYPRUS  
**Valentin CRACIUN**, National Institute for Lasers, Plasma and Radiation Physics, Măgurele, ROMANIA

15.00: **IV.O.14. Increasing the anti-corrosive and mechanical properties of 1050 aluminum alloy by electrochemical nanostructuring technique**

N.L. SIMIONESCU, V.M. DUMITRAȘCU, L. BENEA, Competences Center: Interfaces-Tribocorrosion-Electrochemical Systems (CC-ITES), Faculty of Engineering, Dunarea de Jos University of Galati, ROMANIA

15.15: **IV.O.15. Comparative study of nanocrystalline diamond films synthesis and characterization on silicon substrate modified by seeding, BEN and DLC interlayer**

K. ALI, T. LI, L. WANG, Z. CHEN, J. HUANG, Z. ZHANG, K. TANG, L.J. WANG, School of Materials Science and Engineering, Shanghai University, Shanghai, CHINA

15.30: **IV.O.16. Effects of grain size and annealing on transport properties in hydrogen-terminated nanocrystalline diamond films by hall measurements**

K. ALI, L. WANG, Z. CHEN, J. HUANG, Z. ZHANG, K. TANG, X. ZHOU, L.J. WANG, School of Materials Science and Engineering, Shanghai University, Shanghai, CHINA

15.45: **IV.O.17. Microstructural and wear properties of thermal sprayed tribological coatings**

D. OZKAN, Bartin University, Faculty of Engineering, Department of Mechanical Engineering, Bartin, TURKEY

16.00: **IV.O.18. Investigation of microstructural and corrosion behavior of thermal barrier coatings**

PROGRAM

*M. CELIKER*, Selcuk University, Faculty of Engineering, Department of Metallurgical and Materials Engineering, Konya, TURKEY

*M. KOCABAS, A.C. KARAOGLANLI*, Bartin University, Faculty of Engineering, Department of Metallurgical and Materials Engineering, Bartin, TURKEY

**Alpin Hotel, Hall B**

15.00: Oral presentations III (Section V)

*Chairpersons: Dan ELIEZER*, Ben-Gurion University of the Negev, ISRAEL

*Ioan MILOŞAN*, Transilvania University of Brasov, ROMANIA

15.00: **V.O.01. Soft magnetic nanocrystalline/composite Fe-Si and Fe-Si/Permalloy powders and compacts obtained by mechanosynthesis and spark plasma sintering**

*I. CHICINAŞ, C.D. STANCIU, T.F. MARINCA, F. POPA, B.V. NEAMŢU*, Technical University of Cluj-Napoca Materials Science and Engineering Department, ROMANIA

*O. ISNARD*, Institut Néel, CNRS, Université de Grenoble Alpes, Grenoble, FRANCE

15.15: **V.O.02. Magnetic properties improvement of the permalloy alloys with Mo and Co additions by mechanical alloying**

*F. POPA, T. F. MARINCA, B.V. NEAMŢU, I. CHICINAŞ*, Technical University of Cluj-Napoca Materials Science and Engineering Department, ROMANIA

*O. ISNARD*, Institut Néel, CNRS / Université de Grenoble Alpes, Grenoble, FRANCE

15.30: **V.O.03. Self-organization of silver nanoparticles during synthesis of Ag-Au nanocomposite by UV-irradiation method**

*D. ŁUKOWIEC, A. RADOŃ*, Silesian University of Technology, Faculty of Mechanical Engineering, POLAND

15.45: **V.O.04. Growth and characterization of Cu<sub>2</sub>ZnSnS<sub>4</sub> thin films produced by spin coating technique for eco-friendly solar cells**

*C. TAMIN, D. CHAUMONT*, Nanoform, Laboratoire Interdisciplinaire Carnot de Bourgogne, Université de Bourgogne Franche-Comté, Dijon, FRANCE

*M. ADNANE*, Département de Technologie des Matériaux, Faculté de physique, Université des Sciences et de la Technologie d'Oran Mohamed Boudiaf USTO, USTO-MB, ALGÉRIE

16.00: **V.O.05. Magnetite and zeolite nanomaterials for removal of acetaminophen from wastewater**

*C. I. COVALIU, G. PARASCHIV*, Politehnica University of Bucharest, ROMANIA

*G.A. CATRINA (TRAISTARU), F. PIRVU*, INCD ECOIND, Bucharest, ROMANIA

16.15: **V.O.06. Synthesis, characterization and thermal conductivity analysis of nanofluid containing Alumina @ Copper, core @ shell nanoparticles for machining applications**

*H.B. KULKARNI, M. M. NADAKATTI, A. S. DESHPANDE, G. D. GOKAK*, Visvesvaraya Technological University, Department of Mechanical Engineering, Karnataka, INDIA

*R. M. KULKARNI*, Visvesvaraya Technological University, Gogte Institute of Technology, Karnataka, INDIA

