

Final Programme

Sunday, September 29, 2013

15:00	<i>Registration of the participants</i>
19:00 – 21:00	Welcome Dinner

Monday, September 30, 2013

09:00 – 09:10	<i>Opening Remarks</i>
09:10 – 12:40	Section I.
	<i>Section Chairs: R. Danzer, P. Šajgalik</i>
09:10 – 09:55	<i>George D. Quinn, Oded Zilcha, J. Michael Rowe, D. Pierce</i> Failure analysis of a 41 meter long neutron beam line tube
09:10 – 09:55	<i>George Quinn, Jonathan Salem</i> Fractographic Analysis of a Large Single Crystal Sapphire Refractive Secondary Concentrators
09:55 – 10:40	<i>Stephan Mattai</i> Rock fracture from the micrometer to kilometer scale
10:40 – 11:10	Coffee Break
11:10 – 11:55	<i>Richard Bradt</i> Estimating the effective mass of a crack in soda-lime-silica glass using fractography as the basis for parameter estimation
11:55 - 12:40	<i>Richard Todd</i> Fracture of aligned and continuous MWCNT/glass-ceramic nanocomposites
12:40 – 14:00	Lunch
14:00-17:50	Section II.

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		<i>Section Chairs: R. Morrell, G.D. Quinn</i>
14:00 – 14:30	<i>Robert Danzer</i>	What is tensile strength and how can it be measured
14:30 – 14:50	<i>Hagen Klemm</i>	Failure of silicon nitride at elevated temperatures –a fractographic study
14:50 –15:10	<i>Walter Harrer</i>	Fractography of biaxial tested Si ₃ N ₄
15:10 –15:30	<i>Tanja Lube, Iyas Khader, Andreas Kailer, Ulrich Degenhardt, Karl Berroth, Karl-Heinz Lang, Claudius Wörner</i>	Fatigue behaviour and fatigue fracture in silicon nitride
15:30 – 16:00	Coffee Break	
		<i>Section Chairs: R. Bradt, R. Todd</i>
16:00 – 16:30	<i>K. Gopalakrishnan, John. J. Jr. Mecholsky</i>	Quantitative Fractography of Mixed Mode Fracture in Glass and Ceramics
16:30– 16:50	<i>Raul Bermejo, Zdenek Chlup, Oldrich Sevecek, Robert Danzer</i>	Understanding the propagation of cracks in ceramic laminates
16:50 – 17:10	<i>Peter Supancic</i>	Exact implementation of subcritical crack growth into a Weibullian strength distribution- theory and experiments
17:10 – 17:30	<i>Martin Trunec</i>	Co-extruded layered ceramics with modified mechanical properties
17:30-17:50	<i>Frantisek Lofaj</i>	Scratch resistance study in thin nanocomposite WC-C coatings
18:00	Dinner	
20:00	Poster section	<i>Section Chair: J. Dusza, Cs. Balázsi</i>

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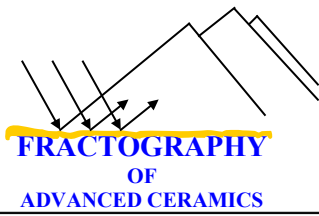
Tuesday, October 1, 2013	
9:00 – 12:10	Section III.
	<i>Section Chairs: H. Klemm, T. Lube</i>
9:00 – 09:30	<i>Gerold Schneider</i> Fracture behaviour of dental enamel
09:30 – 09:50	<i>Csaba Balázs, Katalin Balázs</i> Examination of nanostructured hydroxyapatite bioceramic
09:50 – 10:10	<i>Roger Morrell, Robert Danzer</i> Assessing failures in ceramic HIP systems
10:10 – 10:30	<i>Jakob Kuebler, N. Orlovskaya, M. Lugovy, G. Subhash, M. Neubert, V. Subbotin, R. Stadelmann, C.G. Aneziris, T. Graule</i> Mechanical properties of a ZrB ₂ -30wt.% SiC ceramic composite
10:30-11:00	Coffee Break
	<i>Section Chairs: Z. Chlup, P. Hvizdos</i>
11:00 -11:30	<i>Tomaz Kosmac, Ales Dakskobler, Andraz Kocjan</i> Interrelationship between sintering conditions, microstructure, phase composition and characteristic properties of 3 mol% Y-TZP ceramics
11:30 -11:50	<i>Petra Gaalová</i> Corrosion in acidic beverages and micromechanical properties of human teeth
11:50 – 12:10	<i>Luca Bertolla</i> Preparation and characterization of novel composite bioglass porous scaffolds reinforced with boron nitride nanotubes for hard tissue engineering
12:10 – 14:00	Lunch
14:00-17:30	Section IV.

