

Scientific Publications

2015

Merstallinger A., R. Holzbauer, C. Jogl, A. Tesch., Cold welding in launch, Final Presentation Days, ESA/ESTEC Noordwijk, March 2015. (Workshop for space industry on Tribology and Mechanisms for space, presentation on actual research projects.)

Adam S. Pagan, Bartomeu Massuti-Ballester, Georg Herdrich, James A. Merrifield, James C. Beck, Volker Liedtke, Nils Stelzer, Benoit Bonvoisin; "Characterization of material demisability through plasma wind tunnel experiments"; 8th European Symposium on Aerothermodynamics for Space Vehicles, Lisbon, Portugal, 3rd of March 2015

Zdeněk Chlup, Ľuboš Bača, Martina Halasová, Erich Neubauer, Hynek Hadraba, Nils Stelzer, Pavla Roupcová, "Effect of metallic dopants on the microstructure and mechanical properties of TiB₂", Journal of the European Ceramic Society, Volume 35, Issue 10, September 2015, Pages 2745–2754

Ľuboš Bača; Nils Stelzer; Erich Neubauer; Andreas Merstallinger; Michael Kitzmantel; Dieter Horwatitsch; Grazyna Mozdzen; Oswald Scheibenbauer; "Development of high performance cutting inserts based on titanium diboride (TiB₂) composites for efficient and cost-effective processing of Al-alloys and steels"; 14th Conference of the European Ceramic Society; Toledo, Spain, 21st-25th of June 2015

Volker Liedtke, Ľuboš Bača, Nils Stelzer, Julien Eck, Denis Lavielle, Thomas Rohr; „Development of Nano-Hybrid Transparent Polymer Films"; 13th International Symposium on Materials in the Space Environment, Pau, France, 22nd to 26th of June 2015

Volker Liedtke, Michael Scheerer, Grazyna Mozdzen, Nils Stelzer, Garbiñe Atxaga Genbeltzu, Cristina Jimenez Aguinaga, Bernaitz Arregi Landa, Andrew Norman; "Advanced Aluminium Based Material For Cryo-reservoir Applications"; Pau, France, 22nd to 26th of June 2015

Scheerer, Z. Simon, T. Roser, B. Rittenschober, R. Reinhold, S. Schmidhuber: Multi-Scale, Multi-Physical Process Simulation of The Production of Multicurved Cfrp Reinforcements, to be publ. in the Proc. of the 20th International Conference on Composite Materials, 19-24 July 2015, Copenhagen, Denmark

Scheerer, Z. Simon, M. Marischler, T. Roser, B. Rittenschober: Development of Integrated Process and Structural Health Monitoring System Based on Piezosensors for Cfrp Reinforcements Made By Resin Transfer Molding, to be publ. in the Proc. of the 10th International Workshop on Structural Health Monitoring, 01. – 03. September 2015, Stanford University, USA

2014

Invited lecture: N. Stelzer, J. Gumpinger, “Micro-structure and mechanical properties of aerospace AM parts”, International Symposium Materials Science and Technology of Additive Manufacturing (MSTAM), 26th-28th of May 2014

Michael Scheerer, Oliver Drescher, Martin Stubenrauch, Jan Persson, Simon Appel: Analyses and Testing of the thermo-mechanical behaviour of cryogenic composite lines, Proc. of the 13th European Conference on Spacecraft Structures, Materials and Environmental Testing, 2014, 01.- 04. April 2014; Braunschweig, Germany

Michael Scheerer, Daniel Lager: Validation of temperature compensation techniques for impact damage detection and localization using ultrasonic sparse arrays, Proc. of the 7th European Workshop on Structural Health Monitoring, 08. – 11. July 2014, Nantes, France

2013

Hot shearing processes: correlation of numerical simulation with real wear phenomena; **H. Torres H., Varga M., Horwatitsch D., Merstallinger A., Adam K., Badisch E.**, Leeds-Lyon-Symposium 2013

Development of a test method for determining friction at deformation conditions, **Schuster M, Merstallinger A, Horwatitsch D., Tomala A**, Proceedings ÖTG Symposium 2013, ISBN 978-3-901657-46-7

PTFE based Tribo-Polymers for use in ball bearings, **Merstallinger A., Macho C, Pambaguian L**, Proceedings ÖTG Symposium 2013, ISBN 978-3-901657-46-7

