



Program

EUROPEAN CONFERENCE

Junior Euromat 2004

September 6 - 9, 2004, LAUSANNE, SWITZERLAND



JUNIOR
EURO
MAT
2004

Sponsored by

The Federation of European
Materials Societies (FEMS)

Organized by

Deutsche Gesellschaft für
Materialkunde e.V. (DGM)

Organizing Society

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Conference Location

Université de Lausanne
(UNIL)
Collège Propédeutique 01
CH-1015 Lausanne

Conference Office

The conference office will be
located in the foyer of the lec-
ture hall.
Conference Phone:
+41-21-692 2347
Conference Fax:
+41-21-692-2547
Opening times:
• Sunday, Sept. 5, 2004
15.00 to 18.00 h
• Monday through Thurs-
day along the confe-
rence program

Program Manager

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Conference Secretariat

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Transport Facilities

No special shuttle service to
the UNIL will be arranged.
There is a metro line connec-
ting the UNIL with downtown
Lausanne and the center of
Renens. The stop is called
UNIL Sorge.

A welcome by the
President of FEMS

Dear conference participant,

welcome to Lausanne, welco-
me to JUNIOR EUROMAT
2004, a FEMS-event which is
held in Lausanne at the site
of the University of Lausanne
and of the Swiss Federal In-
stitute of Technology Lau-
sanne (EPFL).

Conferences are a unique
tool for information exchange.
In this respect JUNIOR EU-
ROMAT is special; it is orga-
nized like a summer school
with its informal atmosphere
which should help young sci-
entists and engineers to be at
ease at their often first confe-
rence. Despite this relaxed at-
mosphere JUNIOR EURO-
MAT is a highly professional
conference. This year's JUNI-
OR EUROMAT is formed of
13 topics covering virtually
every aspect of MSE, from
nano to bio, from mechanical
and physical properties to
processing, etc.

It is also a truly international
conference. There will be
some 240 presentations and
as many participants, coming
from 30 countries. In the
opening ceremony, the plena-
ry lecture will be presented by
Prof. C. Humphreys from
Cambridge University and on
Wednesday, materials engi-
neers from industry will pre-
sent themselves and their
company and
discuss with the participants.

The success of this confe-
rence series which started in
1992 seems to show that the
concept which is due to
FEMS and to Dr. Peter
Schepp from the German Ma-
terials Society (DGM) satis-
fies a real need. In the name
of the Executive Committee
of FEMS I would like to thank
Dr. Schepp and his collabora-
tors for their high quality work
in organizing this event.
Financial support from the
German Science Foundation
is gratefully acknowledged; it
helped making the attendan-
ce of students from Central
and Eastern Europe affor-
dable.

I wish you all a very inte-
resting and successful mee-
ting.

Prof. W. Kurz
President of FEMS

FEMS, the Federation of Eu-
ropean Materials Societies
actively promotes Materials
Science and Engineering
www.fems.org



GENERAL INFORMATION

The Federation of European Materials Societies (FEMS)

President

Wilfried Kurz

Schweizerischer Verband für die Materialtechnik, Lausanne, CH

Vice-President

Robert F. Singer

Deutsche Gesellschaft für Materialkunde, Frankfurt, D

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FEMS member societies

Austria:

• The Austrian Society for Metallurgy

Belgium:

• Benelux Métallurgie

Czech Republic:

• Czech Society for New

Materials and Technologies,

• Metal Science Society of the

Czech Republic

Denmark:

• Danish Metallurgical Society

Estonia:

• Estonian Materials Science Society

France:

• Société Française de

Métallurgie et de Matériaux

Germany:

• Deutsche Gesellschaft für

Materialkunde e.V.,

• Deutscher Verband für

Materialforschung und

-prüfung

Greece:

• Hellenic Society for the Science and Technology of

Condensed Matter

Hungary:

• Országos Magyar

Bányászati

és Kohászati Egyesület

Italy:

• Associazione Italiana di

Metallurgia

Latvia:

• Latvian Materials Research Society

Lithuania:

• Lithuanian Materials Research Society

The Netherlands:

• Bond voor Materialenkennis

Norway:

• Norsk Metallurgisk Selskap

Poland:

• Polskie Towarzystwo Materialonawcze

Portugal:

• Sociedade Portuguesa de Materiais

Slovak Republic:

• Society for New Materials and Technologies in Slovakia

Slovenia:

• Slovensko Društvo Za Materiale

ria

Spain:

• Sociedad Espaniola de Materiales

Sweden:

• Svenska Föreningen för Materialteknik

United Kingdom:

• Institute of Materials, Minerals and Mining

GENERAL INFORMATION

The New Conference Format:

Oral Poster Presentation

For the second time, JUNIOR EUROMAT will be organized as a poster conference, i. e. all the contributions will be on display as posters. The poster authors have been invited to introduce their poster orally in the lecture hall (2-3 minutes each) using 1-2 transparencies. After the oral session, the authors will be available for discussion in front of the poster panels. The sessions will be opened by keynote lectures. 185 authors out of 250 will present their poster orally.

Origin of Participants (26 Aug 2004)

	<u>Participants</u>
Algerien	2
Austria	7
Belgium	5
Brasilien	1
Bulgaria	3
China	1
Czech Republic	40
France	5
Germany	34
Georgien	2
Great Britain	15
Hungary	10
Iran	1
Israel	3
Italy	7
Japan	3
Latvia	7
Mexico	1
Netherlands	3
Pakistan	1
Poland	11
Portugal	3
Romania	21
Russia	18
Slovakia	15
Spain	3
Switzerland	11
Turkey	3
Ukraine	14
USA	3
Total	253



OVERVIEW

Time	SUNDAY
15.00 - 18.00	Registration at the conference office (Collège Propédeutique)
	MONDAY
10.00 - 12.00 13.30 - 14.30	<ul style="list-style-type: none"> • Registration at the conference office • Welcoming Address; Invited Speaker
14.30 - 18.00	<ul style="list-style-type: none"> • Presentation of Posters of the Topics: C, H, M
19.00 - 21.00	<ul style="list-style-type: none"> • Welcoming Reception at EPFL
	TUESDAY
9.00 - 12.30	<ul style="list-style-type: none"> • Keynote • Presentation of Posters of the Topic: E, N
14.30 - 18.00	<ul style="list-style-type: none"> • Presentation of Posters of the Topics: F, G, N
20.00 - open end	<ul style="list-style-type: none"> • Festival on the Beach
	WEDNESDAY
9.00 - 12.30	<ul style="list-style-type: none"> • Keynote • Presentation of Posters of the Topics: B, L, I
14.30 - 18.30	<ul style="list-style-type: none"> • Industry Speakers • Podium Discussion
18.30 - 21.00	<ul style="list-style-type: none"> • Networking with Industry Speakers
	THURSDAY
9.00 - 12.30	<ul style="list-style-type: none"> • Keynote • Presentation of Posters of the Topics: A, D, K
14.00	<ul style="list-style-type: none"> • Best Presentation Award
16.20	<ul style="list-style-type: none"> • End of the Conference



OPENING

Time	Lecture Hall B
Sunday 15.00 - 18.00	Authors and participants have the possibility for early registration
10.00 - 12.00	Registration at the conference office for all authors and participants
	Time to fix the Poster in Poster Area I for the Topics C, H, M
	Time to fix the Poster in Poster Area II for the Topics E, N
12.00 - 13.30 Lunch	
13.30	Opening Address
	W. Kurz, EPFL <i>President of FEMS</i>
13.45 - 14.30	Invited Speaker
	The Magic of Materials C. Humphreys, University of Cambridge, UK



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area I
	Topic C Corrosion, Wear, Biocompatibility Chair: P. P. Schepp, Deutsche Gesellschaft für Materialkunde e.V., Frankfurt, Germany
14/C01	Improvement in Corrosion Resistance of Low-Alloyed Chromium by Thermo-Chemical Treatment O. Tsursumia (Sp), O. Mikadze, B. Bulia, Georgian Technical University, Tbilisi (Georgia)
26/C02	The Influence of Concentrated Solar Radiation on Corrosion Properties of SiC Composites O. Subotina (Sp), A. Umansky, A. Panasyuk, I. Podchernyaeva, I. Neshpor, National Technical University of Ukraine, Kiev (Ukraine)
31/C03*	Influence of Ceramic Particles Reinforcement on the Corrosion Resistance of AK12 Alloy K. Luczak (Sp), J. Sleziona, Silesian University of Technology, Katowice (PL)
35/C04	Corrosion Resistant Iron Alloys Obtained through Recycling S. Cimpian (Sp), L. Marginean, I. Marginean, University Politehnica Bucuresti (Ro)
75/C05	Laboratory Investigation of Dry Sliding Wear For AiSi 420B R. Venturini (Sp), S. Baragiola, C. Mapelli, Politecnico di Milano (I)
80/C06	Aminosilica Bonded Triazines. First Look at the New Class of Hybrid Composites M. Mizerski (Sp), I. Piwonski, University of Lodz (PL); J. Kolesinska, K. Jastrzabek, Technical University of Lodz (PL)
92/C07	Investigation on the Arc Erosion Behavior of AgMeO and AgNi Composites N. Jeanvoine (Sp), F. Mücklich, Universität des Saarlandes, Saarbrücken (D)
117/C08	Bioactivity of the Biogenic Hydroxyapatite and Composite Materials on Its Basis L. Ivanchenko (Sp), N. Pinchuk, National Ukrainian Academy of Sciences, Kiev (Ukraine); V. Sulima, L. Panchenko, Institute of Traumatology and Orthopedy of Medical Science Academy of Science of Ukraine, Kiev (Ukraine)
	* = no oral presentation



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area I
	Topic C Corrosion, Wear, Biocompatibility Chair: P. P. Schepp, Deutsche Gesellschaft für Materialkunde e.V., Frankfurt, Germany
132/C09	Influence of Organic Additives in Steel Pickling Baths L.M. Fernández Diaz (Sp), T. Appel, O. Bendick, C. Ostwald, ThyssenKrupp Stahl AG, Dortmund (D)
294/C10	Penetration of Solid Particles Into Liquids P. Kaali (Sp), O. Verezub, G. Kaptay, University of Miskolc (H)
303/C11*	Corrosion Behaviour of Some Ternary Titanium Alloy in Aggressive Environment C. Vasilescu (Sp), M.V. Popa, E. Vasilescu, P. Drob, Institute of Physical Chemistry, Bucharest (Romania); S. Ivanescu, Institute for Non-Ferrous and Rare Metals, Bucharest (RO)
315/C12*	Corrosion Resistance of Composite Obtained by TiN Thin Films on Metallic Substrate R. Zamfir (Sp), A. Zamfir, C. Cotrut, C. Mola-gic, Politehnica University of Bucharest (RO)
327/C13	Tribological Behaviour of Titanium Carbide Thin Films G. Bregliozzi (Sp), S.I.-U. Ahmed, H. Haefke, CSEM, Neuchatel (CH)
	* = no oral presentation