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		<i>Section Chairs: J. Kuebler, G. Schneider</i>
14:00 – 14:30		<i>K. Mingard, B. Roebuck, <u>Roger Morrell</u>, A. Betzwar-Kotas, H. Danniger, B. Weiss</i> Gigapixel imaging of hardmetal fracture surfaces
14:30 – 14:50		<i>Zbigniew Pedzich</i> Cavitation wear of ceramic phases
14:50 – 15:10		<i>Pavol Hvizdoš</i> Wear damage in Si ₃ N ₄ -C composite systems
15:10 – 15:30		<i><u>Maria Maros B.</u>, A.K. Németh</i> Influence of the graphene additives on the wear behaviour of silicon nitride nanocomposites during pin-on-disc tests
15:30 – 16:00		Coffee Break
		<i>Section Chairs: D. Galusek, T. Kosmač</i>
16:00 – 16:30		<i>Dov Shermann</i> The origin of fracture surface instabilities in silicon crystal
16:30 – 16:50		<i>Zdeněk Chlup</i> Influence of pyrolysis temperature on fracture response in SiOC based composites reinforced by basalt woven fabric
16:50 – 17:10		<i><u>Julien Magnien</u>, G. Khatibi, A. Schiessl, A. Schingale, B. Weiss</i> Assessment of mechanical reliability of surface mounted devices by an accelerated shear fatigue test technique
17:10 – 17:30		<i>Felix Fleischhauer</i> Failure analysis of electrolyte supported solid oxide fuel cells
19:00 – 24:00		Conference Gala Dinner
		Best poster award

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Wednesday, October 2, 2013	
09:00 – 12:10	Section V.
	<i>Section Chairs: Z. Pedzich, D. Shermann</i>
09:00 – 09:20	<i>R. Bermejo, I. Kraleva, R. Morrell, C. Krautgasser, F. Aldrian, P. Supancic, R. Danzer</i> Factors affecting the strength distribution in glass-ceramic composites
09:20 – 09:40	<i>Harshit Porwal, Peter Tatarko, Salvatore Grasso, Aldo R. Boccaccini, Ivo Dlouhý, Mike J. Reece</i> Toughened glass and ceramic matrix composites by graphene addition
09:40 – 10:00	<i>Miroslav Hnatko</i> Preparation and properties of SiC/CNT composite by catalytic CVD
10:00 – 10:20	<i>Peter Tatarko, Salvatore Grasso, Harshit Porwal, Zdeněk Chlup, Ivo Dlouhý, Mike J. Reece</i> Boron nitride nanotubes as a reinforcement for brittle matrices
10:20 – 10:50	Coffee Break
	<i>Section Chairs: F. Lofaj</i>
10:50-11:10	<i>Hynek Hadraba</i> Influence of particle arrangement during electrophoretic deposition on mechanical properties of alumina and zirconia
11:10-11:30	<i>Martin Michálek, Dušan Galusek</i> Al ₂ O ₃ /ZrO ₂ /MWCNT composites with improved fracture toughness and high Young modulus
11:30 – 11:50	<i>Milan Parchovianský, D. Galusek, J. Sedláček, P. Švančárek, M. Kašiarová, J. Dusza, P. Šajgalík</i> Effect of the volume fraction of SiC particles on the fracture mode, microstructure and mechanical properties of hot pressed Al ₂ O ₃ /SiC micro/nano composites
11:50-12:10	<i>Halyna Volkova, Yuriy Podrezov, Volodimir Filipov</i> The influence of Ti addition on fracture toughness and failure of



FRACTOGRAPHY OF ADVANCED CERAMICS 2013

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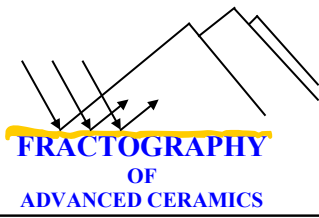
	directionally solidified LaB ₆ -ZrB ₂ eutectic composite with monocrystalline matrix
12:10	<i>Closing Remarks</i>
12:30	Lunch