16.30: **V.O.07. Applications of nano-materials in chemistry**

*M. KHODARI*, South Valley University, Faculty of Science, Chemistry Department, Qena, EGYPT

**Alpin Hotel, Hall E**

15.00: Oral presentations III (Section VII)

*Chairpersons: Luca IULIANO*, Politecnico di Torino, ITALY

*Sorin Ion MUNTEANU*, Transilvania University of Brasov, ROMANIA

15.00: **VII.O.01. Image analysis methods for cross-contamination detection in raw powders for powder bed fusion**

*E. SANTECCHIA*, Consorzio Interuniversitario Nazionale per la Scienza e Tecnologia dei Materiali (INSTM - UdR Ancona) and Università Politecnica delle Marche, Dipartimento SIMAU, Ancona, ITALY

*P. MENGUCCI, G. BARUCCA*, Università Politecnica delle Marche, Dipartimento SIMAU, Ancona, ITALY

*A. GATTO, E. BASSOLI, L. DENTI*, Università di Modena e Reggio Emilia, Dipartimento DIEF, Modena, ITALY

**15.15: VII.O.02. Effect of the geometry on human MSCs adhesion onto PCL/HA scaffolds "powder bed fusion"**

*M.L. GATTO, P. MENGUCCI*, Università Politecnica delle Marche, Dipartimento SIMAU, Ancona, ITALY  
*N. BLOISE, L. VISAI*, Department of Molecular Medicine, Center for Health Technologies (CHT), INSTM UdR of Pavia, University of Pavia, Pavia and Department of Occupational Medicine, Toxicology and Environmental Risks, ICS Maugeri, IRCCS, ITALY  
*L. FASSINA*, Department of Electrical, Computer and Biomedical Engineering, University of Pavia, ITALY  
*L. DENTI, S. DEFANTI*, Università di Modena e Reggio Emilia Dipartimento DIEF, Modena, ITALY

**15.30: VII.O.03. Influence of the layer thickness and scan speed on the microstructure and mechanical properties of SLM inconel 625**

*A. PARASCHIV, G. MATAACHE, M.R. CONDRUZ*, Romanian Research and Development Institute for Gas Turbines COMOTI, Bucharest, ROMANIA

### Alpin Hotel, Hall C

15.45: Oral presentations II (Section VI)

Chairpersons: *Leelananda RAJAPAKSHA*, University of Peradeniya, SRI LANKA  
*Alexandru PASCU*, Transilvania University of Brasov, ROMANIA

**15.45: VI.O.01. Numerical simulation prediction of residual stress in carbon steel considering phase transformation effects**

*M.H. ALHAFADHI, G. KRALLICS*, Institute of physical Metallurgy, Metal Forming, and Nanotechnology, University of Miskolc, HUNGARY

**16.00: VI.O.02. The influence of spot weld on the stiffness on a car body T-joint**

*A. YUDIANTO, S. GHAFARI, P. HUET*, Politecnico di Torino, Department of Mechanical and Aerospace Engineering, ITALY

### Alpin Hotel, Hall A

**15.30: Workshop on Materials Engineering Future**

*T. MACHEDON-PISU*, University Transilvania of Brasov, ROMANIA

### Alpin Hotel, Hall D

**16.15: Workshop Global Source MRK**

**16.15: Hybrid 3D Digital Confocal Microscope: next level imaging with submicron metrology precision**

*E. LEONHARD*, Global Source MRK, ROMANIA

### Alpin Hotel, Hall F

**16.45: Coffee Break**

### Alpin Hotel, Halls E and F

17.00: Poster presentations II

### Section III

**III.PO.01. Examination of Pb immobilization pathways in cementitious systems**

*C. BOBIRICĂ, C. ORBECI, L. BOBIRICĂ, O.D. ORBULEȚ, C. MODROGAN, D. MADELENE*, University Politehnica of Bucharest, Analytical Chemistry and Environmental Engineering Department, ROMANIA

**III.PO.02. Elastomeric composites with waste electric and electronic equipment plastics**

*R.M. GRIGORESCU, L. IANCU, P. GHIOCA, Z. VULUGA, M. IORGA, R.M. ION, C.A. NICOLAE, R. GABOR*, National Institute for Research and Development in Chemistry and Petrochemistry – ICECHIM, Bucharest, ROMANIA  
*S. TEODORESCU*, Valahia University of Targoviste, Targoviste, ROMANIA  
*M. RAPA*, SC ICPAO S.A., Sibiu, ROMANIA

PROGRAM

*M.E. GRIGORE, R.E. ANDREI, M.I. FILIPESCU, G.I. RADU*, National Institute for Research and Development in Chemistry and Petrochemistry – ICECHIM, Bucharest, ROMANIA

**III.PO.03. Influence of working temperature on radiation noise of full ceramic angular contact ball bearings**

*H.P. YAN*, Shenyang Jianzhu University, School of Mechanical Engineering, CHINA

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

*H. WANG*, National-Local Joint Engineering Laboratory of NC Machining Equipment and Technology of High-Grade Stone, CHINA