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area I
	<p>Topic H</p> <p>Processing: Casting, Rolling, Extrusion, Powder Technology, Machining, Joining</p> <p>Chair: P. P. Schepp, Deutsche Gesellschaft für Materialkunde e.V., Frankfurt, Germany</p>
19/H01	<p>The Effect of Powder Size on Mechanical Properties of P/M Ni-Base Superalloy Components</p> <p>A.V. Vostrikov (Sp), G. Garibov, T. Gorbunova, All-Russia Institute of Light Alloys (VILS) Stock Co., Moscow (Russia)</p>
33/H02	<p>Direct Synthesis of Pyrochlores Y₂(Ti_{1-y}Zr_y)₂O₇ Prepared at Room Temperature by Mechanical Milling</p> <p>K.J. Moreno Bello (Sp), A.F. Fuentes, CINVESTAV del IPN, Saltillo, Coahuila (Mexico)</p>
34/H03	<p>Peculiarities of TiC-VC Based Cermets Production Technology</p> <p>T. Hrebenok (Sp), L.G. Bodrova, Ternopil State Technical University (Ukraine)</p>
74/H04	<p>Study of Stainless Steel Extrusion</p> <p>C. Tagliabue (Sp), S. Baragiola, Politecnico di Milano (I)</p>
96/H05	<p>Towards the Design and Optimization of Sintering Aided by Electric Current for High Melting Point Materials</p> <p>B. McWilliams (Sp), A. Zavaliangos, Drexel University, Philadelphia (USA)</p>
99/H06*	<p>The Influence of Compaction Pressures and Infiltration Process by Copper on the Mechanical Properties of Sintered AiSi 316L Austenitic Stainless Steel</p> <p>M. Hebda (Sp), Cracow University of Technology, Krakow (PL)</p>
127/H07	<p>Mechanical Anisotropy of AZ-Magnesium Alloys After Hydrostatic and Direct Extrusion</p> <p>J. Swiostek (Sp), D. Letzig, K.U. Kainer, GKSS-Forschungszentrum Geesthacht GmbH (D)</p>
145/H08	<p>Influence of Feedstock Quality on the Rolling Behavior of Different Magnesium Wrought Alloys</p> <p>M.R. Nürnberg (Sp), D. Letzig, K.U. Kainer, GKSS Forschungsz. Geesthacht GmbH (D)</p>
	* = no oral presentation

Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area I
	<p>Topic H</p> <p>Processing: Casting, Rolling, Extrusion, Powder Technology, Machining, Joining</p> <p>Chair: P. P. Schepp, Deutsche Gesellschaft für Materialkunde e.V., Frankfurt, Germany</p>
166/H09*	<p>Driving Forces For Columnar-abnormal Grain Growth In Non-oriented Electrical Steels</p> <p>V. Petrychka (Sp), F. Kovac, Slovak Academy of Sciences, Kosice (SK)</p>
172/H10	<p>Grain Size Effect on Mechanical Properties of Profiles Prepared by Compaction of Fine Al Powders</p> <p>M. Balog (Sp), J. Nagy, SAS, Bratislava (SK)</p>
207/H11*	<p>Influence Of Preliminary Hydrogen-thermal Treatment Of Si₃N₄ Powder On Its Structure, Compacting And Sintering</p> <p>V. Panashenko (Sp), National Academy of Science, Kiev (Ukraine); N. Danilenko, V. Solutsev, Frantsevich Institute for Problems of Materials Science NAS, Kiev (Ukraine)</p>
268/H12	<p>Influence of Sequential Processing of Continuous Cast Carbon and Nb-microalloyed Steels on Structure and Properties</p> <p>J. Hornik (Sp), P. Zuna, CTU in Prague (CZ)</p>
300/H13	<p>Thermal Stability of Fine Grain Obtained by Compressive Torsion Processing</p> <p>Y. Kume (Sp), M. Kobashi, N. Kanetake, Nagoya University (JP)</p>
325/H14	<p>Welding of High-Carbon Steel Ribbons</p> <p>A. Magasdi (Sp), Budapest University of Technology and Economics (Hungary); J. Dobranszky, Research Group of Metals Technology of the Hungarian Academy of Sciences, Budapest, (H)</p>
344/H15	<p>Metal Injection Moulding of Microstructured Tungsten Components for Heat Transfer Promoters in a Helium-Cooled Divertor</p> <p>B. Zeep (Sp), V. Piottter, R. Ruprecht, J. Hauselt, T. Gietzelt, Forschungszentrum Karlsruhe (D)</p>
347/H16	<p>Micro Precision Powder Injection Moulding of Optical Ferrules Made of Zirconia Ceramics</p> <p>M. Beck (Sp), V. Piottter, R. Ruprecht, J. Hauselt, Forschungszentrum Karlsruhe, Eggenstein-Leopoldshafen (D)</p>
	* = no oral presentation

Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area I
	<p>Topic M Biomimetic and Bioinspired Approaches; Biofunctional Materials Chair: P. P. Schepp, Deutsche Gesellschaft für Materialkunde e.V., Frankfurt, Germany</p>
234/M08	<p>Fabrication of Bio-inspired Ceramic Composites C. Fritscher (Sp), H. Lichtenegger, J. Stampfl, N. Hüsing, R. Liska, S. Seidler, Vienna University of Technology, Wien (A)</p>
277/M09	<p>Biomimetic Routes to Silica with Controlled Structure and Form G. Tilburey (Sp), D. Belton, S. Patwardhan, C.C. Perry, The Nottingham Trent University (UK)</p>
302/M10*	<p>In Vitro Corrosion Resistance of Some Biomaterials C. Vasilescu (Sp), M.V. Popa, E. Vasilescu, P. Drob, Institute of Physical Chemistry, Bucharest (RO); S. Ivanescu, Institute for Non-Ferrous and Rare Metals, Bucharest (ROa); I. Demetrescu, D. Ionita, Politehnica University, Bucharest (RO)</p>
	<p>Discussion in front of the Poster Panels of Poster Area I (Topics: C, H, M)</p>
18.15	Dismantling Time for Poster Area I
19.00	Welcoming Reception at the EPFL (page 55)
	* = no oral presentation



Time / Abstr.No /Poster No.	Lecture Hall B
8.30	<p>Time to fix the Posters in Poster Area II for the Topics E, N</p> <p>Time to fix the Posters in Poster Area I for the Topics F, G, N</p>
9.00 - 9.20	<p>Poster-Award-Winner EUROMAT 2003</p> <p>New Materials and Concepts for Nano Transistors J.K. Efavi, M.C. Lemme, H.D.B. Gottlob, T. Mollenhauer, T. Wahlbrink, H. Kurz Aachen, Germany</p>
	<p>The unprecedented advances of CMOS device technology for the past decades have been based on the use of bulk-Si, poly-Si, and silicon dioxide that enabled scaling of device geometric dimensions to improve performance. In the near future, however, their use is limited and it has become inevitable to integrate new materials and device concepts in order to continue the aggressive scaling of CMOS into the nanometer regime in line with semiconductor international association SIA road map [1].</p> <p>The need to integrate new materials is the result of: high gate leakage current, boron penetration in p-MOSFET, poly-silicon gate depletion and channel mobility issues for submicron devices [2]. Elimination of these device problems requires the introduction of new materials such as high-k dielectrics, metallic gate electrodes and strained silicon that can provide equivalent operational reliability [3].</p> <p>The introduction of new materials requires new device concepts (Finfet, Tri-gate, Double gate FET built on silicon-on-insulator) since conventional planar MOSFTs suffer from severe short channel effects (SCE) in nano-transistors [3].</p> <p>In this presentation, emerging and promising high-k materials, metal gate electrodes together with novel non-planar device structures are discussed. Integration related challenges as well as efforts to overcome them are addressed.</p>



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area II
	<p>Topic E</p> <p>Metals: Al-, Mg-, Ti-, Ni-Alloys, Steel, Inter-metallics, MMCS, Foams</p> <p>Chair: J. Efavi, AMO GmbH, Aachen (Germany)</p>
11/E01	<p>Oxygen Induced Quasi-Brittle Intergranular Fracture during High Temperature Fatigue Loading of the Nickel-Base Superalloy IN718</p> <p>P. Wagenhuber (Sp), U. Krupp, H.-J. Christ, Universität Siegen (D)</p>
17/E02	<p>Fabrication of Ultrafine-Grained Al-Fe-Mn-Si Sheets by Accumulative Roll Bonding</p> <p>P. Homola (Sp), M. Slámová, VUK Panenske Brezany, s.r.o., Odolena Voda (CZ); M. Karlík, Czech Technical University in Praha, (CZ)</p>
32/E03*	<p>Determination of RuAl Phase Boundaries in Ru-Al Phase Diagram from Room Temperature to 1200°C</p> <p>H. Gobran (Sp), K.W. Liu, F. Mücklich, Universität des Saarlandes, Saarbrücken (D)</p>
40/E04	<p>On the Mechanical Response of Non-Stable Microstructures</p> <p>K. Muszka (Sp), J. Majta, A. Bator, AGH University of Science and Technology, Krakow (PL)</p>
42/E05	<p>Hot Deformation and Microstructure of a Particle Reinforced Titanium Alloy</p> <p>M.C. Poletti (Sp), Technische Universität Wien (A); W. Marketz, BÖHLER Schmetedetechnik GmbH & CoKG, Kapfenberg (A); H.P. Degischer, Technische Universität Wien (A)</p>
62/E06	<p>Formation of the Fractal Structures in Al-Sc, Al-Hf, Al-Zr Alloys by the Rapid Quenching from the Liquid State</p> <p>O. Segida (Sp), A.L. Berezina, K.V. Chuistov, V.K. Nosenko, G.V. Kurdyumov Institute for Metal Physics NASU, Kiev 142 (Ukraine); U. Schmidt, Martin-Luther-Universität, Halle (D); A.V. Kotko, G.V. Kurdyumov Institute for Metal Physics NASU, Kiev 142 (Ukraine)</p>
	* = no oral presentation

Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area II
	<p>Topic E</p> <p>Metals: Al-, Mg-, Ti-, Ni-Alloys, Steel, Inter-metallics, MMCS, Foams</p> <p>Chair: J. Efavi, AMO GmbH, Aachen (Germany)</p>
68/E07	<p>Precipitation and Spheroidization of Si in Al-Si-Alloys Affect the Thermal Expansion</p> <p>F. Lasagni (Sp), H.P. Degischer, Technische Universität Wien (A); M. Papakyriacou, ARC Leichtmetallkompetenzzentrum Ranshofen GmbH (A); J.A. Vivas Hohl, Universidad Tecnológica Nacional, Plaza Huinca (Argentina)</p>
86/E08	<p>The Experimental and Theoretical Assessment of Thermodynamic Database for the Free Solders</p> <p>J. Vizdal (Sp), Brno University of Technology (CZ); A. Zemanova, V. Buchtova, Masaryk University, Brno (CZ); A. Kroupa, AS CR, Brno (CZ); J. Vrestal, Masaryk University, Brno (CZ)</p>
100/E09	<p>Thermo-Mechanical Processing of TRIP Steel with Niobium</p> <p>L. Skalova (Sp), D. Jandová, University of West Bohemia in Pilsen, Plzen (CZ)</p>
107/E10	<p>The Al-C System at the Pressure of 8 GPa and a Diamond Synthesis</p> <p>A. Garan (Sp), V. Tukevich, O. Kulik, I. Petrusha, The National Academy of Sciences of Ukraine, Kiev (Ukraine)</p>
126/E11*	<p>Development of Ni – (Al, Cr) - Base Inter-metallic Alloys</p> <p>D. Logacheva (Sp), A. Logunov, Moscow Institute of Steel and Alloys (Russian Federation); A. Logacheva, Open Joint Stock Company „KOMPOZIT“, Korolev (Russia); V. Portnoy, Moscow Institute of Steel and Alloys (Russia); I. Razumovskii, Open Joint Stock Company „KOMPOZIT“, Korolev (Russia)</p>
129/E12*	<p>Thermophysical Description of Steels Behaviour with Help of DTA(Differential Thermal Analysis) - Method</p> <p>B. Smetana (Sp), J. Dobrovska, P. Kozelsky, VSB-Technical University of Ostrava (CZ)</p>
	* = no oral presentation

Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area II
	<p>Topic E</p> <p>Metals: Al-, Mg-, Ti-, Ni-Alloys, Steel, Inter-metallics, MMCs, Foams Chair: J. Efavi, AMO GmbH, Aachen (Germany))</p>
141/E13	<p>Microstructure and Mechanical Properties of Al₂O₃ Particle Reinforced TiAl-based Matrix Composites L. Ondrus (Sp), Slovak Academy of Sciences, Bratislava (SK)</p>
151/E14	<p>Molecular Dynamics Simulation of Glass Forming Ability (GFA) in Zn-Mg-X (X = Ca, Cu, B) System C. Ayas (Sp), H. Mekhrabov, V. Akdeniz, Middle East Technical University, Ankara (Turkey)</p>
164/E15*	<p>The Effect of Long-Term Annealing on Microstructural Changes in Waterwalls M. Jedinakova (Sp), A. Vrostkova, Slovak Academy of Sciences, Kosice (SK)</p>
169/E16	<p>Influence of Ti on the Formation of Fe₅₀Al_{50-x}Ti_x Alloys under Mechanical Alloying S. Fedotov (Sp), All-Russian Research Institute of Automatics, Moscow (Russian Federation)</p>
174/E17	<p>Functional Properties of CuAlNi Shape Memory Alloys Produced by Melt-Spinning E. Unterweger (Sp), G. Lojen, A. Kneissl, University of Leoben (A)</p>
179/E18	<p>Anisotropy of Aluminium Foam M. Nosko (Sp), F. Simancik, K. Mullerova, Slovak Academy of Science, Bratislava (SK)</p>
182/E19	<p>Effect of Chemical Composition on the Foaming of Al Alloys K. Müllerová (Sp), F. Simancik, M. Nosko, IMMM SAS, Bratislava (SK)</p>
198/E20*	<p>Frozen Bearing Steels C.-G. Vladioiu (Sp), V. Bulancea, I. Alexandru, D. Condurache, Technical University „Gh. Asachi“, Iasi (Romania)</p>
	* = no oral presentation

Time / Abstr.No	Lecture Hall B and Poster Area II
	<p>Topic E</p> <p>Metals: Al-, Mg-, Ti-, Ni-Alloys, Steel, Inter-metallics, MMCs, Foams Chair: J. Efavi, AMO GmbH, Aachen (Germany))</p>
211/E21	<p>Effect of Sliding Wear Contact on Tribocorrosion Behavior of Stainless Steel 304L in Ringer's Solution F. Bratu (Sp), University of Galati (RO); A. Berradja, J.-P. Celis, Katholieke University Leuven (B); L. Benea, University of Galati (RO)</p>
220/E22*	<p>Methods about the Magnesium Modification of the Cast Irons I. Milosan (Sp), Transilvania University of Brasov (Romania); A. Crisan, I. Ciobanu, „Transilvania“ University of Brasov (Romania); M.M. Milosan, Bearings Manufacturing & Trading Company Brasov (Romania); D.O. Bendei, University of Exeter (UK)</p>
248/E23	<p>Secrets of the Damascus Steel I. Kientzl (Sp), G. Szocs, L. Nemeth, S. Arvay, Budapest University of Technology and Economics (H); J. Dobranszky, Research Group for Metals Technology of the Hungarian Academy of Sciences, Budapest (H)</p>
251/E24*	<p>Influence of Long-Run High-Temperature-Annealing on Mechanical Properties and Failure Mechanisms of NiCrW Alloys J. Zyka (Sp), J. Siegl, FNSPE CTU, Prague (CZ)</p>
254/E25	<p>Metal Matrix Composites (MMCs): On the Influence of Ti in activated ceramic preforms for pressureless melt infiltration S. Vasic (Sp), EMPA, Duebendorf (Switzerland); B. Grobety, University of Fribourg (CH); J. Kuebler, K. Lemster, T. Graule, EMPA, Duebendorf (CH)</p>
258/E26	<p>Structure/ Property Relationships in 8009 and Related High Temperature Aluminium Alloys For Aerospace Applications E. Solis-Ramos (Sp), H. Jones, W.M. Rainforth, University of Sheffield (GB)</p>
	* = no oral presentation

Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area II
	<p>Topic E</p> <p>Metals: Al-, Mg-, Ti-, Ni-Alloys, Steel, Inter-metallics, MMCs, Foams</p> <p>Chair: J. Efavi, AMO GmbH, Aachen (Germany)</p>
271/E27	<p>Matrix Strength Influence on the Tensile Properties of Particle Reinforced Metal Matrix Composites Containing High Volume Fraction of Ceramic Particulate</p> <p>R. Müller (Sp), A. Rossoll, L. Weber, A. Mortensen, EPFL, Lausanne (CH)</p>
292/E28	<p>Wetting in the Infiltration Process of Alumina Particle Preforms with Copper-Based Alloys</p> <p>M. Bahraini (Sp), L. Weber, EPFL, Lausanne (CH); J. Narciso, University of Alicante (E); A. Mortensen, EPFL, Lausanne (CH)</p>
297/E29*	<p>Method of Thermal Calculation of Alumina Electrolyses Cells with Prebacked Anodes</p> <p>A. Semencescu (Sp), C. Balescu, I. Oprescu, Politehnica University of Bucharest (RO)</p>
299/E30*	<p>Technical and economical efficiency of the aluminium obtained by alumina electrolysis with prebacked anodes plants</p> <p>C.F. Balescu (Sp), I. Oprescu, A. Semencescu, POLITEHNICA University of Bucharest (RO)</p>
306/E31	<p>The Effect of Naturel Aging on Bake Hardening Response of A Twin-Roll Cast AA6016 Alloy</p> <p>T.A. Baser (Sp), Y. Birol, MCTRI, Marmara Research Center, TUBITAK, Kocaeli (Turkey)</p>
311/E32*	<p>Inhomogeneous Precipitation of Ni₄Ti₃ Phase in Ni-rich NiTi Shape Memory Alloy Studied by the Quantitative Image Analysis</p> <p>O. Bojda (Sp), Brno University of Technology (CZ); A. Dlouhy, Academy of Sciences of the Czech Republic, Brno (Czech Republic); J. Fiala, Brno University of Technology (CZ)</p>
	* = no oral presentation



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area II
	<p>Topic E</p> <p>Metals: Al-, Mg-, Ti-, Ni-Alloys, Steel, Inter-metallics, MMCs, Foams</p> <p>Chair: J. Efavi, AMO GmbH, Aachen (Germany)</p>
313/E33*	<p>Study of Transition Layers in a Gamma TiAl – CaO – Al₂O₃ System</p> <p>K. Docekalová (Sp), University of Technology, Faculty of Chemistry, Brno (CZ); A. Dlouhy, Academy of Science, Brno (CZc); L. Zemcik, University of Technology, Faculty of Mechanical Engineering, Brno (Czech Republic); J. Fiala, University of Technology, Faculty of Chemistry, Brno (CZ)</p>
316/E34	<p>The Relation Between Al₃Ti Particle Formation and Impurity Removal During In-Situ Precipitation Treatment Process</p> <p>S. Srimanosaowapak (Sp), University of Oxford (UK); K.A.Q. O'Reilly, Department of Materials, University of Oxford (UK)</p>
324/E35	<p>Analysis of Atomic Structure of Amorphous Metals in the Frame of Percolation Theory</p> <p>A. Bondarev (Sp), Y.V. Barmin, I.L. Bataronov, Voronezh State Technical University (Russia)</p>
328/E36	<p>Mechanical, Friction and Cavitation Erosion Behaviour of Ultra Fine Grain Austenitic Stainless Steels</p> <p>G. Bregliozzi (Sp), S.I.-U. Ahmed, H. Haefke, CSEM, Neuchatel (Switzerland); A. di Schino, J.M. Kenny, University of Perugia, Terni (I)</p>
342/E37	<p>Properties of Iron Aluminide, Produced in Chamber Electroslag Remelting Furnace</p> <p>N. Galyan (Sp), A.A. Troyansky, V.V. Pashynsky, DonNTU, Donetsk (Ukraine)</p>
352/E38	<p>Precipitation in Al–Mg–Si–Cu Alloys and the Role of the Q-Phase</p> <p>S. Bikova (Sp), A.A. Alekseev, P.L. Zhuravleva, J.N. Fridlyander, All-Russian Institute of Aviation Materials, Moscow (Russia)</p>
356/E39	<p>Bonded Ferromagnetic Fibre Arrays</p> <p>C. Shortall (Sp), A.E. Markaki, T.W. Clyne, Department of Materials Science & Metallurgy, Cambridge (UK)</p>
	* = no oral presentation