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Poster Section , Monday, September 30, 2013		
1	<i>R. Lach</i>	Fracture behavior of alumina-YAG particulate composites
2	<i>A. Blachucińska</i>	The analysis of the pore volume fraction on a biomaterial ceramic coating intended for implants
3	<i>M. Platek</i>	Reconstruction of gigapixel stereometric maps of ceramic surfaces
4	<i>Z. Wróbel</i>	Fractal and multifractal analysis of the degree of biomedical ceramic porosity
5	<i>O. Kedzia</i>	Modelling the degree of porosity of the ceramic surface intended for implants
6	<i>W. Sapota</i>	Assessment of possibilities of ceramic biomaterial fracture surface reconstruction using laser confocal microscopy and lenses for long working distance
7	<i>A. Lamza</i>	Multifractal image analysis and pore detection on a stereometric measuring file of porous ceramic coating
8	<i>S. Stach</i>	Perlocation in modelling of the fracture path in ceramic biomaterials
9	<i>M. Halasová</i>	Fracture response of SIOC based composites on dynamic loading
10	<i>M. Kašiarová, M. Michalková P. Tatarko, A. Kovalčíková, L. Kvetková, J. Dusza, P. Šajgalík</i>	Influence of graphene multi-nanoplatelets on the fracture behaviour of Si ₃ N ₄ ceramics
11	<i>M. Michalková</i>	Si ₃ N ₄ /GNPs prepared by different homogenization techniques: impact on mechanical properties

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12	<i>N. Oláh, J. Gubica, C. Balázs, M. Vandrovčova, K. Balázs</i>	Mechanical and Tribological behaviour of TiC and TiC/HAp bioceramics
13	<i>J. Balko, A. Kovalčíková, Cs. Balázs, P. Hvizdoš, J. Dusza</i>	Effect of BN additon on mechanical properties and wear resistance of Si ₃ N ₄ /BN composites
14	<i>L. Kvetková, M. Kašiarová, M. Bl'anda , J. Dusza , Cs. Balázs, F. Dorčáková</i>	Toughening mechanisms in silicon nitride + graphene platelet composites
15	<i>Z. Vilčeková, M. Kašiarová, K. Bodišová, M. Domanická, P. Šajgalík</i>	Characteristic processing flaws of Si ₃ N ₄ based biomaterials and their effect on fracture mechanical properties
16	<i>O. Hanzel, J. Sedláček, P. Šajgalík</i>	Mechanical and functional properties of alumina-MWCNT composites
17	<i>Zs. Maros , Cs. Felhő, B.M. Maros</i>	Application of 2D-3D surface geometrical features in wear analysis of ceramics
18	<i>D.Y. Ezgi</i>	Hierarchical fracture behavior of dental enamel
19	<i>K. Balázs</i>	Hap and TiC/Hap nanomaterials for implants
20	<i>V. Koval', J. Durišin, K. Csach, I. Škorváne, P. Hvizdoš</i>	Phase evolution and microstructure of dysprosium substituted bismuth ferrite ceramics
21	<i>L. Hegedusová L. Ceniga, J. Dusza</i>	Contact strength and crack formation of in PVD-coated WC-CO hardmetal
22	<i>P. Hvičšová, F. Lofaj, M. Novák</i>	Nanoscratch testing of thin CrN coatings
23	<i>A. Dubiel</i>	The effect of graphite nanolayers on fracture of monophase tungsten carbide sinters
24	<i>P. Rutkowski</i>	Mechanical and thermal properties of hot pressed B ₄ C-Cr ₃ C ₂ -hBN materials
25	<i>M. Novák. F. Lofaj, P. Hvičšová</i>	The effect of residual stresses on nanoindentation behavior of thin W-C based coatings
26	<i>M. Kašiarová, P. Tatarko, J. Dusza, P. Šajgalík</i>	Indentation thermal shock resistance of the Si ₃ N ₄ -SiC micro-nanocomposites
27	<i>D. Drdlík, J. Cihlar, E. Bartonickova, H. Hadraba</i>	Anionic stabilization of alumina particles in 2-propanol medium by acidic stabilizers and its influence on the electrophoretic deposition



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