BraMat 2017

10TH INTERNATIONAL CONFERENCE ON MATERIALS SCIENCE & ENGINEERING

Brașov - ROMANIA

March 8 - 11, 2017

PROGRAM

Conference's Partners:

Namicon, Olympus, Innovatest, Sartorom, Standard Service
Medist Life Science, Total Spectrum

TRANSILVANIA University of Brasov

BRAMAT 2017
10TH INTERNATIONAL CONFERENCE ON MATERIALS SCIENCE & ENGINEERING
9 - 11 MARCH 2017, BRASOV, ROMANIA

Organized by: Faculty of Materials Science and Engineering – **Transilvania** University of Brasov
Supporting Organizations: Academy of Technical Sciences of Romania – **ASTR,** Romanian Association of Heat treatment and Surface engineering – **ATTIS,** Romanian Foundry Technical Association – **ATTR,** Romanian Welding Society – **ASR**

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Conference Sections

I. **Metallic materials**
II. **Biomaterials**
III. **Ceramics, polymers and composite materials**
IV. **Surface engineering**
V. **Nanomaterials**
VI. **Welding engineering**
VII. **Safety engineering**
VIII. **Magnesium science and engineering**

Conference's Halls:

Main Hall A – Aula, 41A Iuliu Maniu Str.
Hall B – Room UI 2, 41A Iuliu Maniu Str.
Hall C – Room UI 3, 41A Iuliu Maniu Str.
Hall D – Room UI 6, 41A Iuliu Maniu Str.
Hall E – Room UI 7, 41A Iuliu Maniu Str.
Hall F – Room UII 3, 41A Iuliu Maniu Str.
Hall G – Ground level, 41A Iuliu Maniu Str.
Hall H – First level, 41A Iuliu Maniu Str.
Hall R – Ground level, 29 Eroilor Blvd.

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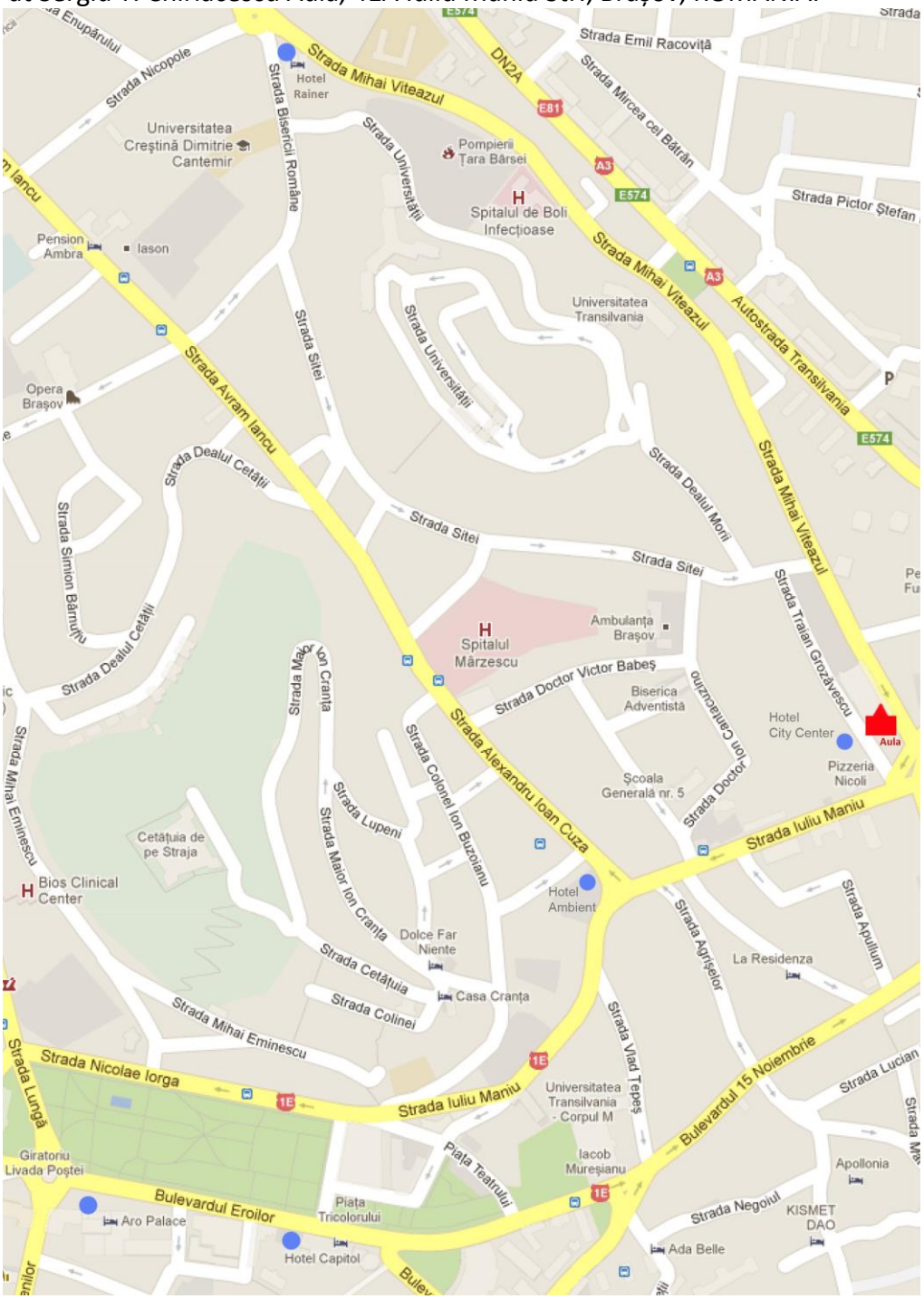
Conference Venue

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 10th International Conference of Materials Science and Engineering – BraMat 2017, will be held at Sergiu T. Chiriacescu Aula, 41A Iuliu Maniu Str., Brașov, ROMANIA.



Program (Outline)

Wednesday, 08.03.2017

16.30: Registration (Hall H)
17.00: Presentations (Main Hall A)
17.50: Ceremony (Main Hall A)
18.30: Violin (*Eszter KLEINMAN-STANKOWSKY*) & piano concert (*Asaf KLEINMAN*) ISRAEL
19.45: Welcome cocktail (Hall H)

Thursday, 09.03.2017

8.30: Registration (Hall H)
9.00: Opening ceremony (Main Hall A)
9.20: Companies Introduction (Main Hall A)
9.30: Coffee break (Hall H)
10.00: Plenary lectures I (Main Hall A)
11.30: Coffee break (Hall H)
12.00: Plenary lectures II (Main Hall A)
13.30: Lunch (Hall H)
15.00: Keynote and oral presentations I (Sections I, III, IV, VIII) (Halls B, C, D, E)
16.45: Coffee break (Hall H)
17.00: Poster presentations I (Sections I, III, VI) (Hall G)
15.00: Companies Workshops (Hall F)
16.00: Workshop "Prelucrarea/valorificarea inovativă a deșeurilor cu conținut de metale neferoase. Aspecte economice și tehnologice" (Hall F)
9.30 - 19.00: Companies exhibitions (Hall G)
19.30: Sculptures and graphics exhibition (Hall R)

Friday, 10.03.2017

9.30: Plenary lectures III (Main Hall A)
11.00: Coffee break (Hall H)
11.30: Keynote and oral presentations II (Sections I, II, III, IV, V) (Halls B, C, D, E, F)
13.30: Lunch (Hall H)
15.00: Oral presentations III (Sections I, III, IV, V, VI, VII) (Halls B, C, D, E, F)
16.45: Coffee break (Hall H)
17.00: Poster presentations II (Sections II, IV, V, VII) (Hall G)
9.30 - 19.00: Companies exhibitions (Hall G)
20.00: Gala dinner (ARO night bar)

Saturday, 11.03.2017

9.30: Closing Ceremony, Poster Awards (Main Hall A)
9.00 - 13.00: Companies exhibitions (Hall G)
10.00: Sightseeing program meeting, 41A Iuliu Maniu Str., Brașov
11.00: Visit of Bran castle
13.30: Lunch in Bran

Program (detailed)

Wednesday, 08.03.2017

16.30: Registration

Main Hall A

17.00: Presentations

Chairpersons: ***Daniel MUNTEANU,*** Transilvania University of Brașov, ROMANIA
Andreea NECHIFOR, Transilvania University of Brașov, ROMANIA

17.10: **The need to re-engineer engineering studies**
Nachum FINGER, Ben-Gurion University of the Negev, Beer-Sheva, ISRAEL

17.30: **From the Bible (as book) to the Nano-Bible (as chip)**
Strul MOISA, Ben-Gurion University of the Negev, Beer-Sheva, ISRAEL

17.50: Ceremony
Special festivity and prize award

18.30: Violin & piano concert
Eszter KLEINMAN-STANKOWSKY, *Asaf KLEINMAN*, ISRAEL

Hall H

19.45: Welcome cocktail

Thursday, 09.03.2017

8.30: Registration

Main Hall A

Opening Ceremony
9.00: Welcome messages
Professor Dr. Eng. ***Ioan Vasile ABRUDAN***, Rector of Transilvania University of Brașov, ROMANIA
Professor Dr. Eng. ***Daniel MUNTEANU***, BraMat Conference Chairman

9.20: Companies introduction

10.00: Coffee Break

Main Hall A

10.00: Plenary Lectures I:

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

10.00: **P.01. In-situ and operando TEM for materials analysis**
C.B. CARTER, University of Connecticut, U.S.A.

10.30: **P.02. Nanotechnology and ultrasound for targeted delivery of drugs and nucleotides**
J. KOST, Ben-Gurion University of the Negev, Beer-Sheva, ISRAEL

11.00: **P.03. Optimization of Au/TiO_2 thin films towards optical (bio)sensing**
M.S. RODRIGUES, J. BORGES, Centro de Física da Universidade do Minho, Campus de Gualtar, Braga, PORTUGAL
D. COSTA, Centro de Física da Universidade do Minho, Campus de Gualtar, Braga, PORTUGAL
Centro de Biologia Molecular e Ambiental, Universidade do Minho, Campus de Gualtar, Braga, PORTUGAL
R.P. DOMINGUES, Centro de Física da Universidade do Minho, Campus de Gualtar, Braga, PORTUGAL
M. APREUTESEI, MATEIS-INSA de Lyon, FRANCE
P. PEDROSA, N. MARTIN, Institut FEMTO-ST, UMR 6174 CNRS, Université Bourgogne Franche-Comté, Besançon, FRANCE
E. ALVES, Instituto de Plasmas e Fusão Nuclear, IST, Universidade de Lisboa, Lisboa, PORTUGAL
N. P. BARRADAS, Centro de Ciências e Tecnologias Nucleares, IST, Universidade de Lisboa, Bobadela LRS, PORTUGAL
P. SAMPAIO, Centro de Biologia Molecular e Ambiental, Universidade do Minho, Campus de Gualtar, Braga, PORTUGAL
F. VAZ, Centro de Física da Universidade do Minho, Campus de Gualtar, Braga, PORTUGAL

11.30: Coffee Break

Main Hall A

12.00: Plenary Lectures II:
Chairperson: ***C. Barry CARTER,*** University of Connecticut, U.S.A.

12.00: **P.04. Improvement of fatigue life and surface properties of metallic materials of biomedical interest by laser shock processing**
J.L. OCAÑA, J.A. PORRO, M. DÍAZ, I. ANGULO, F. CORDOVILLA, D. PERAL, Laser Center, Polytechnical University of Madrid, SPAIN
J.L GONZÁLEZ-CARRASCO, National Center for Metallurgical Research (CENIM-CSIC), Madrid, SPAIN
Center for Networked Research on Bioengineering, Biomaterials and Nanomedicine (CIBER-BBN), SPAIN
M. LIEBLICH, National Center for Metallurgical Research (CENIM-CSIC), Madrid, SPAIN

12.30: **P.05. Properties optimisation of Ti-based biomaterials by structural design**
M. CALIN, M. BÖNISCH, S. PILZ, S. BERA, A. GEBERT, Leibniz Institute for Solid State and Materials Research Dresden (IFW Dresden), Institute for Complex Materials, Dresden, GERMANY
J. ECKERT Montanuniversität Leoben, Department Materials Physics, Leoben, AUSTRIA

13.00: **P.06. Photoactive polymers and composites**
M.W. TAUSCH, University of Wuppertal, Institute of Polymer Technology, Wuppertal, GERMANY

13.30: Lunch

Hall B

15.00: Keynote presentations Ia (Section I)
Chairpersons: ***Gabriela POPESCU***, Politehnica University of Bucharest, ROMANIA
Ana VEȚELEANU, Transilvania University of Brasov, ROMANIA

15.20: **I.K.2. Description and role of γ–γ' interfaces during high temperature creep in nickel base superalloy**
O. BOUALY, LMCN, Equipe C2MCM, Université Cadi Ayyad, FSTG, Guéliz, Marrakech, MOROCCO
N. CLÉMENT, A COUJOU, CEMES-CNRS, Toulouse, FRANCE
M. BENYOUCEF, LMCN, Equipe C2MCM, Université Cadi Ayyad, FSTG, Guéliz, Marrakech, MOROCCO

15.40: **I.K.3. Metal based conformal profile for printed implanted antennas**
I. PETER, Politecnico di Torino, Department of Applied Science and Technology, Torino, ITALY
L. MATEKOVITS, Department of Electronics and Telecommunications, Politecnico di Torino, Torino, ITALY
M. ROSSO, Politecnico di Torino, Department of Applied Science and Technology, Torino, ITALY

Hall B

16.00: Oral presentations Ia (Section I)

Chairpersons: ***Cristian PREDESCU***, Politehnica University of Bucharest, ROMANIA
Cornel SAMOILĂ, Transilvania University of Brasov, ROMANIA

16.00: **I.O.1. Effect of mechanical alloying on the TiB_2 particulate reinforced Al-7 wt.% Si matrix composites**
S. MERTDINÇ, E. TEKOĞLU, Istanbul Technical University, Chemical and Metallurgical Engineering Faculty, Metallurgical and Materials Engineering Department, Istanbul, TURKEY
H. GÖKÇE, Istanbul Technical University, Prof. Dr. Adnan Tekin Material Sciences and Production Technologies Applied Research Center, Istanbul, TURKEY
D. AĞAOĞULLARI, M.L. ÖVEÇOĞLU, Istanbul Technical University, Chemical and Metallurgical Engineering Faculty, Metallurgical and Materials Engineering Department, Istanbul, TURKEY

16.15: **I.O.2. Abnormal behavior of lattice spacing of the orthorhombic martensite in VT23 titanium alloy**
S.L. DEMAKOV, I.A. SEMKINA, S.I. STEPANOV, Ural Federal University named after the first President of Russia B.N. Yeltsin, Ekaterinburg, RUSSIA