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area II
	<p>Topic N Nanostructured Materials Chair: J. Efavi, AMO GmbH, Aachen (Germany)</p>
12/N01	<p>Ionogels: A New Class of Solid State Electrolytes M.-A. Néouze (Sp), J. Le Bideau, Université Montpellier 2, Montpellier Cedex 5 (F); F. Leroux, Blaise Pascal University, Clermont-Ferrand (F); A. Vioux, Université Montpellier, Montpellier (F)</p>
36/N02*	<p>Cell Reaction to Nanotopography E. Martines (Sp), A. Curtis, University of Glasgow (GB)</p>
63/N03*	<p>Martensite Transformation in Nanomaterials E.N. Blinova (Sp), A.M. Glezer, CNIICHER-MET, Moskau (Russia)</p>
73/N04	<p>Control of Macrostress in Reactively Sputtered Mo(Al)Nx Films by Energy of Bombarding Particles J. Suna (Sp), J. Musil, P. Dohnal, University of West Bohemia, Plzen (CZc)</p>
82/N05	<p>Structure and Mechanical Properties of Magnetron Sputtered ZrOx and Zr-Cu-O Films M. Jirout (Sp), J. Musil, University of West Bohemia, Plzen (CZ)</p>
90/N06	<p>Nanocomposites Based on Modified Polyethylene/Lactic Acid/Bentonite P. Jakubiak (Sp), K. Nycz, Poznan University of Economics (PL)</p>
111/N07	<p>Stabilisation of Ag Nanoparticles in Mesoporous Silica Coatings on Glass Surface T.I. Levchenko (Sp), Y.V. Plyuto, A.A. Chuiko, Institute of Surface Chemistry, Kiev (Ukraine)</p>
112/N08	<p>Newly Designed Silica Nanostructures by Hydrolysis of Alkoxysilylated Layered Silicate D. Mochizuki (Sp), A. Shimojima, K. Kuroda, Characterization of the Surface Topography and Tribological Properties of Porous TiO2</p>
* = no oral presentation	

Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area II
	<p>Topic N Nanostructured Materials Chair: J. Efavi, AMO GmbH, Aachen (Germany)</p>
146/N09	<p>Films with the Use of Atomic Force Microscopy (AFM) I. Piwonski (Sp), University of Lodz (PL)</p>
158/N10	<p>Electric Field Effect on Direction of Carbon Nanotubes Growth in CVD Process A. Zolotukhin (Sp), A.N. Obratsov, A. Volkov, Moscow State University, Moskau (Russia); Y.P. Svirko, K. Jefimovs, Joensuu University (SF)</p>
162/N11	<p>Comparison of Mechanochemical Synthesis Ni and Co Aluminides K. Tretjakov (Sp), Lomonosov Moscow State University (Russia)</p>
170/N12	<p>Mechanical Properties of Nanostructured AlFe2V4 Profiles J. Nagy (Sp), SAS, Bratislava (SK); M. Balog, UMMS SAS, Bratislava (SK); P. Svec, FU SAV, Bratislava (SK)</p>
193/N13	<p>Effects of Low Temperature Annealing on Al-Cu Amorphous Alloy Prepared by Sputtering S. Habibi (Sp), Bu Ali Sina University, Hamadan (Iran); M. Soudmand, Payam Nour University, Oromie (Iran); N. Banaee, Solid State Division, Tehran (Iran); S. Majidy, Islamic Azad University, Saveh (Iran)</p>
	<p>Discussion in front of the Poster Panels of Poster Area II (Topics: E, N)</p>
14.00	<p>Dismantling Time for Poster Area II</p>
	<p>Time to fix the Posters in Poster Area II for the Topics B, I, L</p>
12.30 - 14.00 Lunch	
* = no oral presentation	

Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area I
	Topic F Ceramics, CMC, Glass Chair: NN
43/F01	Production of Dense and Porous Glass-Ceramics from Coal Ash and Metallurgical Slag J. Wu (Sp), R.D. Rawlings, A.R. Boccaccini, Imperial College London (GB)
52/F02	Preparation Easy Hydrolising Surface Ester Colloidal Silica with Isopropanol for Utilize in Sol-gel Process P. Ptacek (Sp), J. Havlica, Brno University of Technology (Czech Republic); I. Kuritka, University of Tomas Bata, Zlin (CZ)
56/F03	Homogenisation of Electrically Heated Glass Melts by Lorentz Forces U. Krieger (Sp), B. Halbedel, D. Huelsenberg, A. Thess, Technische Universität Ilmenau (D)
64/F04	Alumina Coatings Prepared from Aqueous Sols M. Dressler (Sp), M. Nofz, S. Reinsch, R. Sojref, Federal Institute for Materials Research and Testing, Berlin (D)
89/F05	Carbon Nanotubes/Glass Matrix Composites: Processing and Characterisation B. Thomas (Sp), Imperial College London (GB); G. Brusatin, University of Padova (I); P. Colombo, university of Bologna (I); M. Shaffer, A.R. Boccaccini, Imperial College London (GB)
119/F06	Tribological Characterization of the Phosphazene Modified Organo-Silica Thin Films K. Koralewski (Sp), G. Celichowski, I. Piwonski, S. Plaza, University of Lodz (PL)
122/F07*	Dielectric Relaxation in SrTiO₃ – MnTiO₃ Ceramics A. Tkach (Sp), P.M. Vilarinho, A.L. Kholkin, University of Aveiro (P)
137/F08	Pulsed Magnetron Sputtering of TiO_x Films with High Target Power Loading J. Lukas (Sp), J. Musil, University of West Bohemia in Pilsen, Plzen (CZ)
	* = no oral presentation



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area I
	Topic F Ceramics, CMC, Glass Chair: NN
148/F09	Solid-State Synthesis of Ln_{0.5}Ca_{0.5}M_{0.5}Fe_{0.5}O₃ (Ln = La, Pr, Nd, Sm, Gd, Dy ; M = Ti, Zr) D. del Favero (Sp), Brno University of Technology (CZ)
150/F10*	Multilayer Intermetallic-Ceramic Composites M. Snel (Sp), G. de With, Technische Universiteit Eindhoven (NL); F. Snijkers, J. Luyten, Institute for Technological Research, Mol (B); S. Kodentskov, Technische Universiteit Eindhoven (NL)
155/F11*	Electric-Field-Assisted Preparation of High-Temperature Ceramic Components M. Gerharz (Sp), Fachhochschule Koblenz, Höhr-Grenzhausen (D)
161/F12*	Hardness and Indentation Fracture Toughness of an Al₂O₃ – Based Layered Composite P. Zimovcak (Sp), J. Dusza, Slovak Academy of Sciences, Kosice (SK); L. Pesek, Technical University of Kosice (SK); G. De Portu, F. Chalvet, ISTEK, Faenza (I)
163/F13	Mechanical properties of carbon derived Si₃N₄+SiC nanomaterial M. Kasiarova (Sp), J. Dusza, Slovak Academy of Science, Kosice (Slovak Republic); M. Hnatko, P. Sajgalic, Institute of Inorganic Chemistry, Bratislava (SL)
171/F14	Ceria Powders Doped by Gadolinium, Samarium and Yttrium Prepared by Sonospraying Method J. Machackova (Sp), K. Castkova, Brno University of Technology (CZ)
183/F15	Dense Silicate Ceramic from the Latvian Devonian Clay E. Lejite (Sp), Riga Technical University (LV)
184/F16	Temperature Resistant Electric Insulator for Piezoceramic Foils A. Naake, Volkswagen AG, Wolfsburg (D)
	* = no oral presentation



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area I
	Topic F Ceramics, CMC, Glass Chair: NN
185/F17	Influence of Different Additives on the Properties of Porus Heavy Ceramics G. Bula (Sp), Riga Technical University (LV)
186/F18	Study of the Photocatalytic Properties of the Titanium Dioxide Powder and Thermal Sprayed Coating for Nitrogen Oxides Removal F.-L. Toma (Sp), G. Bertrand, D. Klein, C. Coddet, UTBM - LERMPS, Belfort (F)
209/F19	Continuous Processing of Cost Effective Ceramic SiCN-Fibers S. Kokott (Sp), G. Motz, Universität Bayreuth (D); D. Koch, G. Grathwohl, Univ. Bremen (D)
210/F20*	Study of Aqueous Suspensions of PZT-LN for Tape Casting M. Nagliati (Sp), D. Gardini, C. Galassi, ISTECCNR, Faenza (RA) (I); M. Deluca, R. Lapasin, DICAMP, Trieste (I)
230/F21	On an Evaluation of the Surface Microcracks Toughness in Glasses and in Ceramics N. Murafa (Sp), L. Berka, Czech TU Prague, (CZ)
253/F22	High Temperature Si3N4-BN Composite Materials of Variable Composition N. Ershova (Sp), I.Y. Kelina, V.V. Vikulin, Federal State Unitary Enterprise, Obninsk, Kaluga Region (Russia)
283/F23*	Synthesis of Superhard B4C-SiC Composites H. Priguzin (Sp), N. Frage, M.P. Dariel, Ben Gurion University, Beer-Sheva (Israel)
343/F24*	TiO2 - SiO2 Sol-Gel Vitreous and Composite Coatings I. Yuhnevicha (Sp), G. Mezinskis, Riga Technical University (LV)
345/F25*	Hydroxyapatite Ceramics Processing Modification Using Hydrolyzed Alkoxide Solutions I. Pavlovska (Sp), G. Mezinskis, J. Jastrzems-kis, D. Lazdina, Riga Tech. University (LV)
* = no oral presentation	