*K. ZHANG, L.X. ZHANG*, Shenyang Jianzhu University, School of Mechanical Engineering, CHINA

**III.PO.04. Overview on microbial degradation of polyolefins based composites**

*I. RAUT, M. CALIN, Z. VULUGA, E. ALEXANDRESCU, M.L. ARSENE, G. VASILESCU, A.M. GURBAN, M. DONI, L. JECU*, National Institute for Research and Development in Chemistry and Petrochemistry – ICECHIM, Bucharest, ROMANIA

**III.PO.05. Functionalized of cellulose acetate membranes for reactive retention of antibiotics**

*S.I. VOICU, A.M. PANDELE*, University Politehnica of Bucharest, Department of Analytical Chemistry and Environmental Engineering; University Politehnica of Bucharest, Advanced Polymer Materials Group, ROMANIA

*C. NETOIU (TUNCEL), C. ORBECI*, University Politehnica of Bucharest, Department of Analytical Chemistry and Environmental Engineering, ROMANIA

*F. MICULESCU*, University Politehnica of Bucharest, Faculty of Materials Science, ROMANIA

**III.PO.06. Plastic composites with all-green additives derived from food industry**

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

*M.C. TIMAR*, Transilvania University of Brasov, Wood Processing and Design of Wooden Products Department, ROMANIA

*A. PASCU, M.A. LUCA, I.C. ROATA, E.M. STANCIU, M.H. TIREEAN*, Transilvania University of Brasov, Materials Engineering and Welding Department, ROMANIA

*V. PADUREANU, C.M. CANJA*, Transilvania University of Brasov, Engineering and Management of Food and Tourism Department, ROMANIA

**III.PO.07. Ceramic 40Ni-YSZ thin films for  $\mu$ SOFC anode prepared by pulsed laser deposition**

*R.V. PASCU, N. DUMITRESCU, L. BOROICA, A. VLAD, A. MATEI, A. TREFILOV*, National Institute for Laser, Plasma and Radiation, Bucharest, ROMANIA

**III.PO.08. Fungal and soil burial biodegradation of some bionanocomposites based on polylactic acid**

*P. PREDA*, National Institute for Research and Development in Microtechnologies -IMT Bucharest, Bucharest, ROMANIA

*M. RĂPĂ*, University Politehnica of Bucharest, Faculty of Material Science and Engineering, ROMANIA

*M. AVRAM*, National Institute for Research and Development in Microtechnologies -IMT Bucharest, Bucharest, ROMANIA

*A. NICOARĂ*, Biogenetix, Petresti, ROMANIA

**III.PO.09. Enhanced photoluminescence property of YAG:Ce by codoping and surface modification**

*V. TUCUREANU*, National Institute for Research and Development in Microtechnologies IMT-Bucharest, Bucharest; Transilvania University of Brasov, Department of Materials Science, Brasov, ROMANIA

*A. MATEI, I. MIHALACHE, C. ROMANIȚAN, M. AVRAM, B. TÎNCU*, National Institute for Research and Development in Microtechnologies IMT-Bucharest, Bucharest, ROMANIA

*D. MUNTEANU*, Transilvania University of Brasov, Department of Materials Science, ROMANIA

**III.PO.10. Photocatalytic surfaces obtained through a one-step thermal spraying process**

*C. CROITORU, I.C. ROATA, A. PASCU, E.M. STANCIU*, Transilvania University of Brasov, Materials Engineering and Welding Department, ROMANIA

*I. HULKA*, Research institute of renewable energy – ICER, "Politehnica" University of Timisoara, ROMANIA



**III.PO.11. Effect of technological parameters, polymer systems and reinforcement on low-velocity impact factor behavior of composite materials laminates**

*S. VINTILA, R. MAIER, A. MANDOC*, Romanian Research Institute for Gas Turbines COMOTI, Bucharest, ROMANIA  
*M. ISTRATE*, S.C. STIMPEX S.A., Bucharest, ROMANIA

**III.PO.12. Covalent immobilization of crown ethers onto cellulose acetate membranes for removal of gadolinium (III)**

*O.S. SERBANESCU, A.M. PANDELE, S.I. VOICU*, University Politehnica of Bucharest, Advanced Polymer Materials Group, ROMANIA

*F. MICULESCU*, University Politehnica of Bucharest, Faculty of Materials Science, ROMANIA

*V.K. THAKUR*, University of Cranfield, School of Aerospace, Transport and Manufacturing, Cranfield, Bedfordshire, UNITED KINGDOM

**III.PO.13. Batch and fixed bed column studies of copper (II) sorption removal from aqueous solutions by an acrylic copolymer functionalized with amidoethylenamine groups**