16.30: **I.O.3. Effect of powder packing on the production of Fe based shape memory alloys via powder metallurgy approach**
B. ÖZKAL, Istanbul Technical University, Department of Metallurgical & Materials Engineering, Particulate Materials Laboratories, Istanbul, TURKEY
L.G. BUJOREANU, Faculty of Materials Science and Engineering, "Gheorghe Asachi" Technical University of Iași, ROMANIA

Hall D

15.00: Keynote presentations Ib (Section III)

Chairpersons: ***Santiago FERRANDIZ,*** Universitat Politècnica de València, SPAIN
Dana LUCA MOTOC, Transilvania University of Brașov, ROMANIA

15.00: **III.K.1. Cryoconite holes from Svalbard glacier - new source of materials**
R.M. ION, ICECHIM, Bucharest, ROMANIA
Valahia University of Targoviste, ROMANIA
S. TEODORESCU, Valahia University of Targoviste, ROMANIA
R.C. FIERASCU, *I. FIERASCU*, ICECHIM, Bucharest, ROMANIA
I.A. BUCURICA, *R.M. STIRBESCU*, Valahia University of Targoviste, ROMANIA
S. GRIGORE, Popular University Emil Racovita, Piatra Neamt, ROMANIA

15.20: **III.K.2. Spark plasma sintered composite compacts obtained from Ni-Fe alloy@$Ni_{1-x}Me_xFe_2O_4$ pseudo core-shell powders**
I. CHICINAŞ, T.F. MARINCA, *F. POPA*, *B.V. NEAMŢU*, Technical University of Cluj-Napoca, ROMANIA
V. POP, Faculty of Physics, Babes-Bolyai University, Cluj-Napoca, ROMANIA
O. ISNARD, Université Grenoble-Alpes, Grenoble, FRANCE

Hall D

15.40: Oral presentations Ib (Section III)

Chairpersons: ***Michael TAUSCH,*** Bergischen Universität Wuppertal, GERMANY
Ionuț Claudiu ROATĂ, Transilvania University of Brașov, ROMANIA

15.40: **III.O.1. The influence of composition and calcination temperature on the phases in $(Ba_{1-x}SrZr)O_3$ perovskites**
M. TORMAN, Sakarya University, Sakarya, TURKEY
K.E ÖKSÜZ, Cumhuriyet University, Sivas, TURKEY
Ş. ŞEN, U. ŞEN, Sakarya University, Sakarya, TURKEY

15.55: **III.O.2. Dielectric properties of Sr-doped $BaZrO_3$**
M. TORMAN, Sakarya University, Sakarya, TURKEY
K.E ÖKSÜZ, Cumhuriyet University, Sivas, TURKEY
Ş. ŞEN, U. ŞEN, Sakarya University, Sakarya, TURKEY

16.10: **III.O.3. The effects of heat treatment on phase composition of mechanochemically synthesized molybdenum silicide powders**
D. OVALI, D. AĞAOĞULLARI, M.L. ÖVEÇOĞLU, Istanbul Technical University, TURKEY

16.25: **III.O.4. Analysis of temperature effect on mechanical and tribological properties of SU-8 photoresist material**
M. PUSTAN, Technical University of Cluj-Napoca, ROMANIA
R. VOICU, National Institute for Research and Development in Microtechnologies - IMT Bucharest, ROMANIA
C. BIRLEANU, F. RUSU, S. CRACIUN, Technical University of Cluj-Napoca, ROMANIA

Hall E

15.00: Keynote presentations Ic (Section IV)

Chairpersons: ***Jose Luis OCAÑA,*** Laser Center, Polytechnical University of Madrid, SPAIN
Alexandru PASCU, Transilvania University of Braşov, ROMANIA

15.00: **IV.K.1. Pulsed laser deposition of thin films: a versatile technique for structure-composition-property studies**
V. CRACIUN, National Institute for Lasers, Plasma and Radiation Physics, Magurele, ROMANIA

15.20: **IV.K.2. Production of zirconium oxynitride thin films by magnetron sputtering: the quest of breaking the chemical composition and colour restrictions**
C.I. DA SILVA OLIVEIRA, D. MARTINEZ-MARTINEZ, L. CUNHA, Center of Physics, University of Minho, Campus de Gualtar, Braga, PORTUGAL
E. ALVES, Instituto de Plasmas e Fusão Nuclear, Instituto Superior Técnico, Universidade de Lisboa, Bobadela LRS, PORTUGAL
N.P. BARRADAS, Centro de Ciências e Tecnologias Nucleares, Instituto Superior Técnico, Universidade de Lisboa, Bobadela LRS, PORTUGAL
M. APREUTESEI, INSA de Lyon, MATEIS Laboratory, Villeurbanne, FRANCE

15.40: Oral presentations Ic (Section IV)

Chairpersons: ***Filipe VAZ***, Center of Physics, University of Minho, Campus de Gualtar, Braga, PORTUGAL
Daniel CRISTEA, Transilvania University of Brasov, ROMANIA

15.40: **IV.O.1. Multi composite protective layers for geothermal conditions**
A. BUZĂIANU, Metav- R&D, Bucharest, ROMANIA
P. MOŢOIU, V.A. MOŢOIU, Tehnoid Com Ltd., Bucharest, ROMANIA
I. CSAKI, G. POPESCU, S. SERGHIUŢĂ, "Politehnica" University Bucharest, ROMANIA
K. RAGNARSTOTTIR, Innovation Center Iceland-ICI, Reykjavik, ICELAND
S. GUÐLAUGSSON, Orka Náttúrunnar, Baejarhals, ICELAND
D. GUÐMUNDSSON, Vélvík ehf, Reykjavik, ICELAND

15.55: **IV.O.2. Influence of the surface manufacturing on running-in and durability of rolling micro-contacts**
M. BENCHEA, "Gheorghe Asachi" Technical University of Iaşi, Mechanical Engineering, Mechatronics and Robotics Department, Iaşi, ROMANIA

16.10: **IV.O.3. Relative humidity effect on the adhesion energy in MEMS**
C. BIRLEANU, M. PUSTAN, N.V. BURNETE, I. PINTEA, Technical University from Cluj-Napoca, Mechanical Systems Engineering Department, Micro &Nano Systems Laboratory, Cluj-Napoca, ROMANIA
V. MERIE, Technical University from Cluj-Napoca, Material Science and Engineering Department, Micro &Nano Systems Laboratory, Cluj-Napoca, ROMANIA

16.25: **IV.O.4. Tribo-mechanical characterization of niobium nitride thin films deposited by DC magnetron sputtering**
V. MERIE, G. NEGREA, B. NEAMȚU, Technical University of Cluj-Napoca, Materials Science and Engineering Department, Cluj-Napoca, ROMANIA
M. PUSTAN, C. BÎRLEANU, Technical University of Cluj-Napoca, Mechanical Systems Engineering Department, Cluj-Napoca, ROMANIA

Hall C

15.00: Keynote presentations Id (Section VIII)

Chairpersons: ***Nir MOSCOVITCH***, R&D and Business Development, Dead Sea Magnesium, ICL, ISRAEL
Bela VARGA, Transilvania University of Brasov, ROMANIA

15.00: **VIII.K.1. Effect of tungsten inert gas welding on the microstructure and the fatigue resistance of ZE41 magnesium alloy**
I. PETER, C. CASTELLA, M. ROSSO, Politecnico di Torino, ITALY

15.20: **VIII.K.2. Nanocarbons-Mg composites for hydrogen storage**
E. RUSE, S. PEVZNER, O. REGEV, Nuclear Research Center Negev, Beer Sheva, ISRAEL
I.P. BAR, R. NADIV, V.M. SKRIPNYUK, Ben-Gurion University of the Negev, Beer Sheva, ISRAEL
E. RABKIN, Israel Institute of Technology, Haifa, ISRAEL

Hall C

15.40: Oral Presentations Id (Section VIII)

Chairpersons: ***Nir MOSCOVITCH***, R&D and Business Development, Dead Sea Magnesium, ICL, ISRAEL
Bela VARGA, Transilvania University of Brasov, ROMANIA

15.40: **VIII.O.1. Characterization of some master Mg-X system (Ca, Mn, Zr, Y) alloys used in medical applications**
S.C. LUPESCU, C. MUNTEANU, B. ISTRATE, M.G. MINCIUNA, Gheorghe Asachi University of Iasi, ROMANIA
K. EARAR, Dunarea de Jos University of Galati, ROMANIA

15.55: **VIII.O.2. The effect of zirconium addition on the microstructure and mechanical properties of gravity cast Mg-4Zn alloy using graphite and shell mould**
L.C. KUMRUOGLU, E.Ç. ÇIFTCI, O. KARASUNGUR, K. INCE, University of Cumhuriyet, Sivas, TURKEY

16.10: **VIII.O.3. The development of special magnesium alloys by ultrarapid solidification**
A. BUZĂIANU, R. TRUSCĂ, E. VASILE, Metav - R&D, Bucharest, ROMANIA

16.25: **VIII.O.4. Experimental investigation of using frictional signature for structural health monitoring**
S.M. TALAI, D.A. DESAI, Tshwane University of Technology, SOUTH AFRICA
P.S. HEYNS, University of Pretoria, SOUTH AFRICA

16.45: Coffee Break

Hall G

17.00: Poster presentations I

Section I

I.PO.1. Determination of the heat density at the interface piece tool for turning operations
M. ABDELKRIM, Université Ouargla, Fac. Sciences Appliquées, Dépt. Génie Mécanique, Ouargla, ALGERIA
M. BRIOUA, Université de Batna 2, Faculté de la Technologie, Dépt. Génie Mécanique, Batna, ALGERIA
A. BELLOUFI, I. REZGUI, Université Ouargla, Fac. Sciences Appliquées, Dépt. Génie Mécanique, Ouargla, ALGERIA

I.PO.2. Thermal processing of a titanium alloy with aeronautical applications
D.C. ACHIȚEI, P. VIZUREANU, M.G. MINCIUNĂ, M.M. AL BAKRI ABDULLAH, Department Technologies and Equipment for Materials Processing, Gheorghe Asachi Technical University of Iasi, ROMANIA
Center of Excellence Geopolymer & Green Technology (CEGeoGTech), School of Materials Engineering, University Malaysia Perlis, MALAYSIA

I.PO.3. Tribological behavior of distaloy DC components
Y.A. AKINALP, K.E. ÖKSÜZ, L.C. KUMRUOĞLU, Cumhuriyet University, Department of Metallurgical & Materials Engineering, Sivas, TURKEY

I.PO.4. Fractographic analysis of a super duplex stainless steel after hot deformation
M.L. ANGELESCU, D. RĂDUCANU, University Politehnica of Bucharest, Faculty of Materials Science and Engineering, Bucharest, ROMANIA
A. VINTILĂ, Forja Rotec Ltd., Buzău, ROMANIA,
N. ȘERBAN, I. CINCA, University Politehnica of Bucharest, Faculty of Materials Science and Engineering, Bucharest, ROMANIA

I.PO.5. Influence of dynamic three point bending on the work hardening capacity of manganese steels
V. BULBUC, The National Railway Company "CFR" SA, Regional Branch of Passenger Rail Iasi, ROMANIA
B. PRICOP, Faculty of Materials Science and Engineering, Gheorghe Asachi Technical University of Iași, ROMANIA
F. MAXIM, ASAM S.A., Iași, ROMANIA
M. POPA, L.G. BUJOREANU, Faculty of Materials Science and Engineering, Gheorghe Asachi Technical University of Iași, ROMANIA

I.PO.6. Oxidation of FeNiCrMnAl high entropy alloy - wear resistant alloy. Chemical and structural characterisation
I. CARCEA, R. CHELARIU, Gheorghe Asachi Technical University of Iasi, Faculty of Materials Science and Engineering, Iasi, ROMANIA
B. ISTRATE, Gheorghe Asachi Technical University of Iasi, Faculty of Mechanical Engineering, Iasi, ROMANIA
A.E. CIOROBÂTCĂ, S.C Rancon S.R.L Iași, ROMANIA
G. BULUC, Gheorghe Asachi Technical University of Iasi, Faculty of Materials Science and Engineering, Iasi, ROMANIA

I.PO.7. Sequential electrodeposition of multilayered Sb-Te/Zn-Sn thin films for thermoelectric applications
M. BURADA, V. SOARE, I. CONSTANTIN, National R&D Institute for Nonferrous and Rare Metals-IMNR, New Materials and Technologies Laboratory, Pantelimon, Ilfov, ROMANIA
P. CAPOTĂ, V. DRAGUȚ, National R&D Institute for Nonferrous and Rare Metals-IMNR, Chemical and Physical Analysis Laboratory, Pantelimon, Ilfov, ROMANIA
M. GHITA, National R&D Institute for Nonferrous and Rare Metals-IMNR, Microscopic Characterization Laboratory, Pantelimon, Ilfov, ROMANIA
A.M.J. POPESCU, Ilie Murgulescu Institute of Physical Chemistry of the Romanian Academy, Laboratory of Molten Salts, Bucharest, ROMANIA

I.PO.8. Influence of the heat treatments with concentrated energy sources on the alloy steels mechanical properties
D. CATANA, Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

I.PO.9. New FeMnSi+AL alloy proposed for high damping capacity
R.C. CRACIUN, S. STANCIU, D.L. CHICET, B. PRICOP, A. ALEXANDRU, N. CIMPOEȘU, Gheorghe Asachi Technical University of Iasi, Faculty of Materials Science and Engineering, Iasi, ROMANIA

I.PO.10. Cold end corrosion avoiding by using a new type of air combustion pre-heater
M. C. ENESCU, Valahia University of Târgovişte, Faculty of Materials Engineering and Mechanics, Târgovişte, ROMANIA
C.M. VLADULESCU, Soctech S.A., Bucharest, ROMANIA
A. GABA, E.V. STOIAN, I. PETRE, Valahia University of Târgovişte, Faculty of Materials Engineering and Mechanics, Târgovişte, ROMANIA

I.PO.11. Titanium influence on the microstructure of FeCrAl alloys
V. GEANTĂ, Politehnica University of Bucharest, Faculty of Materials Science and Engineering, Bucharest, ROMANIA
I. VOICULESCU, Politehnica University of Bucharest, Faculty of Engineering and Management of Technological Systems, Bucharest, ROMANIA
I. MILOȘAN, Transilvania University of Brasov, Materials Science Department, Brasov, ROMANIA
R. ȘTEFĂNOIU, Politehnica University of Bucharest, Faculty of Materials Science and Engineering, Bucharest, ROMANIA
R. TRUȘCĂ, D.D. DAISA, S.C. Metav - Cercetare Dezvoltare S.R.L., Bucharest, ROMANIA

I.PO.12. Virtual testing of the composite structures made from high entropy alloys and steel
V. GEANTĂ, Politehnica University of Bucharest, Faculty of Materials Science and Engineering, Bucharest, ROMANIA
T. CHERECHES, I.P. LIXANDRU, UPS PILOT ARM, Târgoviște, ROMANIA
I. VOICULESCU, Politehnica University of Bucharest, Faculty of Engineering and Management of Technological Systems, Bucharest, ROMANIA
R. ȘTEFĂNOIU, Politehnica University of Bucharest, Faculty of Materials Science and Engineering, Bucharest, ROMANIA
D. DRAGNEA, UPS PILOT ARM, Târgoviște, ROMANIA
T. ZECHERU, L. MATACHE, CRBN Bucharest, ROMANIA