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area I
	Topic G Polymers, Polymer based Composites Chair: NN
47/G01	Conductivity Changing of Polymeric Composite LDPE + CB A. Mlich (Sp), L. Kopecky, V. Bouda, Czech Technical University in Prague (CZ)
65/G02*	The Processing Properties of Polyvinylalcohol Blends B. Simkova (Sp), J. Saková, V. Fuleová, L. Jakubcová, P. Alexy, Slovak University of Technolgy, Bratislava (SK)
70/G03	Influence of Zirconia Powder Surface on Rheological Behaviour of Thermoplastic Ceramic Suspensions J. Hrazdera (Sp), M. Trunec, Brno University of Technology (CZ)
93/G04	Study of the Influence of Microwaves in the Mechanism of Vulcanisation and de Devulcamisation of Natural Rubber Using Model Compound Vulcanisation B. Vega Sánchez (Sp), N. Agulló, S. Borrós, Universitat Ramon Llull, Barcelona (E)
105/G05	Two Photon Absorption for Under-Surface Writing M. Crippa (Sp), Università degli Studi di Milano Bicocca (I)
152/G06	Production and Characterization of Phenol Formaldehyde / Modified Montmorillonite Nanocomposites C.C. Tasan (Sp), C. Kaynak, Middle East Technical University, Ankara (TR)
153/G07*	Utilisation of Renewable Materials as Fillers for Rubber Blends Z. Kramarova (Sp), Slovak University of Technology, Bratislava (SK); I. Chodak, Slovak Academy of Sciences, Bratislava (Slovakia Republic); P. Alexy, I. Hudec, E. Spirk, P. Bugaj, Slovak University of Technology, Bratislava (SK)
173/G08	Development of Fatigue Test Methods for Elastomers C. Feichter (Sp), Z. Major, R.W. Lang, Polymer Competence Center Leoben GmbH (A)
* = no oral presentation	



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area I
	Topic G Polymers, Polymer based Composites Chair: NN
195/G09*	Examination of Polyvinyl-Chloride - Polyethylene Blends M. Kollár (Sp), P. Barczy, K. Marossy, University of Miskolc, Miskolc-Egyetemvaros (H)
196/G10*	Development of plastic hip joint element G. Zsoldos (Sp), G. Czel, University of Miskolc, Miskolc-Egyetemvaros (H)
241/G11*	Hyperbranched Poly(Ether Imide)s by High Temperature Polycondensation in Active Medium P. Buzin (Sp), M. Yablokova, Enikolopov Institute of Synthetic Polymer Materials, Moscow (Russia); A. Smirnov, I. Abramov, Yaroslavl State Technical University, (Russia); A. Kuznetsov, Enikolopov Institute of Synthetic Polymer Materials, Moscow (Russia)
250/G12	Polymer Refractive Index Variation Using Nanoscaled Ceramics for Applications in Polymer Waveguides E. Ritzhaupt-Kleissl (Sp), J. Böhm, T. Hanemann, J. Haußelt, Forschungszentrum Karlsruhe (D)
259/G13	Solution studies on zwitterionic telechelic ionomers J. Xu (Sp), D.G. Bucknall, Oxford University (GB); B.J. Gabrys, Foxcombe Hall, Boars Hill, Oxford (GB); W. Zajac, The Henryk Niewodniczanski, Institute of Nuclear Physics, Krakow (PL); R.W. Richards, L.R. Hutchings, University of Durham (GB)
267/G14	New Liquid Crystalline Thermoset (LCT) Resins for Aerospace Composite Applications A. Knijnenberg (Sp), T.J. Dingemans, Delft University of Technology (NL)
281/G15	Modification of Interphases in Heterogeneous Polymer Blends by Multifunctional Coupling Agents V.B. Sadhu (Sp), J. Pionteck, P. Pötschke, L. Jakisch, A. Janke, L. Häußler, Institut für Polymerforschung Dresden e.V. (D)
	* = no oral presentation



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area I
	Topic G Polymers, Polymer based Composites Chair: NN
304/G16*	Effect of the Electrodeposition on the Anticorrosive Properties of Organic Thin Films C. Vasilescu (Sp), M.V. Popa, P. Drob, E. Vasilescu, Institute of Physical Chemistry, Bucharest (RO); A. Santana Lopez, J. Mirza-Rosca, Las Palmas de Gran Canaria University, Tafira (Spain); S.I. Drob, University of Bucharest (RO)
322/G17	Polymer - Carbon Nanotubes Composites: Influence of the Nanotube Nature and Processing Conditions on the Dispersion R. Daussin (Sp), S. Cuenot, A.-S. Duwez, C. de Villepin, A. Saib, I. Huynen, C. Bailly, Université Catholique de Louvain, Louvain-la-Neuve (B); X. Lou, C. Pagnouille, R. Jerome, Université de Liege (B); A. Felten, J.-J. Pireaux, Facultes Un iversitaires Notre Dame de la Paix, Namur (B)
339/G18	The Study of Photochromic Properties of Some New Diazobenzene Polymers with Structure Photocntrolled I. Grecu, G. Strat, „Gh. Asachi“ Technical University, Iasi (RO); M. Strat, S. Gurlui (Sp), "Al.I.Cuza" University, Iasi (RO)
	* = no oral presentation



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area I
	Topic N Nanostructured Materials Chair: NN
217/N14	High-Temperature Cantilever Sensor Based on Nanostructured and Nanoparticle Doped Ceramics Z. Guo (Sp), J. Kübler, T. Graule, EMPA Dübendorf (CH); M. Reece, University of London (GB)
261/N15	Preparation of Nanocrystalline SiC-Ceramics by Powder Processing and Liquid Phase Sintering K. Wetzler (Sp), G. Rixecker, F. Aldinger, Max-Planck-Institut für Metallforschung, Stuttgart (D)
263/N16	Synthesis of Model Aluminium Polycation Containing Solutions and Solid Materials O. Deschaume (Sp), K. Shafran, C.C. Perry, Nottingham Trent University (GB)
264/N17*	One-Step Flame Synthesis of SnO₂/TiO₂ Coupled Nanoparticles for Photocatalytic Applications K.K. Akurati (Sp), A. Vital, U. Klotz, T. Graule, EMPA, Dübendorf (CH); M. Winterer, University Duisburg (D)
270/N18	Formation of Nanocrystalline Carbon during the SiC Fibers Synthesis Process K. Vyshnyakova (Sp), G. Oleinik, L. Peresentseva, National Academy of Science, Kiev (Ukraine)
275/N19	Ferroelectric Polymeric Nanocomposites E. Erdem, R. Böttcher, Universität Leipzig (D); A. Weller (Sp), H.-J. Gläsel, E. Hartmann, Leibniz Institut für Oberflächenmodifizierung, Leipzig (D)
280/N20*	Radiation Cured Polymeric Nanocomposites of Enhanced Surface Mechanical Properties A. Weller (Sp), H.-J. Gläsel, E. Hartmann, F. Bauer, R. Mehnert, Leibniz Institut für Oberflächenmodifizierung, Leipzig (D)
	* = no oral presentation



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area I
	Topic N Nanostructured Materials Chair: NN
295/N21	Improved Ti-Al-N Coatings by Alloying with Nb, Hf and B M. Pock (Sp), Materials Center Leoben (A); P.H. Mayrhofer, C. Mitterer, University of Leoben (A)
296/N22	Thermal Stability of W-Si-N Coatings K. Fadenberger (Sp), C. Mitterer, P.H. Mayrhofer, University of Leoben (A); J. Musil, R. Daniel, P. Dub, J. Soldan, University of West Bohemia, Plzen (CZ)
314/N23*	Copper-Based Composites With Elements of Nanocrystalline Structure Prepared By Mechanical Alloying A. Prosviryakov (Sp), A. Aksenov, Moscow State Institute of Steel and Alloys (Russia)
333/N24	Self-lubricating PVD Hard Coatings by Doping TiAlCN with MoS₂ V. Spassov (Sp), CSEM Swiss Center for Electronics and Microtechnology, Inc., Neuchâtel (CH); A. Kovacs, P. Barna, Research Institute for Technical Physics and Materials Science (MFA), Budapest (H); H. Haefke, CSEM Swiss Center for Electronics and Microtechnology, Inc., Neuchâtel (CH)
334/N25	HRTEM Structure Investigation of Silicon Nanorods Grown by Thermal CVD V. Spassov (Sp), A. Savan, H. Haefke, CSEM Swiss Center for Electronics and Microtechnology, Inc., Neuchâtel (CH)
	Discussion in front of the Poster Panels of Poster Area I (Topics F, G, N)
	18.00 Dismantling Time for Poster Area I
	20.00 - open end Festival on the Beach (page 55)
	* = no oral presentation



Time / Abstr.No /Poster No.	Lecture Hall B
	<p>Time to fix the Poster in Poster Area II for the Topics Topics B, I, L</p> <p>Time to fix the Poster in Poster Area I for the Topics A, D, K</p>
	<p>Poster-Award-Winner EUROMAT 2003</p> <p>SiO₂-Glass Fibres with Complex Cross-Sectional Geometry</p> <p>J. Heiber (Sp), M. Wegmann, T. Graule, Eidgenössische Materialprüfungs- und Forschungsanstalt, Dübendorf (Switzerland); D. Hülsenberg, Ilmenau Technical University (Germany)</p> <p>Today a variety of possibilities are available to produce silica glass fibres with circular cross-sections. These include melting and drawing technologies as well as technologies based on either sol-gel processing or powder extrusion. The aim of the current study was to fabricate fibre substrates with at least one flat face which can be used as microelectronic substrates for integrating computing power into textiles. To this end, the preform drawing and powder extrusion technologies were investigated to produce silica fibres with either triangular or rectangular cross-sections. In the case of the perform-drawing method, commercially-available circular SiO₂-rods were ground and polished to yield preforms with the desired non-circular cross-sections. These rods were then heated up to temperature >1600°C and drawn to fibres with the desired dimensions. The cross-sectional fibre dimensions could be adjusted by varying the feed rate of the rod into the furnace or the drawing rate of the fibre out of the furnace. Rounding of the flat faces and the sharp corners was investigated as a function of drawing velocity and temperature. For the extrusion process, a nano-sized and a micron-sized SiO₂ powder were blended with a thermoplastic binder system for 3 hours at 150°C and subsequently extruded through a die with a 500 mm diameter circular die land. The effects of the two different particle size distributions as well as the influence of varying powder loading (between 38 and 58 vol%) on the rheological properties of the feedstocks were analysed using capillary rheometry. Green fibres were de-bonded at 500°C and sintered 1 h at 1100°C in air. The de-binding and sintering behaviour was investigated using mercury intrusion porosimetry, thermal gravimetric analysis and dilatometry. Because only the green extrudates consisting of nano-sized powder could be sintered crack-free to glass fibres, these feedstocks were used to extrude and sinter fibres with a non-circular cross-section.</p>