*L. TOFAN, C. PADURARU*, "Gheorghe Asachi" Technical University of Iași, ROMANIA

*R. WENKERT*, Soroka University Medical Center, Beer-Sheva, ISRAEL

*I. BUNIA*, "Petru Poni" Institute of Macromolecular Chemistry, Iassy, ROMANIA

**III.PO.14. The influence of waste Si-PV conditioning on the mechanical performance of the hybrid composite materials**

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

**III.PO.15. Sustainable measures for improvement of deformability and bearing capacity soil characteristics focused on durability of engineering geotechnical engineering works**

*C.F. DOBRESCU*, National Institute for Research and Development in Construction, Urban Planning and Sustainable Spatial Development, INCERC Branch, Bucharest, ROMANIA

**III.PO.16. Sealing contact improvement of profiled plastic discs against metallic seat**

*A.L. TODI-EFTIMIE, D. CATANA*, Transilvania University of Brasov, Materials Engineering and Welding Department, ROMANIA

**III.PO.17. Superalloy/Al<sub>2</sub>O<sub>3</sub> type composite compacts obtained by spark plasma sintering from mechanically alloyed powders**

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

**III.PO.18. Composite with clay and bentonite matrix: a study of the certain materials behavior for ceramic composites**

*S.C. MATEJ, B. VARGA, T. BEDO, M.A. POP, M. STOICANESCU, A. CRISAN*, Transilvania University of Brasov, Material Science Department, ROMANIA

**III.PO.19. Performance indicators of polymeric materials used in the construction of electrostatic discharge protection systems**

*C.B. GHITA, E. HELEREA*, Transilvania University of Brasov, Electrical Engineering and Applied Physics Department, ROMANIA

## Section IV

**IV.PO.01. Interfaces of Yttria stabilized-ceramic sandwich coatings and stainless steel for medical applications: A preliminary evaluation by ultrasonic imaging and spectroscopy**

*M. SOARE, A.C. MOCANU, C. IORDACHE*, S.C. Nuclear NDT Research&Services S.R.L, Department of Research, Development and Innovation, Central Laboratory Building, District 4, Bucharest, ROMANIA

*A. ERNUTEANU*, S.C. Nuclear NDT Research&Services S.R.L, Destructive and Nondestructive Testing Laboratory, Central Laboratory Building, District 4, Bucharest, ROMANIA

*A. SAVIN*, National Institute of Research and Development for Technical Physics, NDT Department, Iasi, ROMANIA

**IV.PO.02. ITO and FTO thin films characterization using AFM technique**

*L. OLTEANU*, Valahia University of Targoviste, Doctoral School of Materials Engineering, Targoviste, Institute of Multidisciplinary Research for Science and Technology, ROMANIA

*R.M. ION*, Valahia University of Targoviste, Doctoral School of Materials Engineering, Materials Engineering and Mechanics Department, National Institute of Research and Development for Chemistry and Petrochemistry - ICECHIM, "Conservation and Evaluation of Cultural Heritage" Research Group, Bucharest, ROMANIA

*A.I. BUCURICA, I.V. GURGU*, Valahia University of Targoviste, Institute of Multidisciplinary Research for Science and Technology, ROMANIA

**IV.PO.03. Optical sensor properties and mathematical modelling of graphene nano thin films**

*S.C. ACIKBAS, A. DENIZ*, Usak University, Department of Mathematics, Faculty of Science, TURKEY

*K. BÜYÜKKABASAKAL*, Usak University, Department of Electric-Electronic Engineering, TURKEY

*Y. ACIKBAS*, USAK University, Department of Materials Science and Nanotechnology Engineering, TURKEY

*R. CAPAN, M. ERDOGAN*, University of Balikesir, Department of Physics, Faculty of Science, TURKEY

**IV.PO.04. Synthesis of cationic photochromic green/blue spirooxazines and red spiropyran derivatives**

*S. JIRAPON, T. CHITTREEYA*, Department of Chemistry, Faculty of Science, Prince of Songkla University, Hat Yai, THAILAND

**IV.PO.05. Application of magnetic composites for the removal of organic pollutants from aqueous effluents**

*I. FIERASCU*, National Institute for Research & Development in Chemistry and Petrochemistry–ICECHIM Bucharest, Emerging Nanotechnologies Group, Bucharest, ROMANIA

*T. FISTOS, A.M. BAROI, R.I. BRAZDIS*, National Institute for Research & Development in Chemistry and Petrochemistry–ICECHIM Bucharest, Emerging Nanotechnologies Group, Bucharest, University of Bucharest, Chemistry Department, Bucharest, ROMANIA

**IV.PO.06. Surface, analytical and historical characterization of romanian book paper (XV-XVII<sup>th</sup> century)**

*I. FIERASCU, R.C. FIERASCU, D. PANAITESCU, C.A. NICOLAE, V. RADITOIU*, National Institute for Research & Development in Chemistry and Petrochemistry – ICECHIM Bucharest, Emerging Nanotechnologies Group, Bucharest, ROMANIA

*A. STIRBA, M.S. ZGARCIU, C. LEAHU*, National Museum of the Union, Alba Iulia, ROMANIA