I.PO.13. Thixoforming and powder metallurgy comparative study and practical case for obtaining piston heads
S. GALLEGO, Polytechnic University of Valencia, Applied Physics Department, Valencia, SPAIN
M.A. POP, T. BEDO, V. GEAMAN, Transilvania University of Brasov, Materials Science Department, Brasov, ROMANIA

I.PO.14. Property improvement of subzero/cryogenic heat treated camshafts made of 8620H, 16MnCr5 and 100Cr6 steels
L.C. KUMRUOĞLU, A. DAYANÇ, University of Cumhuriyet, Engineering Faculty, Department of Metallurgy and Materials Eng., Sivas, TURKEY
B. KARACA, E. YILDIRIM, ESTAŞ Eksantrik San ve Tic A.Ş. Sivas, TURKEY

I.PO.15. Reduction of CuO in H_2 by using concentrated solar energy
A. LÓPEZ-DELGADO, M.A. ARENAS, A.J. VÁZQUEZ, I. PADILLA, J. GARCÍA-HIERRO, J.I. ROBLA, National Centre for Metallurgical Research, Madrid, SPAIN

I.PO.16. Determination of discrete microstructural modifications in grey cast irons
M. LUCA, C. CROITORU, Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

I.PO.17. Corrosion properties of femtosecond laser textured Ti6Al4V-ELI in simulated body fluids
M.P. FIORUCCI, Laboratory of Industrial Application of Laser, Technology Research Centre (CIT), Industrial Engineering II, Higher Polytechnic University College, University of A Coruña, SPAIN
Nanomaterials and Nanoscience Laboratory, Mechanical Engineering, University of Las Palmas de Gran Canaria, SPAIN
H. SAKR SANCHEZ, J. MIRZA ROSCA, Nanomaterials and Nanoscience Laboratory, Mechanical Engineering, University of Las Palmas de Gran Canaria, SPAIN
A.J. LÓPEZ, A. RAMIL, Laboratory of Industrial Application of Laser, Technology Research Centre (CIT), Industrial Engineering II, Higher Polytechnic University College, University of A Coruña, SPAIN

I.PO.18. Passive film on titanium-tantalum alloys. 1) EIS study
J.C. MIRZA ROSCA, V. BOLAÑOS RODRÍGUEZ, A. CUADRADO, University of Las Palmas de Gran Canaria, Mechanical Engineering Department, Las Palmas de Gran Canaria, Canary Islands, SPAIN
M. TIEREAN, L. BALTES, Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

I.PO.19. Validation of 42CrMo4 steel for a "Mahle" piston head taking into account the thermo-mechanical requirements
V. MĂRDĂRESCU, Transilvania University of Brasov, Department of Automotive and Transport, Braşov, ROMANIA
L.G. MITU, Transilvania University of Brasov, Department of Product Design, Mecatronics and Environment, Braşov, ROMANIA
A.I. FULGA, Transilvania University of Brasov, Department of Mathematics and Informatics, Braşov, ROMANIA
A. BEJINARU MIHOC, Transilvania University of Brasov, Department of Product Design, Mecatronics and Environment, Braşov, ROMANIA

I.PO.20. Tensile stress-induced structural changes associated with martensite transformations in Fe-Mn-Si based shape memory alloys
M. MOCANU, E. MIHALACHE, R.I. COMĂNECI, B. PRICOP, Faculty of Materials Science and Engineering, Gheorghe Asachi Technical University of Iași, ROMANIA
B. OZKAL, Particulate Materials Laboratory, Istanbul Technical University, Istanbul, TURKEY
L.G. BUJOREANU, Faculty of Materials Science and Engineering, Gheorghe Asachi Technical University of Iași, ROMANIA

I.PO.21. Recovery of precious metals from anodic dissolution slime by extraction in ionic liquids
A.M.J. POPESCU, V. CONSTANTIN, Ilie Murgulescu Institute of Physical Chemistry of the Romanian Academy, Laboratory of Molten Salts, Bucharest, ROMANIA
V. SOARE, M. BURADA, I. CONSTANTIN, D.V. DUMITRESCU, National R&D Institute for Nonferrous and Rare Metals-IMNR, New Materials and Technologies Laboratory, Pantelimon, Ilfov, ROMANIA
V. SOARE, National R&D Institute for Nonferrous and Rare Metals-IMNR, Chemical and Physical Analysis Laboratory, Pantelimon, Ilfov, ROMANIA
M. GHITA, National R&D Institute for Nonferrous and Rare Metals-IMNR, Microscopic Characterization Laboratory, Pantelimon, Ilfov, ROMANIA
B. MIHAI, University Politehnica of Bucharest, Faculty of Material Science and Engineering, Bucharest, ROMANIA

I.PO.22. Isothermal diagrams of intermetallic phases formation in heat-resistant titanium alloys
M.A. POPOVA, A.A. POPOV, Ural Federal University named after the first President of Russia B.N. Yeltsin, Ekaterinburg, RUSSIA

I.PO.23. Invar type nanocrystalline compacts obtained by spark plasma sintering from mechanically activated powders
C.V. PRICĂ, B.V. NEAMŢU, F. POPA, T.F. MARINCA, N. SECHEL, I. CHICINAŞ, Technical University of Cluj Napoca, Materials Science and Engineering Department, Cluj-Napoca, ROMANIA

I.PO.24. Study of the influence of grain size on the total magnetic losses in silicon steel
E.V. STOIAN, V. BRATU, F.V. ANGHELINA, I. PETRE, P.C. FLUIERARU, A. NEGREA, Valahia University of Targoviste, Faculty of Materials Engineering and Mechanics, Targoviste, ROMANIA

I.PO.25. Mechanical properties and microstructure aspects of AlSi10Mg casting in vibrating field
M.H. TIEREAN, L.S. BALTES, A.S. BANEA, Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

I.PO.26. Study of hydroabrasive wear of hard thin films deposited on special stainless steel used at Francis turbine blades
C.A. ŢUGUI, Tehnical University "Gh. Asachi" Iasi, Science and Materials Engineering, Iasi, ROMANIA
National Institute of Research and Development for Technical Physics, Nondestructive Testing Department, Iasi, ROMANIA
P. VIZUREANU, M.C. PERJU, C. NEJNERU, C. SAVIN, C. BEJINARIU, Tehnical University "Gh. Asachi" Iasi, Science and Materials Engineering, Iasi, ROMANIA

I.PO.27. Dendritic segregation of Zn-Al eutectoid alloys
I. PETER, Politecnico di Torino, Department of Applied Science and Technology, Torino, ITALY
M. AGAPIE, B. VARGA, Transilvania University of Brasov, Department of Materials Science, Brasov, ROMANIA

I.PO.28. Thermal stability and magnetic properties of NiCoFeCrGa high entropy alloy
Á. VIDA, D. MOLNÁR, Institute for Solid State Physics and Optics, Wigner Research Centre for Physics, Budapest, HUNGARY
Department of Materials Physics, Eötvös University Budapest, Budapest, HUNGARY
S. HUANG, Applied Materials Physics, Department of Materials Science and Engineering, Royal Institute of Technology, Stockholm, SWEDEN
Z. MAKSA, Institute for Solid State Physics and Optics, Wigner Research Centre for Physics, Budapest, HUNGARY
Department of Materials Physics, Eötvös University Budapest, Budapest, HUNGARY
C.N. QUANG, Department of Materials Physics, Eötvös University Budapest, Budapest, HUNGARY
L.K. VARGA, Institute for Solid State Physics and Optics, Wigner Research Centre for Physics, Budapest, HUNGARY
B. VARGA, Materials Science Department, Faculty of Materials Science and Engineering, Transilvania University of Braşov, ROMANIA
L. VITOS, Institute for Solid State Physics and Optics, Wigner Research Centre for Physics, Budapest, HUNGARY
Applied Materials Physics, Department of Materials Science and Engineering, Royal Institute of Technology, Stockholm, SWEDEN

I.PO.29. Effect of phase composition of EK77 alloy on the melt viscosity and the features of the ingot structure formation
A.Y. ZHILYAKOV, S.V. BELIKOV, A.G. GUDOV, S.P. BURMASOV, Ural Federal University named after the first President of Russia B.N. Yeltsin, Ekaterinburg, RUSSIA

I.PO.30. Relationship between deformation and recrystallization texture in copper wire
M.A. ZORINA, S.I. STEPANOV, M.S. KARABANALOV, M.L. LOBANOV, Ural Federal University named after the first President of Russia B.N. Yeltsin, Department of Heat Treatment and Physics of Metals, Ekaterinburg, RUSSIA

I.PO.31. NiTi shape memory alloy used for multiple-resetting actuator for fire protection
L. BURLACU, N. CIMPOEȘU, N.M. LOHAN, L.G. BUJOREANU, Faculty of Materials Science and Engineering, Gheorghe Asachi Technical University of Iași, ROMANIA

Section III

III.PO.1. Microstructural analysis and mechanical properties of Al composite materials reinforced with particles based on Fe alloys
R.L. ASAVEI, R. CHELARIU, I. CARCEA, Gheorghe Asachi Technical University, Iasi, ROMANIA

III.PO.2. Few-layer graphene encaspulated Fe-Co nanoparticles
M. BYSTRZEJEWSKI, P. STRACHOWSKI, University of Warsaw, POLAND
I.P. GRUDZINSKI, Medical University of Warsaw, POLAND

III.PO.3. Photoactive glazed polymer-cement composites
L. BALTES, S. PATACHIA, M. TIEREAN, Transilvania University of Brasov, ROMANIA
O. EKINCIOGLU, M.H. OZKUL, Istanbul Technical University, TURKEY

III.PO.4. Photoactive polymer-cement composites for tannins removal from wastewaters
L. BALTES, S. PATACHIA, M. TIEREAN, Transilvania University of Brasov, ROMANIA
O. EKINCIOGLU, M.H. OZKUL, Istanbul Technical University, TURKEY

III.PO.5. Obtaining and characterization of calcium carbonate and wood reinforced PVC composites
C. SPÎRCHEZ, C. CROITORU, A. LUNGULEASA, D. CRISTEA, M.A. POP, T. BEDO, Transilvania University of Brasov, ROMANIA

III.PO.6. Wood-polyethylene composites with alkylphosphonium and alkylammonium ionic liquids as compatibilizers
C. CROITORU, M.C. TIMAR, A. VARODI, I.C. ROATA, Transilvania University of Brasov, ROMANIA

III.PO.7. Influence of biodegradable polymers in the waste generated from polypropylene food containers
S. FERRÁNDIZ, D. BERTOMEU, Univesitat Politècnica de València, Alcoy-Alicante, SPAIN

M.P. ARRIETA, Instituto de Ciencia y Tecnología de Polímeros (ICTP-CSIC), Madrid, SPAIN
M.D. SAMPER, J. LÓPEZ-MARTÍNEZ, Univesitat Politècnica de València, Alcoy-Alicante, SPAIN

III.PO.8. AlMg/AlN obtaining through thermodynamics combined with experimental investigation
R.M. FLOREA, Gheorghe Asachi Technical University of Iasi, ROMANIA

III.PO.9. Studies on novel cyanate-ester polymer blend curing by aid of dielectric broadband relaxation spectroscopy
D. LUCA MOTOC, Transilvania University of Brasov, ROMANIA
L. HARTMANN, Fraunhofer Research Institution for Polymeric Materials and Composites PYCO, Teltow, GERMANY

III.PO.10. Composite membranes used for the processing of some biologically active extracts
M. PASCU (NEAGU), SC Hofigal S.A. Analytical Research Department, Bucharest; Politehnica University of Bucharest, ROMANIA
D.E. PASCU, Politehnica University of Bucharest, ROMANIA
A. COZEA, SC Hofigal S.A. Analytical Research Department, Bucharest, Transilvania University of Brasov, ROMANIA
G. ALEXANDRU, SC Hofigal S.A. Analytical Research Department, Bucharest, ROMANIA
A.A. BUNACIU, Scient - Research Center for Instrumental Analysis, (Cromatec_Plus S.R.L.), Bucharest, ROMANIA
A.C. NECHIFOR, A.R. MIRON, Politehnica University of Bucharest, ROMANIA

III.PO.11. Structural and magnetic properties of quartz sand
F. POPA, T.F. MARINCA, B.V. NEAMȚU, I. CHICINAȘ, Technical University of Cluj-Napoca, ROMANIA

III.PO.12. Removal of crystal violet by adsorption onto charcoal modified developed from pine cones
N. POPA, M. VISA, Transilvania University of Brasov, ROMANIA

III.PO.13. Porous AlMg-SiC composites structure modeling by means of fractal analysis
O. RUSU, I. RUSU, Technical University Gheorghe Asachi, Iasi, ROMANIA

III.PO.14. The study of physico-chemical properties of perovskite type lanthanum manganite obtained by sol-gel method heat treated at different temperatures
P. SFIRLOAGA, M. POIENAR, P. VLAZAN, Institute for Research and Development in Electrochemistry and Condensed Matter, Timisoara, ROMANIA

III.PO.15. Microwave melting and processing of metallic powder MMC castings
S. SATNAM, The Northcap University, Haryana, INDIA
G. DHEERAJ, J. VIVEK, Thapar University, Punjab, INDIA

III.PO.16. Surface characterization of thermally treated lignocellulose panels
C. CROITORU, C. SPÎRCHEZ, A. LUNGULEASA, D. CRISTEA, M.A. POP, T. BEDO, Transilvania University of Brasov, ROMANIA

III.PO.17. Characterization and obtaining of silicone rubber reinforced with magnetic fillers used to protect the human factor
E.V. STOIAN, Valahia University of Targoviste, ROMANIA
J. PINTEA, National Institute for Research and Development in Electrical Engineering, Bucharest, ROMANIA
M.C. ENESCU, I.N. POPESCU, Valahia University of Targoviste, ROMANIA

III.PO.18. Natural resin materials - spectral and chromatographic investigation
N.M. ȘTIRBESCU, Valahia University of Targoviste, Institute of Multidisciplinary Research for Science and Technology, ROMANIA
R.M. ION, Valahia University of Targoviste; National Institute for Research and Development in Chemistry and Petrochemistry - ICECHIM, Bucharest, ROMANIA
S. TEODORESCU, R.M. ȘTIRBESCU, A.I. BUCURICĂ, Valahia University of Targoviste, Institute of Multidisciplinary Research for Science and Technology, ROMANIA