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area II
	<p>Topic B</p> <p>Magnetic Properties, Superconductivity, Electronic Materials</p> <p>Chair: J. Heiber, EMPA Dübendorf, CH</p>
13/B01	<p>Morphology and Structural Transformations of Free-Growing Nanoparticles of Superconducting Ceramics ErBCO</p> <p>E. Sanaia (Sp), E. Kutelia, G. Darsavelidze, Georgian Technical University, Tbilisi (Georgia)</p>
91/B02	<p>Nonlinear Microwave Impedance of Perfect high-Tc Superconducting Films Measured by Coplanar Stripline Resonators</p> <p>O. Kalenyuk (Sp), V.A. Komashko, A.L. Kasatkin, V.M. Pan, National Academy of Sciences, Kiev (Ukraine); A.V. Velichko, M.J. Lancaster, University of Birmingham (GB)</p>
97/B03	<p>A Magnetic Phase-Diagram for Nanoscale Fe-Ni Particles</p> <p>P. Barpanda (Sp), R.E.D. Borkowski, University of Cambridge (UK)</p>
104/B04	<p>Critical Current Density Behavior at Applied Magnetic Field in High-Temperature Superconducting YBa₂Cu₃O_{7-d} Thin Films</p> <p>Y. Cherpak (Sp), O.V. Pronin, V.A. Komashko, S.A. Pozigun, V.M. Pan, National Academy of Sciences, Kiev (Ukraine)</p>
113/B05	<p>Characterization of Monomolecular Interfaces in Organic Thin Film Transistors</p> <p>M. Castellani (Sp), A. v. Muehlenen, M. Schaefer, L. Zuppiroli, EPFL, Lausanne (CH)</p>
143/B06*	<p>Structure and Properties of Magnetic Composite Materials</p> <p>E. Simigova (Sp), I. Hudec, L. Markovičová, R. Dosoudil, Slovak University of Technology, Bratislava (SK)</p>
165/B07	<p>Ultra-Thin Film Pentacene Transistors</p> <p>A. von Mühlennen (Sp), M. Daraktchiev, M. Schaefer, L. Zuppiroli, EPFL, Lausanne (CH); S. Pratontep, M. Brinkmann, Institut Charles Sadron CNRS, Strasbourg (F)</p>
	<p>* = no oral presentation</p>



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area II
	<p>Topic I Magnetic Properties, Superconductivity, Electronic Materials Chair: J. Heiber, EMPA Dübendorf, CH</p>
159/108	<p>Modification of Powders by Plasma Techniques N. Tricas (Sp), S. Borros, Institut Quimic de Sarria, Barcelona (E); R.H. Schuster, Deutsches Institut für Kautschuktechnologie, Hannover (Germany)</p>
176/109*	<p>Preparation and Characterization of Zn Doped SrTiO3 Films O. Okhay (Sp), A. Wu, P.M. Vilarinho, University of Aveiro (P)</p>
201/110	<p>Tribological Characteristic of Thermally Sprayed Coatings J. Gomelska (Sp), K. Novotna, P. Tichotova, O. Blahova, S. Houdkova, University of West Bohemia, Plzen (CZ)</p>
202/111	<p>Adhesion Testing of DLC Coatings Prepared by Magnetron Sputtering M. Sosnova (Sp), J. Gomelska, O. Blahova, J. Skalova, University of West Bohemia, Plzen (CZ)</p>
240/112*	<p>Atmospheric Pressure Microwave CVD for Deposition Functional Layers - Characterisation of Silica Layer Properties L. Roch (Sp), V. Hopfe, I. Dani, B. Leupolt, B. Schöneich, R. Liske, W. Grähler, Fraunhofer Institute of Material and Beam Technology, Dresden (D); B. Schumacher, C. Ostwald, ThyssenKrupp Stahl AG, Dortmund (D); S. Hust, B. Guillermo, Pilkington European Technical Centre, Lathom (UK)</p>
243/113	<p>Structural and Compositional Characteristics of Active Bioceramic Coatings Obtained by Pulsed Laser Deposition E.-G. Patulea (Sp), S. Ciuca, University of Politehnica Bucharest (RO)</p>
308/114	<p>Properties of Metal Layers Deposited by Magnetron Sputtering on Glass Substrate D. Petydes (Sp), Preciosa a.s., Liberec 24 (CZ); I. Stepanek, University of West Bohemia, Plzen (CZ)</p>
	* = no oral presentation



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area II
	<p>Topic L Materials Characterisation: Mechanical Testing, Advanced Analytical Techniques, NDE, Materialographie Chair: J. Heiber, EMPA Dübendorf, CH</p>
350/115	<p>Computer-Aided Ion-Plasma High Energy Technology: Ion-Plasma Equipment, Technologies and Evaporated Materials of Coatings of GTE Blades A. Lutsenko (Sp), S.A. Muboyadzhyan, All-Russian Institute of Aviation Materials, Moscow (Russia)</p>
357/116	<p>Effect of Heat Treatment on the Mechanical Behaviour of Plasma Sprayed Thermal Barrier Coatings (TBCs) S. Paul (Sp), S.A. Tsipas, I.O. Golosnoy, T.W. Clyne, Department of Materials Science and Metallurgy, Cambridge (UK)</p>
84/L01*	<p>Kinetics and Phase Transformation Mechanism of Fe-20%Ni and Fe-12%Mn Binary Alloys S. Parshorov (Sp), E. Marchev, I. Parshorov, Bulgarian Academy of Sciences, Sofia (BG)</p>
87/L02*	<p>Structure Conditions during Recycling Beryllium Bronze in Tool Equipment L. Veleva (Sp), I. Parshorov, Bulgarian Academy of Science, Sofia (BG)</p>
94/L03	<p>EBSD-New Analytical Tool O. Man (Sp), BUT Brno (CZ)</p>
106/L04	<p>Weld Defect Extraction and Classification in industrial Radiographic Images Based Digital Image Processing and Artificial Neural Networks N. Nacereddine (Sp), Centre de Soudage et Contrôle, Chérage, Alger (Algeria)</p>
110/L05	<p>Identification of Elastic Properties in Stiffened Composite Shells A. Buris (Sp), E. Skukis, Riga Technical University, Cesis (LV)</p>
120/L06	<p>Kinetics and Phase Transformation Mechanism of Fe-20%Ni and Fe-12%Mn Binary Alloys E. Machev (Sp), S. Parshorov, I. Parshorov, Bulgarian Academy of Sciences, Sofia (BG)</p>
	* = no oral presentation



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area II
	<p>Topic L Materials Characterisation: Mechanical Testing, Advanced Analytical Techniques, NDE, Materialographie Chair: J. Heiber, EMPA Dübendorf, CH</p>
125/L07*	<p>Hot Deformation Influence on Retained Austenite Volume Fraction in Trip Steel O. Zacek (Sp), J. Klíber, VSB- Technical University of Ostrava, Ostrava-Poruba (CZ)</p>
128/L08	<p>Modeling and Measurement of Surface Displacements in BaTiO₃ Bulk Material in Piezoresponse Force Microscopy (PFM) F. Felten (Sp), G.A. Schneider, Technische Universität Hamburg-Harburg (D); J. Munoz Saldana, Centro de Investigación y de Estudios Avanzados del IPN, Querétaro (Mexico); S.V. Kalinin, Oak Ridge National Laboratory</p>
168/L09	<p>Laser-Based Techniques for Non-Destructive Ultrasonic Evaluation of Material Properties R. Tatarin (Sp), W. Erfurt, J. Stark, Bauhaus-Universität Weimar (D)</p>
208/L11	<p>Influence of Post-Forging Cooling Conditions on the Formation of Microstructures Mainly Formed of Acicular Ferrite in Microalloyed Steels R. Villegas (Sp), A. Redjaimia, LSGS UMR-CNRS, Nancy Cedex (F); L. Marot, M. Conforte, ISPAT Europe, Amneville (F)</p>
231/L12	<p>Characterization of Electrokinetic Properties of High Concentrated Suspensions of Ceramic Composites by Electroacoustic (ESA) Measurement H. Sarraf (Sp), B.J. Havrda, Institute of Chemical Technology of Prague (CZ); C.R. Herbig, Institut für Keramische Werkstoffe, Freiberg (D)</p>
247/L13	<p>Non Linear Filtering of Ultrasonic Signal for Material Characterization F. Bettayeb (Sp), Research Center on welding and control, Algiers (Algeria); S. Haciane, University of Science and Technology, Algiers (Algeria); S. Aoudia, University of Science and Technology, Algiers (Algeria)</p>
	* = no oral presentation



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area II
	<p>Topic L Materials Characterisation: Mechanical Testing, Advanced Analytical Techniques, NDE, Materialographie Chair: J. Heiber, EMPA Dübendorf, CH</p>
252/L14	<p>Microscopical Characterisation of Diamond Seed-layers on Ir/ SrTiO₃ Deposited Using the Bias Enhanced Nucleation (BEN) Technique P. Bernhard (Sp), C. Ziethen, Johannes Gutenberg Universität, Mainz (D); M. Schreck, S. Gsell, T. Bauer, Universität Augsburg (D); G. Schönhense, Johannes Gutenberg Universität, Mainz (D)</p>
269/L15	<p>Mixing Enthalpy in Molten Salts - On the Example of KCl-K₂TiF₆ System Z. Demeter (Sp), M.S. Yaghmaee, G. Kaptay, University of Miskolc, Miskolc-Egyetemvaros (H)</p>
323/L16	<p>Influence of the Manganese and Copper on the Mechanical Properties ADI Irons I. Musilová (Sp), Brno University of Technology (CZ)</p>
329/L17	<p>Cavitation Erosion Behavior of Nanocrystalline Diamond Thin Films on Silicon Substrates G. Bregliozzi (Sp), W. Hänni, H. Haefke, CSEM, Neuchatel (CH)</p>
335/L18	<p>Surface Roughness Measurements of Wood: Physical and Tactile Evaluations T. Ramanantoandro (Sp), M. Bacou, O. Etteradossi, Ecole des Mines d'Alès, Pau cedex 9 (France); P. Larricq, Mechanical Engineering Laboratory of Toulouse (F)</p>
338/L19	<p>The Quantitative Characterization of Aluminothermic Railways Welding Joints M. Branzei (Sp), D. Gheorghe, Polytechnic University of Bucharest (RO)</p>
340/L20*	<p>Comparison of Evaluation Methods of the Chemical Inhomogeneity of Ductile Irons Alloyed with Graded Nickel Contents Z. Vojtkulakova (Sp), Brno University of Technology (CZ)</p>
	* = no oral presentation