**IV.PO.07. Graphene based on separation membrane**

*B. ȚÎNCU*, National Institute for Research and Development in Microtechnologies IMT-Bucharest, Bucharest, University Politehnica of Bucharest, Department of Applied Chemistry and Materials Science, ROMANIA

*A. AVRAM, A. MATEI, C. MĂRCULESCU, M. AVRAM, F. COMANESCU*, National Institute for Research and Development in Microtechnologies IMT-Bucharest, Bucharest, ROMANIA

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*T. BURINARU*, National Institute for Research and Development in Microtechnologies IMT-Bucharest, Bucharest, University of Agronomic Sciences And Veterinary Medicine of Bucharest, Faculty of Veterinary Medicine, Anatomic Pathology Department, Bucharest, ROMANIA

**IV.PO.08. Mechanism of active surface of A-520E resin removal of mixture of nitrate and sulfate anions from aqueous solutions**

*D.S. STEFAN, C. ORBECI, M. PANDELE*, University Politehnica from Bucharest, Faculty of Applied Chemistry and Materials Science, ROMANIA

*M. STEFAN*, University Titu Maiorescu, Pharmacy Faculty, Bucharest, ROMANIA

**IV.PO.09. Overcoming the insulating materials limitation in HiPIMS: ion-assisted deposition of DLC coatings using bipolar HiPIMS**

*V. TIRON*, Alexandru Ioan Cuza University of Iasi, Faculty of Physics, Research Department, ROMANIA

*E.L. URSU*, Petru Poni Institute of Macromolecular Chemistry, Centre of Advanced Research in Bionanoconjugates and Biopolymers, Iasi, ROMANIA

*D. CRISTEA, D. MUNTEANU*, Transilvania University of Brasov, Materials Science Department, ROMANIA

*A. MENHARTH, A. CEBAN, I.L. VELICU*, Alexandru Ioan Cuza University of Iasi, Faculty of Physics, ROMANIA

**IV.PO.10. Characterization and biodegradation evaluation of the hydroxyapatite coatings deposited by magnetron sputtering on biodegradable magnesium alloys type Mg-Zn-Zr-Ag**

*C. MILEA, I. ANTONIAC, A. ANTONIAC, E. PLOPEANU, P.H. QUAN, C. COTRUT, E. VASILE*, University Politehnica of Bucharest, Faculty of Material Science and Engineering, ROMANIA

*A. VLADESCU*, National Institute for Optoelectronics–INOE 2000, Magurele, ROMANIA

*V. SACELEANU*, University Lucian Blaga Sibiu, ROMANIA

**IV.PO.11. Evolution of the mechanical properties of Ti-based intermetallic thin films doped with different metals to be used as biomedical devices**

*C. LOPES, J. BORGES, M.S. RODRIGUES, F. VAZ*, Centro de Física, Universidade do Minho, Campus de Gualtar, Braga, PORTUGAL

*C. GABOR, D. CRISTEA, D. MUNTEANU*, Transilvania University of Brasov, Department of Materials Science, ROMANIA

**IV.PO.12. Laser induced breakdown spectroscopy investigations of high entropy metallic alloys thin films grown by pulsed laser deposition technique**

*S.A. IRIMICIUC, A. STANCALIE, E. AXENTE, D. CRACIUN, P. GAROI, V. CRACIUN*, National Institute for Lasers, Plasma and Radiation Physics, Magurele, ROMANIA

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*D. CRISTEA*, Transilvania University of Brasov, Department of Materials Science, ROMANIA

*V. GEANTA, I. VOICULESCU*, Polytechnic University of Bucharest, Bucharest, ROMANIA

**IV.PO.13. Textile materials treatment with mixture of the TiO<sub>2</sub>:N and SiO<sub>2</sub> nanoparticles for improved self-cleaning properties**

*A.O. MATEESCU, G. MATEESCU, I. BURDUCEA, P. MEREUTA*, Horia Hulubei National Institute for Research and Development in Physics and Nuclear Engineering, Magurele, Ilfov, ROMANIA

*M. BAIBARAC, A. MATEA, A. NILA, M. STROE, A. RADU*, National Institute of Material Physics, Magurele-Bucharest, Ilfov, ROMANIA

*L. CHIRILA, A. POPESCU*, National Research & Development Institute for Textiles and Leather, Bucharest, ROMANIA

**IV.PO.14. Behavior of multilayer materials when exposed to open flame**

*O. MOCANITA, B. ISTRATE, C. MUNTEANU*, "Gheorghe Asachi" Technical University of Iași, Mechanical Engineering Department, ROMANIA

*D. CHICET*, "Gheorghe Asachi" Technical University of Iași, Materials Science and Engineering Department, ROMANIA

*P. AVRAM*, "Gheorghe Asachi" Technical University of Iași, Hydrotechnics Faculty, Geodesy and Environmental Engineering, ROMANIA

**IV.PO.15. Functional surfaces via laser processing in liquid media**

*A. PASCU, E.M. STANCIU, C. CROITORU, I.C. ROATA, M.H. TIERAN*, Transilvania University of Brasov, Materials Engineering and Welding Department, ROMANIA