III.PO.19. Thermal behavior and structural properties of Poly (methyl methacrylate)/TiO_2 nanocomposites for dental applications
E. EFTIMIE TOTU, A.C. NECHIFOR, G. NECHIFOR, A.R. MIRON, O.C. OPREA, University Politehnica of Bucharest, ROMANIA
C.M. CRISTACHE, "Carol Davila" University of Medicine and Pharmacy, Bucharest, ROMANIA

III.PO.20. Iron(II) embedded composites based on activated carbon used as Fenton-like catalysts
A. VAJDA, M.S. SECULA, Gheorghe Asachi Technical University of Iasi, ROMANIA
B. CAGNON, ICMN, CNRS-Universite d'Orleans, Orleans, FRANCE
I. MAMALIGA, Gheorghe Asachi Technical University of Iasi, ROMANIA

III.PO.21. Effect of dopant concentration on the structural, morphological and optical properties of $NaNbO_3$ nanoparticles
P. VLAZAN, M. POIENAR, P. SFIRLOAGA, Institute for Research and Development in Electrochemistry and Condensed Matter, Timisoara, ROMANIA

III.PO.22. Mineral investigations of Romanian wheat and flour
R. VLADOIU, Valahia University of Targoviste, ROMANIA
R.M. ION, Valahia University of Targoviste; National Institute for Research and Development in Chemistry and Petrochemistry - ICECHIM, Bucharest, ROMANIA

III.PO.23. Fly ash characterization from CET Govora used in masonry mortars
G. VELCIU, V. MARINESCU, National Research&Development Institute for Electrical Engineering ICPE-CA, Bucharest, ROMANIA
A. MOANTA, SC CEPROCIM SA, Bucharest, ROMANIA
M. LUNGULESCU, G. SBARCEA, A. DUMITRU, National Research&Development Institute for Electrical Engineering ICPE-CA, Bucharest, ROMANIA

III.PO.24. Analyzing the ballistic impact performance of laminated composites
B. DELIKTAS, A. DURMUS, Uludag University, Bursa, TURKEY

III.PO.25. Thermal and thermorheologic characterization of different polyolefin waste fractions
A. LAZAR, C. CROITORU, M. TIEREAN, L. BALTES, Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

Section VI

VI.PO.1. Induction brazing of copper components using an amorphous brazing alloy
C. CODREAN, D. BUZDUGAN, B. RADU, V.A. ȘERBAN, Politehnica University of Timișoara, ROMANIA

VI.PO.2. Characterization of the surfaces obtained by gouging
B. FAZAKAS, T. MACHEDON-PISU, Transilvania University of Brașov, ROMANIA
N. CIMPOEȘU, "Gheorghe Asachi" Technical University of Iaşi, ROMANIA

VI.PO.3. Solid state welding technologies for aerospace applications
J.H. YOON, J.T. YOO, Korea Aerospace Research Institute, KOREA
K. NO, University of Science & Technology, KOREA
H.S. LEE, Korea Aerospace Research Institute, University of Science & Technology, KOREA

VI.PO.4. A study on friction stir welding process of AA2219-t87 Al-Cu alloy
K. NO, University of Science & Technology, KOREA
J.H. YOON, J.T. YOO, Korea Aerospace Research Institute, KOREA
H.S. LEE, Korea Aerospace Research Institute, University of Science & Technology, KOREA

VI.PO.5. Overview of joining dissimilar materials: metals and polymers
E. MOLDOVAN, M.H. TIEREAN, E.M. STANCIU, Transilvania University of Brașov, ROMANIA

VI.PO.6. Overlap laser welding of thin polycarbonate sheets
E. MOLDOVAN, M.H. TIEREAN, E.M. STANCIU, Transilvania University of Brașov, ROMANIA

VI.PO.7. Investigations on dissimilar brazed joints between tungsten carbide and steel
I. VOICULESCU, V. GEANTĂ, Politehnica University of Bucharest, ROMANIA
H. BINCHICIU, S.C. Sudotim AS S.R.L. Timișoara, ROMANIA
D.M. IOVĂNAȘ, Transilvania University of Brașov, ROMANIA
I.M. VASILE, R. ȘTEFĂNOIU, Politehnica University of Bucharest, ROMANIA

VI.PO.8. Innovative research in the field of brazed joints for drill bit
T.D. TIHANOV, C. FLOREA, University of Petroșani, ROMANIA
D.M. IOVANAȘ, Transilvania University of Brașov, ROMANIA
E.F. BINCHICIU, A. BINCHICIU, S.C. Sudotim AS S.R.L. Timișoara, ROMANIA

VI.PO.9. Aspects regarding repetitive maintenance concept in push blades for loading equipment
T.D. TIHANOV, C. FLOREA, University of Petroșani, ROMANIA
D.M. IOVANAȘ, Transilvania University of Brașov, ROMANIA
E.F. BINCHICIU, S.C. Sudotim AS S.R.L. Timișoara, ROMANIA

VI.PO.10. Research regarding the post-cladding heat treatment applied on Metco 12C layer over C45 steel
A. BADEA, M.H. TIEREAN, A. PASCU, Transilvania University of Brașov, ROMANIA

VI.PO.11. Dissimilar laser welding of pure aluminium and copper
E.M. STANCIU, I.C. ROATĂ, A. PASCU, M.H. TIEREAN, Transilvania University of Brașov, ROMANIA

Hall F

15.00: Workshop Sartorom
Laboratory equipment for metal testing

16.00: Workshop "Prelucrarea/valorificarea inovativă a deșeurilor cu conținut de metale neferoase. Aspecte economice și tehnologice"
Importanța economică a valorificării metalelor utile conținute în deșeuri industriale
D. DUMITRESCU, D. MITRICA, I. CONSTANTIN, M. OLARU, National R&D Institute for Nonferrous and Rare Metals, IMNR Bucharest, ROMANIA

Analiza comparativă a tehnologiilor de prelucrare a deșeurilor de metale neferoase. Implicații ecologice
V. SOARE, M. BURADA, A. CARAGEA, National R&D Institute for Nonferrous and Rare Metals, IMNR Bucharest, ROMANIA

Prezentarea proiectului Programul Operațional Competitivitate 2014-2020, contract 17/2016 TRANSECOTEH – Obiective, rezultate estimate, oferta tehnică
D. DUMITRESCU, V. SOARE, D. MITRICĂ, M. BURADA, I. CONSTANTIN, V. SOARE, A. CARAGEA, National R&D Institute for Nonferrous and Rare Metals, IMNR Bucharest, ROMANIA

Hall G

9.30–19.00: Exhibitions (*Namicon, Olympus, Innovatest, Sartorom, Standard Service, Medist Life Science, Total Spectrum*)

Hall R (Transilvania University Multicultural Center)

19.30: Sculptures and graphics exhibition
Dan COVĂTARU, sculptor, "George Enescu" University of Arts, Iaşi, ROMANIA

Friday, 10.03.2017

Main Hall A

9.30: Plenary Lectures III:

Chairperson: ***Luis CUNHA,*** Universidade do Minho, Braga, PORTUGAL

9.30: **I.K.1. Growth kinetic of pyramidal faces of ADP at very small supersaturations**
H.V. ALEXANDRU, Politehnica University of Bucharest, ROMANIA

10.00: **P.08. Tribomechanical response of bare and hydrogenated amorphous carbon coated metallic biomaterials**
K. KAPNISIS, Cyprus University of Technology, Department of Mechanical Engineering and Materials Science and Engineering, Lemesos, CYPRUS
M. CONSTANTINOU, Cyprus University of Technology, Department of Mechanical Engineering and Materials Science and Engineering, Research Unit for Nanostructured Materials Systems, Lemesos, CYPRUS
M. KYRKOU, Cyprus University of Technology, Department of Mechanical Engineering and Materials Science and Engineering, Lemesos, CYPRUS
P. NIKOLAOU, Cyprus University of Technology, Department of Mechanical Engineering and Materials Science and Engineering, Research Unit for Nanostructured Materials Systems, Lemesos, CYPRUS
A. ANAYIOTOS, Cyprus University of Technology, Department of Mechanical Engineering and Materials Science and Engineering, Lemesos, CYPRUS
G. CONSTANTINIDES, Cyprus University of Technology, Department of Mechanical Engineering and Materials Science and Engineering, Research Unit for Nanostructured Materials Systems, Lemesos, CYPRUS

10.30: **P.09. Reinforcement effectiveness on mechanical performances of composites obtained by powder bed fusion**
A. GATTO, E. BASSOLI, L. DENTI, S. DEFANTI, R. GROPPO, Department of engineering "Enzo Ferrari", University of Modena and Reggio Emilia, ITALY

11.00: Coffee Break

Hall B

11.30: Oral Presentations IIa (Section I)

Chairpersons: ***Mustafa BENYOUCEF***, Université Cadi Ayyad - Marrakech, MOROCCO
Ioan MILOȘAN, Transilvania University of Brasov, ROMANIA

11.30: **I.O.4. Production of open cell aluminum foam by vacuum casting method**
F. MEDIK, T. SUNAR, M. ÇETIN, University of Karabuk, Manufacturing Engineering Department, Karabük, TURKEY
M. YAŞAR, University of Karabuk, Faculty of Technology, Karabük, TURKEY
L. TURHAN, TUBITAK Marmara Research Center Materials Institute, Gebze/Kocaeli, TURKEY

11.45: **I.O.5. Microstructure and properties of AlCrFeNiMn/Gr high entropy composite processed by mechanical alloying and spark plasma sintering**
G. POPESCU, I. CSAKI, C.A. POPESCU, R. TRUȘCĂ, E. VASILE, Politehnica University of Bucharest, ROMANIA

12.00: **I.O.6. Hot working effects on the damping behavior of shape memory alloys**
M. POPA, B. PRICOP, E. MIHALACHE, L.G. BUJOREANU, N.M. LOHAN, Faculty of Materials Science and Engineering, "Gheorghe Asachi" Technical University of Iași, ROMANİA

12.15: **I.O.7. Influence of the element additions to the microstructural and mechanical characteristics of selected high entropy alloys**
D. MITRICA, V. SOARE, M.T. OLARU, National R&D Institute for Nonferrous and Rare Metals – IMNR, New Materials and Technologies Laboratory, Pantelimon, Ilfov, ROMANIA

V. DRAGUT, National R&D Institute for Nonferrous and Rare Metals – IMNR, Chemical and Physical Analysis Laboratory, Pantelimon, Ilfov, ROMANIA
G. POPESCU, Politehnica University of Bucharest, Faculty of Materials Science and Engineering, Bucharest, ROMANIA
C. PREDESCU, A. BERBECARU, Politehnica University of Bucharest, Center for Research and Eco-Metallurgical Expertise, Bucharest, ROMANIA
V. SOARE, National R&D Institute for Nonferrous and Rare Metals – IMNR, Chemical and Physical Analysis Laboratory, Pantelimon, Ilfov, ROMANIA
M. GHITA, National R&D Institute for Nonferrous and Rare Metals – IMNR, Microscopic Characterization Laboratory, Pantelimon, Ilfov, ROMANIA

12.30: **I.O.8. Optimal choice of multi-pass turning parameters in metal cutting**
A. BELLOUFI, Université Ouargla, Faculté Sciences Appliquées, Département Génie Mécanique, Ouargla, ALGERIA
M. ASSAS, Université de Batna 2, Faculté Technologie, Laboratoire de Recherche en Productique, Batna, ALGERIA
I. REZGUI, M. ABDELKRIM, M. BOUAKBA, Université Ouargla, Fac. Sciences Appliquées, Département Génie Mécanique, Ouargla, ALGERIA

12.45: **I.O.9. Experimental Investigations to evaluate the effects of cutting parameters on cutting temperature and residual stresses during milling process of the AISI 1045**
M. ABDELKRIM, Université Ouargla, Faculté Sciences Appliquées, Département Génie Mécanique, Ouargla, ALGERIA
M. BRIOUA, Université de Batna 2, Faculté Technologie, Département Génie Mécanique, Batna, ALGERIA
G. BRABIE, C. TAMPU, B. CHIRITA, Vasile Alecsandri" University of Bacau, Bacau, ROMANIA
A. BELLOUFI, Université Ouargla, Faculté Sciences Appliquées, Département Génie Mécanique, Ouargla, ALGERIA

13.00: **I.O.10. The influence of intercritical quenching in ultrasonic field on the structure of some dual-phase steels with low content of carbon and manganese**
C. DULUCHEANU, T. SEVERIN, "Stefan cel Mare" University of Suceava, Department of Mechanics and Technologies, Suceava, ROMANIA

13.15: **I.O.11. Effect of strain hardening on precipitation kinetics in ATI 718PLUS**
B. HASSAN, University of Strathclyde, Advanced Forming Research Centre, Inchinnan, Renfrewshire, UNITED KINGDOM
S. NOUVEAU, Aubert & Duval, Inchinnan, Renfrewshire, UNITED KINGDOM
Y. JANSEN, Aubert & Duval, Pamiers CEDEX, FRANCE
J. CORNEY, University of Strathclyde, Department of Design, Manufacture and Engineering Management, Glasgow, UNITED KINGDOM

Hall C

11.30: Keynote Presentations IIa (Section II)

Chairpersons: ***Mariana CALIN,*** Leibniz Institute for Solid State and Materials Research Dresden (IFW Dresden), Institute for Complex Materials, Dresden, GERMANY
Sorin MUNTEANU, Transilvania University of Brasov, ROMANIA

11.30: **II.K.1. Evaluation of different magnesium based alloys without aluminium for potential orthopedic implants**
I. ANTONIAC, University Politehnica of Bucharest, ROMANIA

11.50: **II.K.2. Synthesis and characterization of some ceramic coatings ON Mg-Ca-Zr metallic substrate for medical applications**
B. ISTRATE, C. MUNTEANU, Gheorghe Asachi Technical University of Iasi, ROMANIA
V. GEANTA, Politehnica University of Bucharest, ROMANIA
D.M. VLAD, G.T. Popa University of Medicine and Pharmacy, Iasi, ROMANIA

Hall C

12.10: Oral Presentations IIb (Section II)

Chairpersons: ***Iulian ANTONIAC***, University Politehnica of Bucharest, Romania
Camelia GABOR, Transilvania University of Brasov, Romania

12.10: **II.O.1. Induced wettability and surface-volume correlation of composition for bovine bone derived hydroxyapatite particles**
A. MAIDANIUC, S.I. VOICU, M. MICULESCU, A.C. MOCANU, I. PENCEA, C. ANDRONESCU, E. MATEI, I. CSAKI, Politehnica University of Bucharest, ROMANIA
T. MACHEDON-PISU, Transilvania University of Brasov, ROMANIA

12.25: **II.O.2. Effect of sintering temperature on structure and properties of some new hydroxyapatite based composites for bone tissue engineering**
C. TECU, L. DRAGOMIR, C. MILEA, A. ANTONIAC, I. ANTONIAC, University Politehnica of Bucharest, ROMANIA
M.G. GOK, G. GOLLER, Istanbul Technical University, TURKEY