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area II
	<p>Topic L</p> <p>Materials Characterisation: Mechanical Testing, Advanced Analytical Techniques, NDE, Materialographie</p> <p>Chair: J. Heiber, EMPA Dübendorf, CH</p>
341/L21*	<p>Determination of Building Materials Emis-sivity</p> <p>H. Kminova (Sp), S. Stastnik, J. Zach, Brno University of Technology (CZ)</p>
346/L22	<p>Influence of MnO2 Crystal Structure on ESR of Tantalum Capacitors</p> <p>D. Dias (Sp), P. Carvalho, A. Ferro, W. Lohwasser, Technical Superior Institute, Lisbon (Portugal)</p>
351/L23*	<p>Evaluation of Workability of Metal Matrix Composites (MMS) and Glass Plastics for Aviation Constructions</p> <p>O.V. Mitrakov (Sp), S. Chernoyarov, All-Russian Institute of Aviation Materials, Moscow (Russia)</p>
358/L24	<p>Adhesion of Plasma Electrolytic Oxidation Coatings</p> <p>A. Plati (Sp), J.A. Curran, T.W. Clyne, University of Cambridge (UK)</p>
	<p>Discussion in front of the Poster Panels of Poster Area II (Topics B, I, L)</p>
12.30 - 14.00	Lunch
	* = no oral presentation



Time / Abstr.No /Poster No.	Lecture Hall B
	<p>Industry Speakers</p> <p>Chair: P.P. Schepp, Deutsche Gesellschaft für Materialkunde, Frankfurt (D)</p>
14.00	<p>S. Wilson</p> <p>Sulzer Innotec, Winterthur, CH Email: scott.wilson@sulzer.com</p>
14.30	<p>C. Engel</p> <p>Robert Bosch GmbH, Stuttgart Email: christine.engel@de.bosch.com</p>
15.00	<p>J. Vlcek</p> <p>EADS Suresnes, F Email: johannes.vlcek@eads.net</p>
15.30	<p>G. Deinzer</p> <p>Adam Opel AG, Rüsselsheim, D Email: guenter.deinzer@de.opel.com</p>
16.00	<p>K. Schneider</p> <p>Alstom Power, Baden, CH Email: klauserich.schneider@t-online.de</p>
16.30	<p>J. Ritterbusch</p> <p>Wiley-VCH, Weinheim, D Email: aem@wiley-vch.de</p>
17.00	Podium Discussion
18.00	Networking with the Industry Speakers in the foyer of the lecture hall and in front of the conference building



Time / Abstr.No /Poster No.	Lecture Hall B
	Time to fix the Poster in Poster Area I for the Topics A, D, K
	<p>Poster-Award-Winner EUROMAT 2003</p> <p>Metal Foams - Airy Materials</p> <p>N. Babcsan (Sp), F. Garcia-Moreno, J. Banhart, Hahn-Meitner-Institut Berlin GmbH (Germany); D. Leitmeier, ARC Leichtmetallkompetenzzentrum Ranshofen GmbH (Austria)</p>
	<p>Airy materials can be made from metallic systems by foaming. They even float on the water but still remain strong for several application. One can foam melts directly by gas injection (beer route) or can apply indirect foaming by using gas releasing agents (bread route). Metal foams have similar structure to a slice of bread. The shiny surface and the shape of the metallic bubbles are catching the eyes and have motivated <i>industrial artists</i>. However, their properties have high importance in industrial applications. Some products have already been realized as part of lifting arm of light trucks or sound barriers for highways and bridges. The volume fraction of gas bubbles in the metal is a simple variable to tailor the properties for the costumer requirements. By the help of <i>material designers</i>, the wide range of possible properties can lead to innovative applications and multifunctional materials. The main challenge of recent research is to achieve more uniform cellular structure, to control foam architecture and to improve reproducibility of part production. It requires new research directions (high temperature colloid chemistry), multidisciplinary knowledge and new tools (real time X-ray radiography) for the <i>materials scientists and engineers</i>. As the life of the liquid metal foam is strongly affected by the gravity, one of the aims of the research community is to understand the fundamentals even in low gravity environment.</p>



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area I
	<p>Topic A</p> <p>Mechanical Properties: Plastic Deformation, Fatigue, Fracture, Creep</p> <p>Chair: N. Babcsan, Hahn-Meitner-Institut, Berlin (D)</p>
1/A01*	<p>The Increase of Fatigue Resource by the Repeated Electrostimulation</p> <p>O.S. Lejkina (Sp), S.V. Konovalov, Siberian State Industrial University, Novokuznetsk (Russia)</p>
3/A02	<p>Influence of a Protective Alumina Coating on the Mechanical Properties of 3rd Generation Gamma-TiAl</p> <p>T. Heckel (Sp), H.-J. Christ, Universität Siegen (D)</p>
21/A03	<p>Effect of Forging on the Microstructure and Mechanical Properties of as-Sintered Molybdenum Bars</p> <p>K. Ghauri (Sp), S. Akhtar, University of Engineering and Technology Lahore, Rawalpindi cantt (Pakistan)</p>
23/A04	<p>Mechanical Behaviour of Copper with a Submicrocrystalline Structure</p> <p>V. Khotinov (Sp), I. Pyshmintsev, Urals State Technical University, Ekaterinburg (Russian Federation); R. Valiev, Institute of Physics of Advanced Materials, Ufa (Russia)</p>
38/A05	<p>Workability Assessment of the Power Steam Pipeline Steel and Its Welding Joint after a Long-Term Service</p> <p>A. Markov (Sp), H.V. Krechkovska, Karpenko Physico-Mechanical Institute of NASU, Lviv (Ukraine)</p>
41/A06	<p>Specific Features of Elastic Deformation for Commercial Titanium</p> <p>S. Cimpian (Sp), D. Raducan, University Politehnica Bucharest (RO)</p>
69/A08	<p>Grain Boundary Structure, Chemistry and their Effects on Creep Properties of Bicrystal RR2086 Superalloy</p> <p>K. Yonghua (Sp), Q.Z. Chen, University of Hong Kong (China PR)</p>
109/A09	<p>Delamination and Skin-Stringer Separation Analysis in Composite Stiffened Shells</p> <p>J. Vanags (Sp), K. Kalnins, Riga Technical University, Valmiera (LV)</p>
	* = no oral presentation



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area I
	<p>Topic A</p> <p>Mechanical Properties: Plastic Deformation, Fatigue, Fracture, Creep</p> <p>Chair: N. Babcsan, Hahn-Meitner-Institut, Berlin (D)</p>
178/A10	<p>Study of the Strain Energy Density in a Bi-Material Notch Vicinity</p> <p>J. Klusák (Sp), Academy of Sciences, Brno (CZ)</p>
189/A11	<p>Two-Parameter Fracture Mechanics: Possibility of Application on Short Fatigue Cracks in the Vicinity of Bi-Material Interface</p> <p>S. Seitl (Sp), Academy of Sciences of the Czech Republic, Brno (CZ)</p>
228/A12	<p>Life-time Estimation of General Singular Stress Concentrators</p> <p>J. Klusák (Sp), S. Seitl, P. Hutar, L. Nahlik, Academy of Sciences, Brno (CZ)</p>
242/A13	<p>Fracture Toughness of Plastic-Mold Steels: Dependence upon the Production Cycle, the Heat Treatment and the Microstructure; Other Fracture-Related Parameters; Applications</p> <p>P. Matteis (Sp), D. Firrao, M. Vassallo, Politecnico di Torino (I)</p>
249/A14	<p>Comparative Study of Impact Energies in Bainitic Structures of HSLA Steel</p> <p>K.M. Ghauri (Sp), S. Akhtar, University of Engineering & Technology Lahore (Pakistan)</p>
274/A15*	<p>Method of Thermo-Mechanical Fatigue Characteristics Description of Creep – Resisting Steels</p> <p>A. Marek (Sp), G. Junak, M. Jablonska, Silesian University of Technology, Katowice (PL)</p>
279/A16	<p>Microstructure/Properties Relationship in Ultrafine Grained Aluminium Processed by ECAP Technique</p> <p>P. Kral (Sp), J. Dvorak, M. Svoboda, V. Sklenicka, Institute of Physics of Materials, Academy of Sciences of the Czech Republic, Brno (CZ)</p>
* = no oral presentation	



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area I
	<p>Topic A</p> <p>Mechanical Properties: Plastic Deformation, Fatigue, Fracture, Creep</p> <p>Chair: N. Babcsan, Hahn-Meitner-Institut, Berlin (D)</p>
284/A17	<p>Dynamic Response of B4C-SiC Ceramic Composites</p> <p>S. Hayun (Sp), N. Frage, M.P. Dariel, E. Zaretsky, Ben Gurion University, Beer-Sheva (Israel)</p>
288/A18*	<p>Influence of the Heat Treatment Parameters on the Microstructure and Mechanical Properties of 6005 and 6082 Aluminium Alloys</p> <p>G. Mrowka-Nowotnik (Sp), J. Sieniawski, University of Technology, Wincentego, (PL)</p>
290/A19*	<p>Pearlite Reaction Under Hot Deformation of the Commercial Carbon Steel</p> <p>A. Nowotnik (Sp), Rzeszów University of Technology, Rzeszow (Pl); L. B, University of Science and Technology, Krakow (Pl)</p>
298/A20	<p>Creep of Intermetallic Alloy TiAl at Very Low Strain Rates</p> <p>P. Marecek (Sp), J. Fiala, Technical University of Brno (CZ); L. Kloc, Institute of Physics of Materials, Academy of Sciences of the Czech Republic, Brno (CZ)</p>
305/A21*	<p>Glassy Polymer Fracture: Calibration of a Cohesive Zone for Crazeing</p> <p>N. Saad (Sp), C. Olagnon, R. Estevez, GEMPPM-CNRS/ INSA Lyon, Villeurbanne (F)</p>
310/A22	<p>Aluminium Fatigue Behaviour</p> <p>S. Guelfo (Sp), Politecnico di Torino (I)</p>
* = no oral presentation	