*I. HULKA*, Research institute of renewable energy – ICER, "Politehnica" University of Timisoara, ROMANIA

*J.C. MIRZA ROSCA*, Las Palmas de Gran Canaria University, SPAIN

**IV.PO.16. Surface condition of Nd<sub>2</sub>Zr<sub>2</sub>O<sub>7</sub> thermal barrier coatings exposed to different Na<sub>2</sub>SO<sub>4</sub>+V<sub>2</sub>O<sub>5</sub> molten salts at elevated temperatures**

*D. MIGAS, G. MOSKAL*, Silesian University of Technology, Institute of Materials Engineering, Katowice, POLAND

*S. JUCHA*, Silesian University of Technology, Department of Production Engineering, Katowice, POLAND

**IV.PO.17. Surface analysis on profiled linear contact for gear couplings**

*A.L. TODI-EFTIMIE*, Transilvania University of Brasov, Material Science Department, ROMANIA

**IV.PO.18. Physico-chemical characterization of wood treated with polymeric systems**

*S. TEODORESCU, R.M. STIRBESCU*, Valahia University of Targoviste, Institute of Multidisciplinary Research for Science and Technology, ROMANIA

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*R.M. ION, L. IANCU*, Valahia University of Targoviste, Materials Engineering and Mechanics Department, National Institute for Research and Development in Chemistry and Petrochemistry-ICECHIM, Nanomedicine Research Group, Bucharest, ROMANIA

*R.M. GRIGORESCU, P. GHIOCA*, National Institute for Research and Development in Chemistry and Petrochemistry - ICECHIM, Nanomedicine Research Group, Bucharest, ROMANIA

**IV.PO.19. Microstructure and isothermal oxidation behavior of nanostructured YTTRIA partially stabilized zirconia thermal barrier coatings**

*A. PARASCHIV*, Romanian Research and Development Institute for Gas Turbines COMOTI, Bucharest ROMANIA

*A. BANU, C. DOICIN*, Politehnica University of Bucharest, ROMANIA

*I. IONICA*, Plasma Jet, Magurele, ROMANIA

**IV.PO.20. Photocatalytic removal of ibuprofen from water using sol-gel prepared TiO<sub>2</sub> thin films**

*S.M. AVRAMESCU, A. OLARU, A.V. NICA*, University of Bucharest, Faculty of Chemistry, ROMANIA

*A. DUMITRU*, University of Bucharest, Faculty of Physics, Magurele, ROMANIA

*V. PURCAR*, National Research and Development Institute for Chemistry and Petrochemistry – ICECHIM, Bucharest, ROMANIA

**IV.PO.21. Influence of the deposition of some TBCs on the valves of an internal combustion engine on exhaust gas parameters**

*M. PANTURU, C. MUNTEANU, B. ISTRATE, C. STESCU*, "Gheorghe Asachi" Technical University of Iași, Mechanical Engineering Department, ROMANIA

*D. CHICET*, "Gheorghe Asachi" Technical University of Iași, Materials Science and Engineering Department, ROMANIA

**IV.PO.22. Microstructural analysis, evaluation of the adhesion and utilization properties of plasma coatings on alloy steel substrate**

*C. STESCU, V. CĂRLESCU, O. MOCĂNIȚA, C. MUNTEANU*, "Gheorghe Asachi" Technical University of Iași, Mechanical Engineering Department, ROMANIA

*D. CHICET*, "Gheorghe Asachi" Technical University of Iași, Materials Science and Engineering Department, ROMANIA

**IV.PO.23. Silica microfibers superficially grafted with TiO<sub>2</sub>**

*E.E. TOTU, A.C. NECHIFOR, E. VOICILĂ, GH. NECHIFOR*, Faculty of Applied Chemistry and Material Science, University Politehnica of Bucharest, ROMANIA

*T. TOTU*, Faculty of Electronics, Telecommunications and Information Technology, University Politehnica of Bucharest, Center for Microscopy-Microanalysis and Information Processing, University Politehnica of Bucharest, ROMANIA

**IV.PO.24. Microstructural properties and microabrasion, dry sliding and high temperature wear resistance of MCrAlY coatings deposited by detonation gun (D-GUN) and supersonic plasma spraying (SAPS) techniques**

*D. OZKAN, M. OGE, M.S. GOK*, Bartin University, Department of Mechanical Engineering, Faculty of Engineering, TURKEY

*M. KILIC, A.C. KARAOGLANLI*, Bartin University, Department of Metallurgical and Materials Engineering, Faculty of Engineering, TURKEY

**IV.PO.25. Plasma nitriding process characterization and corrosion-wear behavior of austenitic and martensitic stainless steels**

*F. HUSEM*, Karabuk University, Faculty of Engineering, Department of Metallurgical and Materials Engineering, TURKEY