12.40: **II.O.3. Morphology and biocompatibility characterization of nanostructured TiO_2 surfaces for biomedical implants developed by electrochemical anodization**
G. STRNAD, S. MOICA, Petru Maior University of Tirgu Mures, ROMANIA
D. PORTAN, University of Patras, GREECE
L. JAKAB-FARKAS, Sapientia University of Cluj Napoca, ROMANIA
C. PETROVAN, O. RUSSU, D. R. MANU, University of Medicine and Pharmacy, Tirgu Mures, ROMANIA

12.55: **II.O.4. Corrosion behavior of biodegradable FeMnSi-MgCa alloy**
F. SĂNDULACHE, S. STANCIU, R. CIMPOEŞU, B. ISTRATE, N. CIMPOEŞU, Gheorghe Asachi Technical University of Iasi, ROMANIA
C. TRINCĂ, G. ZEGAN, "Ion Ionescu de la Brad" University of Agricultural Sciences and Veterinary Medicine, ROMANIA

13.10: **II.O.5. Resveratrol covalent immobilization onto cellulose acetate membranes for improved osseointegration**
S.I. VOICU, M.A. PANDELE, A. IORDACHE, F. MICULESCU, University Politehnica from Bucharest, ROMANIA
A.I. STARAS, P. NEACSU, A. CIMPEAN, University of Bucharest, ROMANIA
V.K. THAKUR, University of Cranfield, School of Aerospace, Transport and Manufacturing, UNITED KINGDOM

Hall D

11.30: Oral Presentations IIc (Section III)

Chairpersons: ***Rodica Mariana ION***, ICECHIM, Bucharest; Valahia University of Targoviste, ROMANIA
Cătălin CROITORU, Transilvania University of Braşov, ROMANIA

11.30: **III.O.5. Eco efficient melting of ceramic frits**
A. LÓPEZ-DELGADO, J.I. ROBLA, I. PADILLA, J. GARCÍA-HIERRO, National Centre for Metallurgical Research, Madrid, SPAIN
M. ROMERO, Eduardo Torroja Institute for Construction Sciences, Madrid, SPAIN

11.45: **III.O.6. Soft magnetic composites based on hybrid coated Fe-Si nanocrystalline powders**
B.V. NEAMŢU, Technical University of Cluj-Napoca, ROMANIA
M. NASUI, Center for Superconductivity, Spintronics and Surface Science, Technical University of Cluj-Napoca, ROMANIA
T.F. MARINCA, F. POPA, I. CHICINAŞ, Technical University of Cluj-Napoca, ROMANIA

12.00: **III.O.7. Characterization of thermoplastic bearings by using of horizontal rotational forming**
P.A. POP, University of Oradea, ROMANIA
J. LOPEZ-MARTINEZ, Univesitat Politècnica de València, Alcoy-Alicante, SPAIN
I.M. GORDAN, University of Oradea, ROMANIA
S. FERRANDIZ-BOU, Univesitat Politècnica de València, Alcoy-Alicante, SPAIN
L.G. MITU, Transilvania University of Brasov, ROMANIA

12.15: **III.O.8. Influence of aqueous milling duration on the sintering ability of some hard metal powders**
H.F. CHICINAŞ, T.F. MARINCA, Technical University of Cluj-Napoca, ROMANIA
P. GÖTZE, A. ECKERT, G-Elit Präzisionwerkzeug, Berlin, GERMANY
C.O. POPA, Technical University of Cluj-Napoca, ROMANIA

12.30: **III.O.9. Metal/oxide magnetic composites obtained by reactive spark plasma sintering**
T.F. MARINCA, B.V. NEAMŢU, H.F. CHICINAŞ, F. POPA, I. CHICINAŞ, Technical University of Cluj-Napoca, ROMANIA

12.45: **III.O.10. Efficient type of batteries for electric vehicles powering**
R. TARULESCU, S. TARULESCU, A. SOICA, Transilvania University of Brasov, ROMANIA

13.00: **III.O.11. The theory of generalized thermoelasticity with fractional order strain for dipolar materials with double porosity**
A. CHIRILĂ, M. MARIN, Transilvania University of Brasov, ROMANIA

13.15: **III.O.12. Effect of walnut shell reinforcement on polymer matrix composites**
G. AÇIKBAŞ, S. ÖZCAN, N. ÇALIŞ AÇIKBAŞ, Bilecik Seyh Edebali University, Bilecik, TURKEY

Hall E

11.30: Oral Presentations IId (Section IV)

Chairpersons: ***Valentin CRACIUN***, National Institute for Lasers, Plasma and Radiation Physics, Magurele, ROMANIA
Maria STOICĂNESCU, Transilvania University of Braşov, ROMANIA

11.30: **IV.O.5. Coating of liquid wood sheets**
O. MOCĂNIŢA, M. BENCHEA, B. ISTRATE, C. MUNTEANU, Technical University of Iasi, Mechanical Engineering Department, Iasi, ROMANIA
D. CHICET, Technical University of Iasi, Materials Science and Engineering Department, Iasi, ROMANIA

11.45: **IV.O.6. The reaction to corrosion in steam of a geothermal power plant turbine blade**
V. MOŢOIU, TEHNOID COM SRL, Bucharest, ROMANIA
B. GHIBAN, Materials Science & Engineering Faculty, University Politehnica of Bucharest, ROMANIA

12.00: **IV.O.7. Investigation of double-layered rare earth zirconates for thermal barrier coatings (TBCs) applications under isothermal oxidation conditions**
K.M. DOLEKER, A.C. KARAOGLANLI, Bartin University, Department of Metallurgical and Materials Engineering, Bartin, TURKEY

12.15: **IV.O.8. Ultra-stable aqueous suspensions of few-layer graphene encapsulated iron nanoparticles**
P. STRACHOWSKI, M. BYSTRZEJEWSKI, University of Warsaw, Faculty of Chemistry, Warsaw, POLAND
I.P. GRUDZIŃSKI, Medical University of Warsaw, Faculty of Pharmacy, Warsaw, POLAND

12.30: **IV.O.9. Optical, electrical and structural properties of SiC thin films deposited by reactive DC magnetron sputtering**
T. TAVSANOGLU, Mugla Sitki Kocman University, Faculty of Engineering, Department of Metallurgical and Materials Engineering, Mugla, TURKEY
E.O. ZAYIM, Istanbul Technical University, Faculty of Science and Letters, Department of Engineering Physics, Istanbul, TURKEY
O. AGIRSEVEN, O. YUCEL, Istanbul Technical University, Faculty of Chemical and Metallurgical Engineering, Department of Metallurgical and Materials Engineering, Istanbul, TURKEY
S. YILDIRIM, Istanbul University, Faculty of Science, Department of Physics, Istanbul, TURKEY

12.45: **IV.O.10. Isothermal oxidation and thermal cyclic behaviors of YSZ and YSZ/$La_2Zr_2O_7$ double-layered thermal barrier coatings (TBCs)**
K.M. DOLEKER, Y. OZGURLUK, A.C. KARAOGLANLI, Bartin University, Department of Metallurgical and Materials Engineering, Bartin, TURKEY

13.00: **IV.O.11. Hot corrosion behavior of YSZ and $Gd_2Zr_2O_7$ thermal barrier coatings (TBCs) exposed to molten sulfate and vanadate salt**
Y. OZGURLUK, K. M. DOLEKER, A.C. KARAOGLANLI, Bartin University, Department of Metallurgical and Materials Engineering, Bartin, TURKEY

13.15: **IV.O.12. Substrate influence on the tribological behaviour of DLC coatings with CrN interlayer deposited on hardened steel**
D. FELDIOREAN, D. CRISTEA, M. TIEREAN, C. GABOR, D. MUNTEANU, Transilvania University of Brasov, Materials Science and Engineering Faculty, Brasov, ROMANIA
L. JAKAB-FARKAS, Sapientia University, Faculty of Engineering, Tg. Mures, ROMANIA
L. CUNHA, Centro de Física, Universidade do Minho, Campus de Gualtar, Braga, PORTUGAL
N.P. BARRADAS, Centro de Ciências e Tecnologias Nucleares, Instituto Superior Técnico, Universidade de Lisboa, Bobadela LRS, PORTUGAL
E. ALVES, Instituto de Plasmas e Fusão Nuclear, Instituto Superior Técnico, Universidade de Lisboa, Bobadela LRS, PORTUGAL
M. SOCOL, D. CRACIUN, Laser Department, National Institute for Laser, Plasma, and Radiation Physics, Magurele, ROMANIA

Hall F

11.30: Keynote Presentations IIb (Section V)

Chairpersons: ***Julia MIRZA ROSCA***, Universidad de Las Palmas de Gran Canaria, SPAIN
Tibor BEDO, Transilvania University of Brasov, ROMANIA

11.30: **V.K.1. Regular surface nanopatterning with nanosphere lithography, block-copolymer lithography and combinations of both**
K. BRASSAT, C. BRODEHL, J.K.N. LINDNER, Paderborn University, Department of Physics, GERMANY

11.50: **V.K.2. The role of hydrogen in materials degradation**
D. ELIEZER, Ben-Gurion University of the Negev, Beer-Sheva, ISRAEL

12.10: Oral Presentations IIe (Section V)

Chairpersons: ***Denis CHAUMONT***, Université de Bourgogne, Dijon, FRANCE
Aurel CRISAN, Transilvania University of Brasov, ROMANIA

12.10: **V.O.1. TiO_2/Pt-NPs photocatalyst supported on zeolites obtained from fly ash**
M. VISA, M. COSNITA, Transilvania University of Brasov, R&D Center Renewable Energy Systems and Recycling, ROMANIA

12.25: **V.O.2. Synthesis and properties of Cu_2ZnSnS_4 nanoparticles**
K.G. DEEPA, C. R. PRAVEEN, Indian Institute of Science Interdisciplinary Centre for Energy Research, INDIA

12.40: **V.O.3. Controlling the chain organization and thermochromic behaviors of polydiacetylene assemblies by varying solvent media**
C. KHANANTONG, N. CHAROENTHAI, Department of Chemistry, Faculty of Science, Naresuan University, THAILAND
S. WACHARASINDHU, M. SUKWATTANASINITT, Organic Synthesis Research Unit, Department of Chemistry, Faculty of Science, Chulalongkorn University, THAILAND
N. TRAIPHOL, Laboratory of Advanced Chromic Materials, Department of Materials Science, Faculty of Science, Chulalongkorn University, THAILAND
R. TRAIPHOL, Laboratory of Advanced Polymers and Nanomaterials, School of Materials Science and Engineering, Faculty of Science, Mahidol University at Salaya, and NANOTEC-MU Excellence Center on Intelligent Materials and Systems, Faculty of Science, Mahidol University, THAILAND

12.55: **V.O.4. Properties analysis of dextrane magnetic carrier compounds with potential applications in environmental and biomedical fields**
A.M. PREDESCU, E. MATEI, A.C. BERBECARU, M.C. PANTILIMON, C.I. DRĂGAN, C. PREDESCU, C. GRĂDINARU, University Politehnica of Bucharest, ROMANIA

13.10: **V.O.5. Carbon coated metallurgical grade silicon decorated graphene anodes**
G. HATIPOĞLU, Sakarya University, Engineering Faculty, Dept. of Metallurgy and Materials Engineering and Tubitak, Marmara Research Center, Energy Institute, TURKEY
M. ALAF, Bilecik Seyh Edebali University, Engineering Faculty, Dept. of Metallurgy and Materials Engineering, Gulumbe Campus, TURKEY
D. UZUN, Tubitak, Marmara Research Center, Energy Institute, TURKEY
H. AKBULUT, Sakarya University, Engineering Faculty, Dept. of Metallurgy and Materials Engineering, Esentepe Campus, TURKEY

13.30: Lunch

Hall B

15.00: Oral Presentations IIIa (Section I)
Chairpersons: ***Horia ALEXANDRU,*** Politehnica University of Bucharest, ROMANIA
Traian Lucian SEVERIN, "Stefan cel Mare" University of Suceava, ROMANIA

15.00: **I.O.12. Effect of pre-straining and baking temperature on bake hardening behaviour of hot-dip galvanized steels**
G. *AYTAN, Y. YUREKTURK,* Istanbul Technical University, Metallurgical and Materials Department, Istanbul, TURKEY
M. BAYDOGAN, Istanbul Technical University, Metallurgical and Materials Department, Istanbul, TURKEY
Istanbul Technical University, Prof. Dr. Adnan Tekin Material Sciences and Production Technologies Applied Research Center, Istanbul, TURKEY

15.15: **I.O.13. Estimating volume fractions of microstructural constituents in austempered high silicon alloyed GJS 600-10 ductile iron through magnetic measurements (VSM)**
Y. YUREKTURK, Istanbul Technical University, Metallurgical and Materials Department, Istanbul, TURKEY
M. BAYDOGAN, Istanbul Technical University, Metallurgical and Materials Department, Istanbul, TURKEY
Istanbul Technical University, Prof. Dr. Adnan Tekin Material Sciences and Production Technologies Applied Research Center, Istanbul, TURKEY

15.30: **I.O.14. Oxide nanomaterials: synthesis, mechanistic studies and technological innovation in wastewater treatment by flotation**
C. COVALIU, G. PARASCHIV, University Politehnica of Bucharest, ROMANIA
C. MOGA, S.C. DFR Systems S.R.L., Bucharest, ROMANIA
M. MATACHE, National Institute of Research-Development for Machines and Installations Designed to Agriculture and Food Industry, Bucharest, ROMANIA

15.45: **I.O.15. Formation of Al-Ti based phases for grain refinement of al alloys produced by high energy ball milling**
M. ARIKOĞLU, A. ÖZER, Cumhuriyet University Metallurgical and Materials Engineering Department, Sivas, TURKEY

16.00: **I.O.16. Identification of the creep models parameters of the metallic materials using evolutionary algorithms**
B. DELIKTAS, H.T. TÜRKER, Uludag University, Civil Engineering Department, Bursa, TURKEY
M. SÖNMEZ, Aksaray University., Civil Engineering Department, Bursa, TURKEY
A. DURMUS, Uludag University, Civil Engineering Department, Bursa, TURKEY

16.15: **I.O.17. Analytical description of the bainite transformation kinetics in steels 300m and D6AC**
A.A. KUKLINA, M.V. MAYSURADZE, Y.V. YDIN, Ural Federal University named after the first President of Russia B.N. Yeltsin, Ekaterinburg, RUSSIA

16.30: **I.O.18. Concepts regarding the heat transfer and reduction of the energy consumptions at the metallurgical heating furnaces**
D. CONSTANTINESCU, B.A. CÂRLAN, University Politehnica of Bucharest, ROMANIA

Hall D

15.00: Oral Presentations IIIb (Section III)

Chairpersons: ***Ionel CHICINAŞ,*** Technical University of Cluj-Napoca, ROMANIA
Liana Sanda BALTES, Transilvania University of Braşov, ROMANIA

15.00: **III.O.13. Theoretical comparison between carbon fiber and graphene composites for automotive components**
L. RAD, M. ADAM, A. CHIRU, Transilvania University of Brasov, ROMANIA