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area I
	<p>Topic D Fundamental Aspects: Diffusion, Transformation, Dislocation Theory Chair: N. Babcsan, Hahn-Meitner-Institut, Berlin (D)</p>
9/D01	<p>Sorption, Diffusion and Permeation in Composites M. Zhu (Sp), D. Vesely, University of Oxford (GB)</p>
15/D02	<p>Properties of Low Angle Dislocation Boundaries in Precipitation Hardened Crystals D. Holec (Sp), A. Dlouhy, Academy of Sciences of the Czech Republic, Brno (CZ)</p>
51/D03	<p>Computer Simulation of Heat-Resistant Steels Welds B. Zlamal (Sp), V. Jan, Brno University of Technology (CZ)</p>
95/D04	<p>Diffusion of Dithiophosphates in Rubber Compounds C. Rosca (Sp), University "Politehnica" of Timisoara (Romania); U. Giese, R.H. Schuster, Deutsches Institut für Kautschuktechnologie e.V., Hannover (Germany); T. Früh, Rhein Chemie Rheinau GmbH, Mannheim (Germany); I. Manovicu, University "Politehnica" of Timisoara (RO)</p>
135/D05	<p>The Negative Thermal Expansion of the Orthorhombic Cu₂V₂O₇ in a Wide Temperature Range M. Rotermel (Sp), Institute of Solid State Chemistry of the Ural Division of Russian Academy of Sciences, Ekaterinburg (Russian Federation); T. Krasnenko, Institute of Solid State Chemistry of the Ural Division of Russian Academy of Sciences, Ekaterinburg (Russia)</p>
190/D06	<p>Nucleation Effects during Crystallization in Disordered Metastable Metallic Systems D. Müller (Sp), Slovak Academy of Sciences, Bratislava (SK)</p>
197/D07	<p>Ageing Phenomena in CuAlNi Shape Memory Alloys M. Benke (Sp), J. van Humbeeck, V. Mertinger, E. Nagy, University of Miskolc, Miskolc-Egyetemvaros (H)</p>
* = no oral presentation	



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area I
	<p>Topic D Fundamental Aspects: Diffusion, Transformation, Dislocation Theory Chair: N. Babcsan, Hahn-Meitner-Institut, Berlin (D)</p>
266/D08	<p>Bulk and Near-Surface Microstructure of Pt-Rh C. Steiner (Sp), M.M.I.P. van der Klis, B. Schönfeld, G. Kostorz, ETH Zürich (CH); B. Patterson, P.R. Willmott, PSI, SLS, Villigen (CH)</p>
282/D09*	<p>Low Temperature Bonding by Interdiffusion L. Karpenkop (Sp), N. Frage, N. Frumin, M.P. Dariel, Ben Gurion University, Beer-Sheva (Israel)</p>
* = no oral presentation	



Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area I
	<p>Topic K Simulation and Modelling Methods Chair: N. Babcsan, Hahn-Meitner-Institut, Berlin (D)</p>
4/K01	<p>The Modeling of Amorphous State of the Melt-Quenched Ni-Nb Alloys Prepared Including Powdered Components Y. Kostenko (Sp), Zaporozhye State University (Ukraine)</p>
45/K02	<p>Mathematical Modelling by Finite Element Analysis Method of Stress State Establishing for an Steel Alloy S.-D. Mácutá (Sp), University "Dunera de Jos" Galati (RO); S. Stoescu, College Corabia (RO)</p>
49/K03	<p>Crystal Plasticity for Hexagonal Structured Magnesium Alloy AZ31 S. Graff (Sp), D. Steglich, W. Brocks, GKSS Research Center, Geesthacht (D)</p>
108/K04	<p>Optimum Design of Stiffened Composite Shells Subjected to Post-Buckling Constraints R. Sprogis (Sp), K. Kalnins, Riga Technical University (LV)</p>
140/K05	<p>A Hierarchical FEM-XFEM Approach for the Calculation of Stress-Intensity Factors (SIF's) E. Wyart (Sp), P. Martiny, CENAERO, Gosselies (B); J.-F. Remacle, T. Pardoën, Université Catholique de Louvain, Louvain-la-Neuve (B); F. Lani, CENAERO, Gosselies (B)</p>
160/K06	<p>X-FEM-Based Numerical Study of the Effect of the Co-Continuity of the Phases on the Mechanical Response of Dual Elasto-Plastic Phase Composites P. Martiny (Sp), E. Wyart, CENAERO, Gosselies (B); J.-F. Remacle, T. Pardoën, Université Catholique de Louvain, Louvain-la-Neuve (B); F. Lani, CENAERO, Gosselies (B)</p>
181/K07	<p>Effective Diffusion Coefficients of a Two Phase Superalloy, Via a Multiscale Approach N. Warnken (Sp), G. Laschet, I. Steinbach, ACCESS e.V., Aachen (D); S. Chakraborty, Indian Institute of Technology, Kharagpur (India)</p>
* = no oral presentation	

Time / Abstr.No /Poster No.	Lecture Hall B and Poster Area I
	<p>Topic K Simulation and Modelling Methods Chair: N. Babcsan, Hahn-Meitner-Institut, Berlin (D)</p>
188/K08	<p>Criteria for Crack Propagation through Material Interface L. Nahlik (Sp), Academy of Sciences of the Czech Republic, Brno (CZ)</p>
233/K09*	<p>Three-Dimensional FEM Model of the Fatigue Crack T. Denk (Sp), V. Oliva, A. Materna, Czech Technical University, Prague (CZ)</p>
293/K10	<p>Analysis of Various Effects on the Accuracy of Measured Thermophysical Parameters by Pulse Transient Method M. Diesková (Sp), S. Barta, Electrical Engineering and Information Technology, Bratislava (Slovakia Republic); L. Kubicar, Slovak Academy of Science, Bratislava (Slovakia Republic)</p>
301/K11	<p>Infiltration Experiments and Theory A. Gazsi (Sp), T. Barczy, G. Kaptay, University of Miskolc (H)</p>
317/K12*	<p>Comparison of Theoretical Calculations of Phase Equilibria in the System Ag-In-Sb with Experimental Data V. Buchtova (Sp), J. Vrestal, Faculty of Science, Masaryk University, Brno (Czech Republic); A. Kroupa, Institute of Physics of Materials, Academy of Sciences, Brno (Czech Republic)</p>
320/K13	<p>Multi-Scale Modeling of Multi-Axial Compaction of Granular Media from Loose to High Relative Densities A. Procopio (Sp), A. Zavaliangos, Drexel University, Philadelphia (USA)</p>
326/K14	<p>Computational and Experimental Phase Studies in the La-Ga-Ni-O System N. Solak (Sp), M. Zinkevich, H. Nitsche, F. Aldinger, Max-Planck-Institut fuer Metallforschung, Stuttgart (Germany)</p>
12.30 - 14.00 Lunch	
* = no oral presentation	

A W A R D

	Lecture Hall B and Foyer
	Awards
	<p>The best two posters of each session (half day) will receive a certificate and a prize of 100 Euro for the first and 50 Euro for the second winner. On Thursday afternoon the session winners will take part in the competition of the best conference poster. The winner and the second winner will receive an extra award of 150 Euro and 100 Euro, respectively.</p> <p>Best two posters of the Monday afternoon-session; Topic C, H, M</p> <p>Best two posters of the Tuesday morning-session; Topic E, N</p> <p>Best two posters of the Tuesday afternoon-session; Topic F, G, N</p> <p>Best two posters of the Wednesday morning-session; Topic B, I, L</p> <p>Best two posters of the Thursday morning-session; Topic A, D, K</p> <p>Best two posters of the conference</p> <p>Repetition of the Oral Presentation of the best two posters of the conference</p>
16.00	Closing Address

Registration Fees

- 01** Fee for Junior Delegates (Students) coming from Eastern Europe (Belarus, BU, RO, Russia, Ukraine) 90,-EUR
- 02** Fee for Senior Delegates coming from Eastern Europe 150,-EUR
- 03** Fee for Junior Delegates (Students) coming from Central and Western Europe 180,-EUR
- 04** Fee for Senior Delegates coming from Central and Western Europe 300,-EUR

These fees include lunch from Monday through Thursday, the welcoming reception, the basic set at the festival, the industry evening and coffee during the official breaks.

Payment

Payments can be made either by Credit Card (which we highly recommend) or by bank transfer. Bank transfers have to be made to one of the accounts listed below. Please include both the invoice number and your name, when setting the account. In addition, for payments from abroad, a EUR 5,- bank charge must be added to the above mentioned total. Cash payments have to be made in EURO to the account of:

Deutsche Gesellschaft für Materialkunde, Frankfurt
Dresdner Bank AG
Account No.: 0610047800
Bank Sorting Code 500 800 00 (*important*)
SWIFT-BIC: DRES DE FF 563 (International)
IBAN : DE85 5008 0000 0610 0478 00

SteuerNr.: 452503507
USt-IdNr./VAT No.:
DE 111292466

Accommodation

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phone: +41-21-613 7316;
fax: +41-21-616 8647;
EMail: jaggi@
lausanne-tourisme.ch

Welcoming Reception

The welcoming reception on Monday evening will be held in the EPFL, 10 minutes walking distance from the conference location.

The welcoming reception will be sponsored by the local government, Canton de Vaud and FEMS..

Beginning: 19.00 h
End: 21.00 h

Festival on the Beach

The festival starts with a self organized barbecue. Delegates are invited to contribute to the subsequent musical interpretations by playing their own instruments.

Depending on the weather, the festival is supposed to be held along the beach of the Lake. Therefore, the place of the festival is not yet fixed so far. Further information can be obtained at the conference office.

The cover and the basic set of food are included in the conference fee. Tickets for meat and beverages have to be purchased at the conference office or on site.

Beginning: 20.00 h
Open end

Industry Evening

The industry evening on Wednesday in the foyer of the lecture hall or in front of the conference building will give further possibilities for discussion with the industry speakers.

Beginning: after the oral presentations and the podium discussion
Open End

Lunch during the Week

Lunch during the week is served in the restaurant of the University of Lausanne. The restaurant is within 5 minutes walking distance from the conference building. The building is closely connected to the recreation area along the Lake. The Lunch tickets will be handed out to all registered participants at the conference office.

Accompanying Persons

It is possible to buy Lunch-tickets and tickets for the welcome reception, the festival on Tuesday and the Industry Evening on Wednesday for accompanying persons at the conference office in Lausanne (.40 EURO per Person)