*M. AKGUN, A.C. KARAOGLANLI*, Bartin University, Faculty of Engineering, Department of Metallurgical and Materials Engineering, TURKEY

*O. UNAL*, Karabuk University, Faculty of Engineering, Department of Mechanical Engineering, TURKEY

*D. OZKAN*, Bartin University, Faculty of Engineering, Department of Mechanical Engineering, TURKEY

**IV.PO.26. Characteristics of thin oxide films for sensor applications**

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*S. A. IRIMICIUC, P. GAROI, G. DORCIOMAN, D. CRACIUN, V. CRACIUN*, National Institute for Lasers, Plasma and Radiation Physics, Măgurele, ROMANIA  
*B. C. HODOROABA*, Physics Faculty, University of Bucharest, Magurele, ROMANIA  
*M. MOGILDEA*, Institute for Space Sciences, Măgurele, ROMANIA  
*V. CRACIUN*, Extreme Light Infrastructure-Nuclear Physics, Magurele, ROMANIA

**Section VI**

**VI.PO.01. Ignition behaviour of insulative materials: a safety vision**

*A. OLAH, C. CROITORU, I.C. ROATA, A.B. ANDREESCU*, Transilvania University of Brasov, Materials Engineering and Welding Department, ROMANIA

**VI.PO.02. Influence of electric current intensity and gas pressure on abrasion resistance of FeNiCrSiB-WC+TiC depositions obtained by arc spraying process**

*ST. L. TOMA*, "Gheorghe Asachi" Technical University of Iași, Materials Engineering and Industrial Safety Department, ROMANIA

*C. MUNTEANU, V. PALEU*, "Gheorghe Asachi" Technical University of Iași, Department of Mechanical Engineering, Mechatronics and Robotics, ROMANIA

*A. CAZAC, R.A. HARAGA, C. BEJINARIU*, "Gheorghe Asachi" Technical University of Iași, Materials Engineering and Industrial Safety Department, ROMANIA

**VI.PO.03. A comparison between the properties of some self-fluxing coatings with WC-Co and Ti addition deposited by laser cladding**

*I. HULKA*, Research institute of renewable energy – ICER, "Politehnica" University of Timisoara, ROMANIA

*V.A. SERBAN, D. UTU, P. NEGREA*, "Politehnica" University of Timisoara, ROMANIA

**VI.PO.04. Laser welding of dissimilar materials**

*E.M. STANCIU, A. PASCU, I.C. ROATA, C. CROITORU, M.H. TIERAN*, Transilvania University of Brasov, Materials Engineering and Welding Department, ROMANIA

*I. HULKA*, Research institute of renewable energy – ICER, "Politehnica" University of Timisoara, ROMANIA

**VI.PO.05. LASER microstructuring of AISI 430 stainless steel**

*E.R. MOLDOVAN*, Transilvania University of Brasov, Materials Engineering and Welding Department, ROMANIA

*C. CONCHESO DORIA*, BSH Electrodomésticos España, S.A., Zaragoza, SPAIN

*J. L. OCAÑA MORENO*, Universidad Politecnica de Madrid, SPAIN

*M. COSNITA, M.H. TIERAN, A. PASCU, L. BALTES*, Transilvania University of Braşov, ROMANIA

**VI.PO.06. Cladding and thermal spraying under the spotlight: between functional materials and occupational health hazards**

*I.C.ROATA, C. CROITORU, E.M. STANCIU, A. PASCU*, Transilvania University of Braşov, Materials Engineering and Welding Department, ROMANIA

**VI.PO.07. Solar pyrolysis syntesis of nanomaterials from polymer wastes**

*C. CROITORU, A. PASCU, E.M. STANCIU, I.C. ROATA*, Transilvania University of Braşov, Materials Engineering and Welding Department, ROMANIA

*I. HULKA*, Research institute of renewable energy – ICER, "Politehnica" University of Timisoara, ROMANIA

**VI.PO.08. Experimental determination of a thermal field for the welding operations of the active surfaces of the workpiece**

*T. MACHEDON PISU, A. OLÁH*, Transilvania University of Braşov, Materials Engineering and Welding Department, ROMANIA

*M. MACHEDON PISU*, Transilvania University of Braşov, Faculty of Electrical Engineering and Computer Science, ROMANIA

**VI. PO.09. Laser cladding: from experimental research to industrial applications**

*A. PASCU*, Transilvania University of Braşov, Materials Engineering and Welding Department, ROMANIA

*J.C. MIRZA ROSCA*, Las Palmas de Gran Canaria University, SPAIN

*E.M. STANCIU*, Transilvania University of Braşov, Materials Engineering and Welding Department, ROMANIA

**VI.PO.10. Metallurgical characterization of post-cladding heat treatment applied on METCO 12C layer over C45 steel**  
*A.D. BADEA, L.S. BALTES, E.M. STANCIU, A. PASCU, M.H. TIERAN*, Transilvania University of Braşov, Materials Engineering and Welding Department, ROMANIA