15.15: **III.O.14. Life cycle cost comparison between steel, carbon fiber composites and graphene composites**
L. RAD, M. ADAM, A. CHIRU, Transilvania University of Brasov, ROMANIA

15.30: **III.O.15. Nanoparticle embedded mixed matrix PSF membranes characterization and membrane performance**
S.C. PINTILIE, L.G. TIRON, A.L. LAZAR, S. BALTA, Dunarea de Jos University of Galati, ROMANIA

15.45: **III.O.16. Optimal composition of mixed material for the thermoforming process**
A. SONSIRI, P. PALICAMIN, Rajamangala University of Technology Krungthep, Bangkok, THAILAND

16.00: **III.O.17. Effect of sequential milling (mechanical alloying-cryogenic milling) on the microstructural and mechanical properties of TiB_2 reinforced Al-12.6 wt.% Si MMCs**
E. TEKOĞLU, S. MERTDINÇ, D. AĞAOĞULLARI, M. L. ÖVEÇOĞLU, Istanbul Technical University, TURKEY

16.15: **III.O.18. Analysis of flexural properties for metal/plastic composites made by a new hybrid process**
J. BUTT, H. SHIRVANI, S. NAMMI, Anglia Ruskin University, Department of Engineering & Built Environment, Chelmsford, Essex, UNITED KINGDOM

Hall E

15.00: Oral Presentations IIIc (Section IV)

Chairpersons: ***Corneliu MUNTEANU,*** Technical University of Iasi, ROMANIA
Elena Manuela STANCIU, Transilvania University of Brasov, ROMANIA

15.00: **IV.O.13. Effect of process parameters on the tribological properties of porcelain waste reinforced epoxy composites**
N. ÇALIŞ AÇIKBAŞ, Bilecik Seyh Edebali University, Engineering Faculty, Dept. of Metallurgy and Materials Engineering, Bilecik, TURKEY
B. YAMAN, Eskisehir Osmangazi University, Engineering Faculty, Dept. of Metallurgy and Materials Engineering, Eskisehir, TURKEY
G. AÇIKBAŞ, Bilecik Seyh Edebali University, Vocational School, Metallurgy Program, Bilecik, TURKEY

15.15: **IV.O.14. Induced superhydrophobic and antimicrobial character of zinc metal modified ceramic wall tile surfaces**
S. ÖZCAN, Bilecik Seyh Edebali University, Engineering Faculty, Dept. of Chemical and Process Engineering, Bilecik, TURKEY
G. AÇIKBAŞ, Bilecik Seyh Edebali University, Vocational School, Metallurgy Program, Bilecik, TURKEY
N. ÇALIŞ AÇIKBAŞ, Bilecik Seyh Edebali University, Engineering Faculty, Dept. of Metallurgy and Materials Engineering, Bilecik, TURKEY

Hall F

15.00: Oral Presentations IIId (Section V)

Chairpersons: ***Rakchart TRAIPHOL,*** Mahidol University at Salaya, THAILAND
Mihai Alin POP, Transilvania University of Brasov, ROMANIA

15.00: **V.O.6. Influence of carbon nanotubes used in carburizing heat treatment of SAE 3310 steel**
S.A. BARABAS, A. FLORESCU, T. MACHEDON-PISU, F. SARBU, Transilvania University of Brasov, ROMANIA

15.15: **V.O.7. Deposition of TiO_2 nanostructures by MOCVD with metallocene catalysts**
A. CRISBASAN, D. CHAUMONT, Y. LACROUTE, R. CHASSAGNON, Nanoform, ICB, Universite de Bourgogne Franche-Comte, FRANCE
M. SACILOTTI, Departamento de Fisica, Universidade Federal de Pernambuco Recife, BRAZIL

15.30: **V.O.8. Characterization of VC reinforced Cu, Fe and Ni composite powders produced via mechanical alloying**
B. ÖZKAL, A. SELTE, Istanbul Technical University, TURKEY

15.45: **V.O.9. Morphological analysis of magnetic nanomaterials through comparative methods**
M.C. PANTILIMON, C.I. DRAGAN, C. GRADINARU, A.M. PREDESCU, M. SOHACIU, G. COMAN, C. PREDESCU, Politehnica University of Bucharest, ROMANIA

16.00: **V.O.10. In situ synthesis of SnO_2/graphene nanocomposite anode and its enhanced Li-ion battery performance**
M. ALAF, Bilecik Seyh Edebali University, TURKEY
E. ALKAN, M.O. GULER, H. AKBULUT, Sakarya University, Engineering Faculty, Dept. of Metallurgy and Materials Engineering, Esentepe Campus, TURKEY

16.15: **V.O.11. Exfoliation of graphite in carbon arc discharge**
M. FRONCZAK, M. BYSTRZEJEWSKI, Faculty of Chemistry, University of Warsaw, POLAND

16.30: **V.O.12. Wastewater treatment using zeolites nanomaterials**
C. COVALIU, G. PARASCHIV, University Politehnica of Bucharest, ROMANIA

Hall C

15.00: Oral Presentations IIIe (Sections VI & VII)

Chairpersons: ***Radu IOVĂNAŞ,*** Transilvania University of Brasov, ROMANIA
Dragoș BUZDUGAN, Politehnica University of Timișoara, ROMANIA

15.00: **VI.O.1. Characterization of fusion lines obtained by laser welding on preheated ductile iron plates**
I.C. MON, M.H. TIEREAN, Transilvania University of Brașov, ROMANIA
E. CICALA, M. PILLOZ, I. TOMASHCHUK, P. SALLAMAND, Université de Bourgogne Franche Comté, FRANCE

15.15: **VI.O.2. Continuous wave laser welding of copper**
A. PASCU, I.C. ROATĂ, E. M. STANCIU, M.H. TIEREAN, Transilvania University of Brașov, ROMANIA

15.30: **VI.O.3. Increasing the quality of welded joints of Al-Si 6082 alloys by introducing forced vibrations**
M.A. BODEANU, T. MACHEDON-PISU, Transilvania University of Brașov, ROMANIA

15.45: **VI.O.4. Influence of the laser cladding parameters on the morphology, wear and corrosion resistance of composite coatings**
I. HULKA, D. UȚU, V.A. ȘERBAN, Politehnica University of Timişoara, ROMANIA
A. PASCU, I. ROATĂ, Transilvania University of Brașov, ROMANIA

16.00: **VI.O.5. Mechanical properties improvement of Cu10Al laser cladded on aluminum**
I.C. ROATĂ, E. M. STANCIU, Transilvania University of Brașov, ROMANIA
C. CROITORU, A. PASCU, Transilvania University of Brașov, ROMANIA

I. HULKA, Politehnica University of Timişoara, ROMANIA

16.15: **VII.O.1. Ecosocial (environmental and social) safety in metallic material industry**
A. NICOLAE, G. COMAN, B.F. STROE, A.N. ILIE, M. NICOLAE, Politehnica University of Bucharest, ROMANIA

16.45: Coffee break

Hall G
17.00: Poster presentations II

Section II

II.PO.1. Charcoal obtained from the waste vegetable products, used like support for plant extracts
A. COZEA, S.C. HOFIGAL IMPORT EXPORT SA, Transilvania Universitaty from Brasov, ROMANIA
M. PASCU (NEAGU), S.C. HOFIGAL IMPORT EXPORT SA, Politehnica University of Bucharest, ROMANIA
D.E. PASCU, Politehnica University of Bucharest, ROMANIA
R. GRUIA, Transilvania Universitaty from Brasov, ROMANIA

II.PO.2. Obtaining and mechanical properties of Ti-Mo-Zr-Ta alloys
M.S. BĂLȚATU, M. BENCHEA, Gheorghe Asachi Technical University of Iasi, ROMANIA
P. VIZUREANU, Gheorghe Asachi Technical University of Iasi, ROMANIA
Centre of Excellence Geopolymer & Green Technology School of Materials Engineering, University Malaysia Perlis, MALAYSIA
V. GEANTĂ, University Politehnica of Bucharest, ROMANIA
A.V. SANDU, Gheorghe Asachi Technical University of Iasi, ROMANIA
Centre of Excellence Geopolymer & Green Technology School of Materials Engineering, University Malaysia Perlis, MALAYSIA, Romanian Inventors Forum, ROMANIA

II.PO.3. Zirconia dental implant materials
S.C. FOCȘĂNEANU, M.S. BĂLȚATU, Gheorghe Asachi Technical University of Iasi, ROMANIA
P. VIZUREANU, Gheorghe Asachi Technical University of Iasi, Romania; Centre of Excellence Geopolymer & Green Technology School of Materials Engineering, University Malaysia Perlis, MALAYSIA
A.V. SANDU, Gheorghe Asachi Technical University of Iasi, ROMANIA
Centre of Excellence Geopolymer & Green Technology School of Materials Engineering, University Malaysia Perlis, MALAYSIA, Romanian Inventors Forum, ROMANIA

II.PO.4. Biosynthesis of metallic nanoparticles using microorganisms
I.GHIUȚĂ, D. CRISTEA, D. MUNTEANU, Transilvania University of Brasov, ROMANIA

II.PO.5. Effect of SiC partıcle sıze on the physıcal and mechanıcal propertıes OF NiTi alloys
K.E. ÖKSÜZ, H. AKKAN, M. ŞIMŞIR, Cumhuriyet University, TURKEY

II.PO.6. XRD analysis and FTIR study on calcined bones
K.E. ÖKSÜZ, E.N. YILMAZ, Y. DURMUŞ, A. ÖZER, Cumhuriyet University, TURKEY

II.PO.7. Chitosan/casein multilayer films as a novel drug delivery system
M. MARUDOVA, A. VIRANEVA, G. EXNER, I. BODUROV, T. YOVCHEVA, Plovdiv University "Paisii Hilendarski", BULGARIA
B. PILICHEVA, S. SOTIROV, Y. UZUNOVA, Medical University Plovdiv, BULGARIA
I. VLAEVA, University of Food Technologies, BULGARIA

II.PO.8. Alloys with superior mechanical properties used in manufacturing of implants
M. G. MINCIUNĂ, P. VIZUREANU, D.C. ACHIȚEI, Gheorghe Asachi Technical University of Iasi, ROMANIA
Centre of Excellence Geopolymer & Green Technology School of Materials Engineering, University Malaysia Perlis, MALAYSIA
B. ISTRATE, Gheorghe Asachi Technical University of Iasi, ROMANIA

II.PO.9. Influence of the modulated two-step synthesis of biogenic hydroxyapatite on biomimetic products' surface
F. MICULESCU, M. MICULESCU, S.I. VOICU, University Politehnica of Bucharest, ROMANIA
A.C. MOCANU, A. MAIDANIUC, S.C. Nuclear NDT Research&Services S.R.L, Romania, University Politehnica of Bucharest, ROMANIA
G. STAN, National Institute of Materials Physics, ROMANIA
A. CÎMPEAN, V. MITRAN, University of Bucharest, ROMANIA
T. MACHEDON-PISU, Transilvania University of Brasov, ROMANIA

II.PO.10. Overview of most popular Romanian medicinal and aromatic plants as potential sources of biomaterials
S. SPÎNU, University of Agronomic Sciences and Veterinary Medicine of Bucharest; University of Bucharest, ROMANIA
M. DRUGULESCU, University of Agronomic Sciences and Veterinary Medicine of Bucharest, ROMANIA
D. IONESCU, University of Agronomic Sciences and Veterinary Medicine of Bucharest, Hofigal Export Import S.A, ROMANIA

II.PO.11. Structural and compositional analysis of phosphocalcic bioactive glasses
D. AVRAM, D.N. UNGUREANU, N. ANGELESCU, I. IONIȚĂ, Valahia University of Targoviste, ROMANIA

II.PO.12. Surface modifications of titanium-based implants: the effect of surface characteristics on biocompatibility and osseointegration
Y.Y. KHRUNYK, S.V. BELIKOV, O.Y. KORNIENKO, A.V. KORELIN, Ural Federal University, RUSSIA
I.V. VYALYKH, Ural Scientific Research Veterinary Institute, RUSSIA

II.PO.13. The study of materials used to manufacture prosthetic components for medical implants
V. DESPA, F.V. ANGHELINA, V. BRATU, Valahia University of Targoviste, ROMANIA
C.O. RUSĂNESCU, Politehnica University of Bucharest, ROMANIA

II.PO.14. Biomaterials perspective on the complications related to the use of surgical meshes in urogynecological surgery
A. ANTONIAC, C. MILEA, L. DRAGOMIR, A. TAPOSU, I. ANTONIAC, University Politehnica of Bucharest, ROMANIA
E. BRATILA, "Carol Davila" University of Medicine and Pharmacy, Bucharest, ROMANIA
C. BERCEANU, University of Medicine and Pharmacy of Craiova, ROMANIA

II.PO.15. In vitro comparative assessment of the chemistry, handling and mechanical properties of cements for vertebroplasty
D. VOINESCU, Clinical University Emergency Hospital Elias Bucharest, ROMANIA
A. TAPOSU, C. MILEA, A. ANTONIAC, I. ANTONIAC, D. POP, University Politehnica of Bucharest, ROMANIA
A. MOHAN, University of Oradea, ROMANIA

II.PO.16. Failure analysis of a titanium clavicle plate
F. VARLAN, I. ANTONIAC, R. BOLOLOI, G. DAN, B. GHIBAN, University Politehnica of Bucharest, ROMANIA
R. MARINESCU, D. LAPTOIU, Colentina Clinical Hospital, Orthopedic Department, Bucharest, ROMANIA

II.PO.17. Additively manufactured femoral stem topology optimization: case study
D. MUNTEANU, S. MUNTEANU, Transilvania University of Brasov, Material Science Department, Brasov, ROMANIA
B. GHEORGHIU, SC MIND FOUR D SRL, Brasov, ROMANIA
T. BEDO, M.A. POP, C. GABOR, D. CRISTEA, Transilvania University of Brasov, Material Science Department, Brasov, ROMANIA

II.PO.18. Comparative study of mechanical properties for the main brands of dental implants
M. STOICANESCU, E. BUZAMET, V. BUDEI, V. CRACIUN, R. BUDEI, Dentix Millennium SRL, Sabareni, jud. Giurgiu, ROMANIA

II.PO.19. Research of possible causes breaking of dental implants
M. STOICANESCU, E. BUZAMET, V. BUDEI, V. CRACIUN, R. BUDEI, Dentix Millennium SRL, Sabareni, jud. Giurgiu, ROMANIA

Section IV

IV.PO.1. Sintering under concentrated solar radiation of perovskite ceramics for electronic applications
I. APOSTOL, S.C. IPEE Amiral Trading Impex S.A., Curtea de Arges, ROMANIA
K. VENKATA SARAVANAN, Central University of Tamil Nadu, School of Basic and Applied Sciences, Physics Dept, Thiruvarur, INDIA
J. RODRÍGUEZ, I. CAÑADAS, J. GALINDO, CIEMAT- Plataforma Solar de Almeria, Tabernas, Almeria, SPAIN

IV.PO.2. Nanocomposites thin layers for dental implants functionalization, obtained by advanced laser deposition techniques
L. FLOROIAN, M. BADEA, D. CALAVER, Transilvania University of Brasov, ROMANIA
C. RISTOSCU, N. MIHAILESCU, I. NEGUT, I.N. MIHAILESCU, National Institute for Lasers, Plasma and Radiation Physics, Măgurele, ROMANIA
M. MOSCATELLI, N. PASTORI, G. CANDIANI, R. CHIESA, Politecnico di Milano, ITALY

IV.PO.3. Adhesion characterisation of complex ceramics thin layers deposited on metallic substrate
C. FLOREA, C. BEJINARIU, C. SAVIN, R. CIMPOESU, Technical University "Gheorghe Asachi" from Iași, Faculty of Material Science and Engineering, Iaşi, ROMANIA
B. ISTRATE, M. BENCHEA, Technical University "Gheorghe Asachi" from Iași, Faculty of Mechanical Engineering, Iaşi, ROMANIA

IV.PO.4. Comparative study of the adhesion of Ti-Me (Me = Al, Cu, Ag, Au) thin films on polymeric substrates, aiming biomedical applications
B. FREITAS, C. LOPES, A. FERREIRA, M.S. RODRIGUES, F. VAZ, Universidade do Minho, Centro de Física, Campus de Gualtar, Braga, PORTUGAL

IV.PO.5. Antifungal properties of magnetron sputtered zinc oxide thin films
D. COSTA, J. BORGES, M.F. MOTA, P. SAMPAIO, F. VAZ, Universidade do Minho, Centro de Física, Campus de Gualtar, Braga, PORTUGAL
D. COSTA, Centro de Biologia Molecular e Ambiental, Universidade do Minho, Campus de Gualtar, Braga, PORTUGAL

IV.PO.6. Thin films composed of metallic nanoparticles (Au, Ag) dispersed in AlN matrix: influence of metal concentration and thermal annealing on the plasmonic absorption band
R.P. DOMINGUES, M.S. RODRIGUES, D. COSTA, J. BORGES, F. VAZ, Centro de Física, Universidade do Minho, Campus de Gualtar, Braga, PORTUGAL
F.J. OLIVEIRA, R.F. SILVA, CICECO - Aveiro Institute of Materials, Department of Materials and Ceramic Engineering, UA, Aveiro, PORTUGAL
P. PEDROSA, N. MARTIN, Institut FEMTO-ST, UMR 6174 CNRS, Université Bourgogne Franche-Comté, Besançon, FRANCE
E. ALVES, Instituto de Plasmas e Fusão Nuclear, IST, Universidade de Lisboa, Lisboa, PORTUGAL
N.P. BARRADAS, Centro de Ciências e Tecnologias Nucleares, IST, Universidade de Lisboa, Bobadela LRS, PORTUGAL

IV.PO.7. The effect of iron on the corrosion of AlTiNiCu and AlTiNiCuFe equi-molar composition high entropy alloys
É. FAZAKAS, Á. VIDA, Bay Zoltán Nonprofit Ltd. for Applied Research, Engineering Division, Budapest, Hungary
Á. VIDA, Department of Materials Physics, Eötvös University Budapest, HUNGARY
Institute for Solid State Physics and Optics, Wigner Research Centre for Physics, Budapest, HUNGARY
J. MIKLÓS-KOVÁCS, Institute for Solid State Physics and Optics, Wigner Research Centre for Physics, Budapest, HUNGARY

IV.PO.8. Increasing wear resistance of power steering pump cam using Ni-Cr-Fe and Ni-Cr-B-Si-Fe coatings
C. STESCU, C. MUNTEANU, B. ISTRATE, M. BENCHEA, Gheorghe Asachi University of Iasi, Mechanical Engineering Department, Iasi, ROMANIA
D. LUCA, D. CHICET, Gheorghe Asachi University of Iasi, Materials Science and Engineering Department, Iasi, ROMANIA

IV.PO.9. Microstructural aspects of TBC`s deposited on internal combustion engine valve materials
M. PANȚURU, C. PAULIN, Ş. LUPESCU, C. MUNTEANU, Technical University of Iasi, Mechanical Engineering Department, Iasi, ROMANIA
D. CHICET, Technical University of Iasi, Materials Science and Engineering Department, Iasi, ROMANIA

IV.PO.10. Studies regarding the wear behavior of the braking mechanism
I. PETRE; A. POINESCU; A. CATANGIU, S. MIHAI, Valahia University of Targoviste, Faculty of Materials Engineering and Mechanics, Targoviste, ROMANIA

IV.PO.11. Surface characterization of MFe_2O_4 powder obtained by using olive oil as a surfactant agent
T. ROMAN, S. STANCIU, Gheorghe Asachi Technical University of Iasi, Faculty of Materials Science and Engineering, Iasi, ROMANIA
A. PUI, Department of Chemistry, "Alexandru Ioan Cuza" University of Iasi, Iasi, ROMANIA

IV.PO.12. Importance of post-processing for CVD graphene
B. ȚÎNCU, A. AVRAM, V. ȚUCUREANU, A. MATEI, C. MĂRCULESCU, T. BURINARU, B. BITA, F. COMĂNESCU, M. AVRAM, National Institute for Research and Development in Microtehnologies IMT-Bucharest, ROMANIA
V. ȚUCUREANU, Transilvania University of Brasov, Department of Materials Science, ROMANIA

IV.PO.13. New metallo-porphyrins: characterization and applications in solar energy conversion
L. OLTEANU, S. TEODORESCU, R.M. ŞTIRBESCU, I.D. DULAMĂ, A.I. BUCURICĂ, Valahia University of Targoviste, Institute of Multidisciplinary Research for Science and Technology, Targoviste, ROMANIA
R.M. ION, Valahia University of Targoviste, Materials Engineering and Mechanics Department, Targoviste, ROMANIA
National Institute for Research and Development in Chemistry and Petrochemistry - ICECHIM, Nanomedicine Research Group, Bucharest, ROMANIA

IV.PO.14. Nanostructured aniticorrosive hybrid materials obtained by PLD
M. BIRDEANU, A.V. BIRDEANU, M. VAIDA, National Institute for Research and Development in Electrochemistry and Condensed Matter, Timisoara, ROMANIA
A.V. BIRDEANU, National R&D Institute for Welding and Material Testing – ISIM Timişoara, ROMANIA
D.S. MILOVANOVIC, University of Belgrade, Vinca Institute of Nuclear Sciences, Belgrade, SERBIA
A. LASCU, A. PALADE, I. FRINGU, E. FAGADAR-COSMA, Institute of Chemistry Timisoara of the Romanian Academy, Timisoara, ROMANIA

IV.PO.15. Surface properties of laser treated arc-deposited claddings
A. OLAH, C. CROITORU, M. TIEREAN, Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

IV.PO.16. Preliminary results on effect of H_2S on P265GH commercial material for gas and petroleum transportation
M. ZAHARIA, S. STANCIU, R. CIMPOEȘU, C. NEJNERU, I. IONIȚĂ, C. SAVIN, N. CIMPOEȘU, Technical University "Gheorghe Asachi" of Iași, Faculty of Material Science and Engineering, Iaşi, ROMANIA

IV.PO.17. Combined fast laser texturing and HV of TiO_2 powder deposition surface engineering treatment for corrosion protection
A.V. BIRDEANU, I. A. PERIANU, National R&D Institute for Welding and Material Testing – ISIM Timişoara, ROMANIA
D.S. MILOVANOVIC, University of Belgrade, Vinca Institute of Nuclear Sciences, Belgrade, SERBIA
S. PETRONIC, Innovation Center, Faculty of Mechanical Engineering University of Belgrade, SERBIA
M. BIRDEANU, National Institute for Research and Development in Electrochemistry and Condensed Matter, Timisoara, ROMANIA

IV.PO.18. In-situ XRD vs ex-situ heat treatment of tantalum oxynitride thin films: Similarities and differences on the structural evolution
D. CRISTEA, T. BEDO, Materials Science Department, Transilvania University, Brasov, ROMANIA
M. APREUTESEI, P. STEYER, MATEIS Laboratory-INSA de Lyon, Villeurbanne, FRANCE
C. MOURA, L. CUNHA, Centro de Física, Universidade do Minho, Campus de Gualtar, Braga, PORTUGAL
F. VAZ, Centro de Física, Universidade do Minho, Campus de Azurém, Guimarães, PORTUGAL

IV.PO.19. Surface improvement of cold sprayed copper-alumina coating via friction stir processing
C. LANGLADE, A. ROMAN, E. AUBIGNAT, Université Bourgogne Franche Comté, France Laboratoire Interdisciplinaire Carnot de Bourgogne, Belfort, FRANCE
D. SCHLEGEL, ESTA, Belfort, FRANCE
M. FOLEA, Transilvania University of Brasov, Manufacturing Engineering Department, Brasov, ROMANIA

IV.PO.20. Structure and properties of biodegradable calcium phosphate coatings deposited by magnetron sputtering on biodegradable magnesium alloys
E. PLOPEANU, I. ANTONIAC, A. ANTONIAC, A. TAPOSU, R. BOLOLOI, University Politehnica of Bucharest, Faculty of Material Science and Engineering, Bucharest, ROMANIA
A. VLADESCU, National Institute for Optoelectronics–INOE 2000, Magurele, ROMANIA
A. MOHAN, University of Oradea, Faculty of Medicine, Oradea, ROMANIA

IV.PO.21. Functional coatings with protective properties deposited by cold spray technology
*A.O. MATEESCU, G. MATEESCU, "*Horia Hulubei" National Institute of Physics and Nuclear Engineering, Magurele, ROMANIA
A. BĂLAN, C. CEAUS, I. STAMATIN, University of Bucharest, Faculty of Physics, 3 Nano-SAE Research Centre, Magurele, ROMANIA
C. SAMOILĂ, D. CRISTEA, V. JINGA, D. MUNTEANU, Transilvania University of Brasov, Materials Science Department, Brasov, ROMANIA
D. URSUȚIU, Transilvania University of Brasov, Electronics and Computer Department, Brasov, ROMANIA

IV.PO.22. Improvement of the mechanical and tribological properties of the metallic materials by the surface nitriding in open atmosphere cold plasma surface treatment
*A.O. MATEESCU, G. MATEESCU, "*Horia Hulubei" National Institute of Physics and Nuclear Engineering, Magurele, ROMANIA
A. BĂLAN, C. CEAUS, I. STAMATIN, University of Bucharest, Faculty of Physics, 3 Nano-SAE Research Centre, Magurele, ROMANIA
C. SAMOILĂ, D. CRISTEA, V. JINGA, D. MUNTEANU, Transilvania University of Brasov, Materials Science Department, Brasov, ROMANIA
D. URSUȚIU, Transilvania University of Brasov, Electronics and Computer Department, Brasov, ROMANIA

Section V

V.PO.1. Composite materials for ibuprofen removal from water by catalytic ozonation
S.M. AVRAMESCU, A. OLARU, C. BRADU, A. NICA, University of Bucharest-PROTMED Research center, ROMANIA
R.C. FIERASCU, I. FIERASCU, C.A. NICOLAE, B. TRICA, The National Institute for Research & Development in Chemistry and Petrochemistry-ICECHIM, ROMANIA

V.PO.2. Activated carbon AC35 nanomaterial temperatures limits for solar adsorption cooling system using methanol as refrigerant
N. CHERRAD, Ouargla, Fac. des Sciences Appliquées, Dépt. Génie Mécanique and Laboratoire de Génie Energétique et Matériaux (LGEM), Université de Biskra, ALGERIA
A. BENCHABANE, Laboratoire de Génie Energétique et Matériaux (LGEM), Université de Biskra, ALGERIA
M. ABDELKRIM, A. BELLOUFI, Ouargla, Fac. des Sciences Appliquées, Dépt. Génie Mécanique, ALGERIA

V.PO.3. Conduction component of dielectric losses in ferroelectric phase of TGS
M. DAN, L. DAN, University of Bucharest, Faculty of Physics, Bucharest, ROMANIA
C.P. GANEA, National Institute of Materials Physics, Bucharest, ROMANIA
H.V. ALEXANDRU, University of Bucharest, Faculty of Physics, Bucharest, ROMANIA
Academy of Romanian Scientists, ROMANIA

V.PO.4. Magnetic material with nanosize dimensions: synthesis, characterization and testing
C.I. DRAGAN, E. MATEI, G. COMAN, A. M. PREDESCU, M. SOHACIU, A.C. BERBECARU, M.C. PANTELIMON, University Politehnica of Bucharest, ROMANIA

V.PO.5. A novel route for the preparation of $CoCr_2O_4/SiO_2$ nanocomposite starting from Co(II) - Cr(III) carboxylate complex combinations
E. BEREI, C. MUNTEAN, O. ȘTEFĂNESCU, M. ȘTEFĂNESCU, Politehnica University of Timișoara, ROMANIA
T. VLASE, West University of Timișoara, Chemistry Department, ROMANIA

V.PO.6. Removal of phenolic derivatives from water by crosslinked β-cyclodextrin
I. FIERASCU, R.C. FIERASCU, The National Institute for Research & Development in Chemistry and Petrochemistry-ICECHIM, ROMANIA
S.M. AVRAMESCU, A. OLARU, C. BRADU, A. NICA, C.A. NICOLAE, B. TRICA, University of Bucharest-PROTMED Research Center, ROMANIA

V.PO.7. Tuned apatitic materials: synthesis, characterization and potential applications
R.C. FIERASCU, I. FIERASCU, R. SOMOGHI, R.M. ION, The National Institute for Research & Development in Chemistry and Petrochemistry-ICECHIM, ROMANIA
A. MOANTA, CEPROCIM SA, Bucharest, ROMANIA
L.M. DITU, University of Bucharest, Microbiology Department, ROMANIA

V.PO.8. Photovoltaic performance enhancement of hydrothermally grown ZnO nanorods for dye sensitized solar cells: the effects of seed layer
D. GÜLTEKİN, H. AKBULUT, Sakarya University, Metallurgy and Materials Engineering Department, Esentepe Campus, TURKEY

V.PO.9. Graphene supported a-MnO_2 cathodes FOR Li-O_2 batteries
M. ALAF, Bilecik Seyh Edebali University, Engineering Faculty, Dept. of Metallurgy and Materials Engineering, Gulumbe Campus, TURKEY
F. KAYIS, U. TOCOGLU, H. AKBULUT, Sakarya University, Engineering Faculty, Dept. of Metallurgy and Materials Engineering, Esentepe Campus, TURKEY