## Section VII

**VII.PO.01. Properties evaluation of SLM manufactured inconel 625**

*M.R. CONDRUZ, G. MATAACHE, A. PARASCHIV*, Romanian Research and Development Institute for Gas Turbines COMOTI, Bucharest, ROMANIA

**VII.PO.02. Study of the melt rheological properties as possibility to control the 3D printing behavior of new sustainable polymeric materials**

*D.A. IONIŢĂ, A.M. SÎRMON, A.B. GÎRBACIU, D. DIMONIE*, INCDCP-ICECHIM Bucharest, ROMANIA  
*S. IFTIMIE*, University of Bucharest, Faculty of Physics, Magurele, ROMANIA

**VII.PO.03. Tensile notch sensitivity of additive manufactured inconel 625**

*G. MATAACHE, A. PARASCHIV, R. CONDRUZ*, Romanian Research and Development Institute for Gas Turbines COMOTI, Bucharest, ROMANIA

**VII.PO.04. Electrochemical characterization of 3D-printed CoCrMoW dental alloy**

*G. DELEU, A. A. MINEA, I. IONIŢĂ, R. CIMPOEŞU, N. CIMPOEŞU*, "Gheorghe Asachi" Technical University of Iaşi, Materials Science and Engineering Faculty, ROMANIA  
*M. COTEAŢĂ*, "Gheorghe Asachi" Technical University of Iaşi, Faculty of Machine Manufacturing and Industrial Management, ROMANIA  
*B. ISTRATE*, "Gheorghe Asachi" Technical University of Iaşi, Mechanical Faculty, ROMANIA

**VII.PO.05. Topology optimization combined with AM technology: the key to success in the automotive industry**

*A. MERULLA*, Ferrari S.p.A., ITALY  
*A. GATTO, E. BASSOLI*, Department of Engineering "Enzo Ferrari", University of Modena and Reggio Emilia, Modena, ITALY  
*S. MUNTEANU, C. GABOR, D. CRISTEA, M.A. POP, T. BEDŮ, D. MUNTEANU*, Department of Materials Science, Transilvania University of Brasov, ROMANIA  
*B. GHEORGHIU*, S.C. Mind Four D S.R.L., Brasov, ROMANIA

**VII.PO.06. Additively manufactured femoral stem topology optimization: case study**

*S. MUNTEANU, D. MUNTEANU, T. BEDO, M.A. POP, C. GABOR, D. CRISTEA*, Transilvania University of Brasov, Materials Science Department, ROMANIA  
*B. GHEORGHIU*, SC Mind Four D SRL, Brasov, ROMANIA

**VII.PO.07. Method for translating 3D bone defects into personalized implants made by additive manufacturing**

*T. BEDO, S.I. MUNTEANU, I. POPESCU, M.A. POP, D. CRISTEA, I. MILOSAN, D. MUNTEANU*, Transilvania University of Brasov, Material Science Department, ROMANIA  
*Al. CHIRIAC*, UMF "Grigore T. Popa" Iasi Iasi, ROMANIA

**VII.PO.08. The optimization of the production procedure in relation to the mechanical properties of additively manufactured parts**

*C. GABOR, M. A. POP, T. BEDŮ, S. I. MUNTEANU, D. CRISTEA, D. MUNTEANU*  
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## Alpin Hotel, Forest restaurant

**20.00: Gala dinner, Poster awards**

## Saturday, 16.03.2019

### Alpin Hotel, Hall A

10.00: Closing ceremony

11<sup>th</sup> International Conference on Materials Science and Engineering – BraMat 2019  
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14.03.2019

	Hall A	Hall B	Hall C	Hall D	Hall E	Hall F	Lobby	Rest. Forest	Rest. Tosca
8:30							Registration		
9:00	Opening								
9:30	Cofee break						Companies		
10:00	P.03-P.05								
11:30	Cofee break								
12:00	P.06-P.08								
13:30									Lunch
15:00		I.K.01-02 I.O.01-05	III.O.01-07	IV.K.01 IV.O.01-06	II.K.01 II.O.01-06				
16:45						Cofee break			
17:00	Workshop DIPEASMD				I.PO.01-29 II.PO.01-17 V.PO.01-17				
19:30									Barbecue

15.03.2019

	Hall A	Hall B	Hall C	Hall D	Hall E	Hall F	Lobby	Rest. Forest	Rest. Tosca
8:30	P.09-P.13						Companies		
11:00	Cofee break								
11:30		I.K.03 I.O.06-12	III.O.08-15	IV.K.02 IV.O.07-13	II.K.02 II.O.07-11				
13:30									Lunch
15:00		V.O.01-07	III.O.16-21	IV.O.14-18	VII.O.01-03 VI.O.01-02				
15:30	Workshop MEF								
16:15				Global Source MRK					
16:45						Cofee break			
17:00						III.PO.01-19 IV.PO.01-26 VI.PO.01-10 VII.PO.01-08			
20:00									Gala dinner



## ALPIN RESORT HOTEL