V.PO.10. Influence of surfactants on the chemical synthesis of Cu-doped ZnO nanoparticles
A. MATEI, B. TINCU, C. ROMANITA, L. CERNICA, National Institute for Research and Development in Microtehnologies IMT-Bucharest, ROMANIA
V. TUCUREANU, National Institute for Research and Development in Microtehnologies IMT-Bucharest and Transilvania University of Brasov, Department of Materials Science, ROMANIA
B. BITA, National Institute for Research and Development in Microtehnologies IMT-Bucharest and Faculty of Physics, University of Bucharest, ROMANIA
L. DUMITRESCU, Transilvania University of Brasov, Product Design and Environment Faculty, ROMANIA

V.PO.11. Photovoltaic performance of ultrasmall Fe doping $CuCrO_2$ nanoparticles for P-type dye sensitized solar cells application
M. MICLAU, D. URSU, National Institute for Research and Development in Electrochemistry and Condensed Matter, ROMANIA

V.PO.12. Low-temperature hydrothermal synthesis of the copper metaborate CuB_2O_4
M. MICLAU, A. DABICI, B. TARANU, D. URSU, National Institute for Research and Development in Electrochemistry and Condensed Matter, ROMANIA

V.PO.13. Modulation of TVA deposition parameters for the Fe-Ni-Cu-Ta thin films interdiffusivity and GMR effect influence
F. MICULESCU, B. VASILE, C.M. COTRUT, A. PURCARU, M. MICULESCU, University Politehnica of Bucharest, ROMANIA
G.E. STAN, V. KUNCSER, National Institute of Materials Physics, Măgurele-Bucharest, ROMANIA
I. JEPU, C.P. LUNGU, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Măgurele, ROMANIA
T. MACHEDON-PISU, Transilvania University of Brasov, Materials Science and Engineering Faculty, ROMANIA

V.PO.14. Phyto-mediated metallic nano-architectures via Melissa Officinalis l.: Synthesis, characterization, cytotoxicity and antimicrobial properties
A. ORTAN, University of Agronomic Sciences and Veterinary Medicine, ROMANIA

R.C. FIERASCU, I. FIERASCU, University of Agronomic Sciences and Veterinary Medicine and The National Institute for Research & Development in Chemistry and Petrochemistry-ICECHIM, ROMANIA
S.M. AVRAMESCU, University of Agronomic Sciences and Veterinary Medicine and University of Bucharest-PROTMED Research center, ROMANIA
D. IONESCU, University of Agronomic Sciences and Veterinary Medicine and S.C. HOFIGAL EXPORT IMPORT S.A., Bucharest, ROMANIA
A. SUTAN, University of Pitesti, Faculty of Science, ROMANIA
L.M. DITU, University of Bucharest, Microbiology Department, ROMANIA

V.PO.15. Synthesis and characterization of CeO_2 doped ZrO_2 ceramics by a simple sol-gel route
U.H. ÖZER, K.E. ÖKSÜZ, A. ÖZER, Cumhuriyet University, Department of Metallurgical & Materials Engineering, TURKEY

V.PO.16. Solar radiation synthesis of functional carbonaceous materials using Al_2O_3/TiO_2-Cu doped catalyst
A. PASCU, E.M. STANCIU, I.C. ROATA, C. CROITORU, M.H. TIEREAN, Transilvania University of Brașov, Materials Science and Engineering Faculty, ROMANIA
I. HULKA, Politehnica University of Timișoara, ROMANIA
V.PO.17. Synthesis and characterisation of crednerite $CuMn_{1-X}B_XO_2$ (B=Mg, Al; x=0 - 0.08) type materials
M. POIENAR, P. SFIRLOAGA, P. VLAZAN, Institute for Research and Development in Electrochemistry and Condensed Matter, Timisoara, ROMANIA

V.PO.18. Development of broadband ultrasonic spectroscopy for colloidal suspensions characterization
M. SOARE, A.C. MOCANU, C. IORDACHE, S.C. Nuclear NDT Research&Services S.R.L, Department of Research, Development and Innovation, Bucharest, ROMANIA
M.V. PREDOI, University Politehnica of Bucharest, Department of Mechanics, Research Center in Mechanics of Systems, Bucharest, ROMANIA
D. PREDOI, C.S. CIOBANU, National Institute of Materials Physics, Laboratory of Multifunctional Materials and Structures, Măgurele-Bucharest, ROMANIA

V.PO.19. Nanoaggregates obtained from eco-friendly silver nanoparticles and phthalocyanine derivatives
A.A. SORESCU, R.M. ION, Valahia University of Targoviste, Material Science Department, Targoviste and The National Research&Development Institute for Chemistry and Petrochemistry - ICECHIM, Bucharest, ROMANIA
A. NUŢĂ, The National Research&Development Institute for Chemistry and Petrochemistry - ICECHIM, Bucharest and The Romanian Academy "Stefan S. Nicolau" Institute of Virology, Bucharest, ROMANIA
I.R. ŞUICĂ-BUNGHEZ, C.L. NISTOR, R.C. FIERĂSCU, The National Research&Development Institute for Chemistry and Petrochemistry - ICECHIM, Bucharest, ROMANIA

V.PO.20. The use of gooseberry and chokeberry fruits for the synthesis of metallic (Au, Ag, Pt) nanoparticles
I.R. SUICA-BUNGHEZ, National R&D Institute for Chemistry and Petrochemistry – ICECHIM, Bucharest, ROMANIA
N. NWAHARA, Rhodes University, Department of Chemistry, Grahamstown, SOUTH AFRICA
S. TEODORESCU, N. STIRBESCU, R.M. STIRBESCU, Multidisciplinary Science and Technology Research Institute of Valahia University of Targoviste - ICSTM-UVT, Targoviste, ROMANIA
R.M. ION, National R&D Institute for Chemistry and Petrochemistry – ICECHIM, Bucharest and Valahia University of Targoviste, ROMANIA

V.PO.21. Removal of heavy metals from single-and binary-metal aqueous solutions using hydroxyapatite nano-adsorbents
C. TARDEI, D. TALPEANU, F. CLICINSCHI, National Institute for R&D in Electrical Engineering ICPE-CA, Bucharest, ROMANIA
C.M. SIMONESCU, C. ONOSE, University POLITEHNICA Bucharest, Faculty of Applied Chemistry and Materials Science, Bucharest, ROMANIA

V.PO.22. Si@void@carbon yolk-shell anodes for lithium ion batteries
U. TOÇOĞLU, F. KAYIŞ, H. AKBULUT, Sakarya University, Metallurgical and Materials Department, TURKEY
M. ALAF, Bilecik Şeyh Edebali University, Metallurgical and Materials Department, TURKEY

V.PO.23. Controlling self-assembling and thermochromism of polydiacetylene/zinc oxide nanocomposite by varying PH
N. TRAIPHOL, S. SEETHA, Laboratory of Advanced Chromic Materials, Department of Materials Science, Faculty of Science, Chulalongkorn University, THAILAND

V.PO.24. Properties of the yellow emitting phosphors for white LED manufacturing
V. TUCUREANU, National Institute for Research and Development in Microtehnologies IMT-Bucharest and Transilvania University of Brasov, Department of Materials Science, ROMANIA
A. MATEI, A. AVRAM, M.C. POPESCU, I. MIHALACHE, M. DANILA, M. AVRAM, C.V. MARCULESCU, B.C. TINCU, T. BURINARU, National Institute for Research and Development in Microtehnologies IMT-Bucharest, ROMANIA
M. VOLMER, Transilvania University of Brasov, Electrical Engineering and Applied Physics Department, ROMANIA
D. MUNTEANU, Transilvania University of Brasov, Department of Materials Science, Materials Science and Engineering Faculty, ROMANIA

V.PO.25. Influence of CdS loading upon type PdS/CdS-ZnS photocatalysts
D. URSU, R. BANICA, C. MOSOARCA, M. MICLAU, P. SVERA, National Institute for Research and Development in Electrochemistry and Condensed Matter, Timisoara, ROMANIA

V.PO.26. Low-cost synthesis of PdS /Zn1-xCdxS using battery industry waste
D. URSU, P. SVERA, C. MOSOARCA, M. MICLAU, R. BANICA, National Institute for Research and Development in Electrochemistry and Condensed Matter, Timisoara, ROMANIA

V.PO.27. Biosynthesis of zinc oxide nanoparticles using enterobacter
I.GHIUȚĂ (POPESCU), D. CRISTEA, D. MUNTEANU, Transilvania University of Brasov, Material Science Department, Materials Science and Engineering Faculty, ROMANIA
I. VYRIDES, Cyprus University of Technology, Department of Environmental Science and Technology, CYPRUS
A. ANAYIOTOS, Cyprus University of Technology, Department of Mechanical and Materials Science and Engineering, CYPRUS

Section VII

VII.PO.1. Vision of safety – research about fire resistance of materials
A. OLAH, A.B. PUIU, P.L. CONDREA, Transilvania University of Brasov, ROMANIA

Hall G

9.30–19.00: Exhibitions (*Namicon, Olympus, Innovatest, Sartorom, Standard Service, Medist Life Science, Leica Microsystems*)

ARO night bar

20.00: Gala dinner

Saturday, 11.03.2015

Main Hall A

9.30: Closing Ceremony, Poster Awards

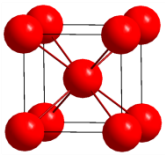
Hall G

9.00–13.00: Exhibitions (*Namicon, Olympus, Innovatest, Sartorom, Standard Service, Medist Life Science, Total Spectrum*)

10.00: Sightseeing program meeting, 41A Iuliu Maniu Str., Brașov

11.00: Visit of Bran castle

13.30: Picnic in Bran



Advanced Metallic, Ceramic and MMC Composite Materials and Technologies-C08
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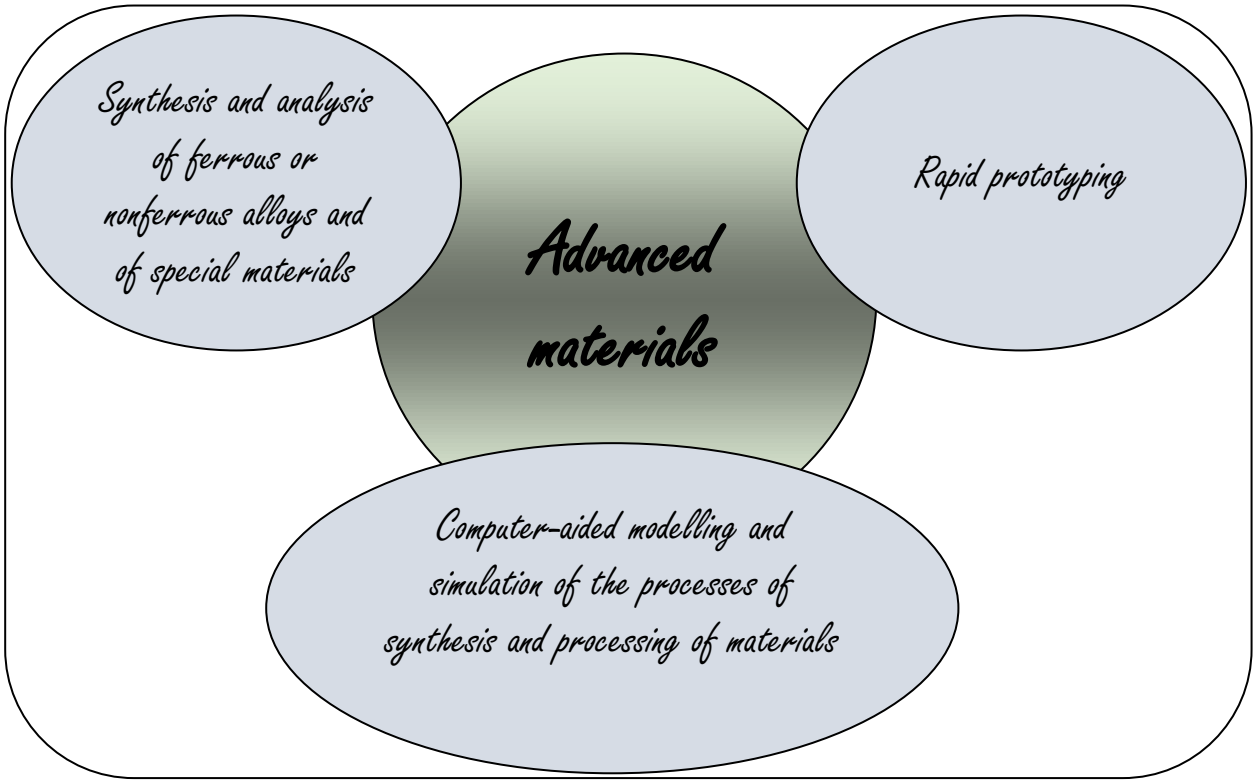
The R&D Topics of Advanced Metallic, Ceramic and Composite Materials and Technologies – C08



Research scope and aims:

- Development of advanced materials research activities, in full accordance with the interests and needs required by materials science;
- synthesis of advanced metallic, ceramic and composite materials;
- engineering of surfaces (synthesis of thin layers, generation of special surfaces using various technologies, characterization of their properties);
- characterization of materials;
- computer-aided modelling and simulation of the processes of synthesis and processing of materials.

The research activity of the team was always performed in collaboration with similar research groups in the country and abroad. Over 25 national Universities, Research Institutes, Economic Enterprises and over 17 international Universities, Research Institutes, Economic Enterprises were permanent or regular collaborators in solving common themes.

The research infrastructure used, always adapted to requirements, was supplemented by acquisitions provided by the funding of the conducted research contracts. This was considerably enriched by the construction of the ICDT institute of the Transilvania University of Brasov, which the C08 laboratory is part of.

AWET ADVANCED WELDING eco TECHNOLOGIES
DEVELOPEMENT
• Development of robotized welding/ cladding and thermal cutting technologies;
Hybrid materials synthesis
•Elaboration of metallization /thermal spraying technologies;
• Technologies of polymers synthesis, characterization and recycling.
Materials Engineering
AWET
Welding
RESEARCH
in the field of
• Welding, brazing, cutting and cladding;
Materials processing using LASER technology;
• Products reconditioning using welding/ cladding/brazing processes;
• Automation, mechanized and robotized welding and interfacing processes;
LASER processing
Cutting
SEVICES
• Technical expertise on welded joints, structures and work accidents;
• Determination of physicochemical integrity and mechanical characteristics of welded joints and structures;
• Evaluation of welded structures lifespan (fracture mechanics approach for assessing modern concepts, the design guidelines and standards to brittle fracture).
WELDING
not only sparks and lights
TRANSILVANIA UNIVERSITY OF BRAȘOV
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Transilvania University - Brașov, ROMANIA
Materials Science and Engineering Faculty
Bachelor studies

Master's studies

ENGINEERING AND MANAGEMENT OF ADVANCED METALLIC, CERAMIC AND COMPOSITE MATERIALS

WELDING ENGINEERING OF ADVANCED MATERIALS

OCCUPATIONAL SAFETY AND HEALTH ENGINEERING

Doctoral studies

MATERIALS ENGINEERING

INDUSTRIAL ENGINEERING

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