Vergleich von zwei Reibungstestmethoden für die Simulation von Umformprozessen, **Horwatitsch D., Merstallinger A., Steinhoff K**, Proceedings ÖTG Symposium 2013, ISBN 978-3-901657-46-7

Development of dry lubricated harmonic drives for space applications, **Jansson M, Koenen H, Viviente J-L, Merstallinger A**, European Space Mechanisms and Tribology Symposium, ESMATS 2013, Noordwijk, The Netherlands

Bača Ľuboš, Neubauer Erich, Mozdzen Grazyna, Kitzmantel Michael, Stelzer Nils, The role of refractory metals on the sintering behaviour, microstructure and mechanical properties of titanium diboride (TiB₂); 13th European Ceramic Society Conference Limoges, 23rd – 27th of June 2013

Scheerer, Z. Djinovic, M. Schüller, Fiber-optic system for deflection and damage detection in morphing wing structures, Proc. of the SPIE 2013 Smart Structures & NDI, 10. – 14. March 2013, San Diego, USA

M.Scheerer, D. Lager, F. Göral: Development and testing of a hybride active – passive acoustic shm system for impact damage detection in honeycomb aircraft structures, proc. Of the 19th international conference on composite materials, 28.07.2013 - 02.08.2013, Montreal, Canada

2012

FeF3 catalytic influence on PFPE (Perfluoroalkylpolyethers) lubricants' lifetime under loaded conditions, **Gaillard L, Rohr T, Mariot A, Merstallinger A, Holzbauer R, Brenner J, Gabler C**, Proc. 41st Aerospace Mechanisms Symposium, Pasadena, 2012, USA

Microstructural characterisation of high plastically deformed sub-surface tribozones in sliding Experiments, **Badisch E., Cihak-Bayr U., Mozdzen G., Merstallinger A., Winkelmann H.**, Materials Science & Engineering, submitted

Evaluation of the Ring Compression Test for the Parameter Determination of Extended Friction Models, **Horwatitsch D., Merstallinger A., Steinhoff K.**, 13th International Conference on Aluminum Alloys (ICAA -13), June 2012, Pittsburgh, Pennsylvania, USA

Invited lecture: **N. Stelzer**; „Hochleistungsverbundwerkstoffe für die Luft- und Raumfahrt“, WKO Fachtagung „New Materials & Materials Technologies“, 14. Juni 2012, Wien, Austria

Scheerer, V. Calard, T. Goss, P. Hahn, M. Henzel, Z. Simon: Effect of Production Induced Porosity on the Structural Behaviour And Damage Onset in Ncf Composites, Proc. Of The 15th European Conference On Composite Materials, Venice, Italy, 24-28 June 2012

Scheerer, D. Lager, M. Marischler, Graf, A. Peldszus: Damage detection capabilities of ultrasonic phased arrays and sparse arrays in metallic and composite structures, Proc. of the 6th European Workshop on Structural Health Monitoring, 03.-06. July 2012, Dresden, Germany

Scheerer, T. Cardone, A. Rapisarda, S. Ottaviano, D. Francesconi: Online Damage Detection on Metal and Composite Space Structures by Active and Passive Acoustic Methods, Proc. of the 6th European Workshop on Structural Health Monitoring, 03.-06. July 2012, Dresden, Germany

Scheerer, A. Peldszus, M. Stadtschnitzer, R. Wagner “Modern Acoustic NDT Methods for the off- and online Detection of Damages in Composite Aeronautic Structures”. Proc. 3rd IALCCE, Vienna, Austria, pp. 1430–1437, 2012

2011

Invited lecture: **N. Stelzer**; Nanoobjekte/Nanomaterialien-Grundeigenschaften, Herstellung, Verwendung, AUVA Workshop „Nanotechnologien – Arbeits- und Gesundheitsschutz“, 31.März 2011, Wien, Austria.

Invited lecture: **N. Stelzer, H. Steiner**; Customized security pigments against forgery“, Kunststoff Cluster Fachtagung - Echt oder falsch? – Produktsicherheit und Piraterie im Fokus, 26. Mai 2011, St. Pölten, Austria.

Invited lecture: **N. Stelzer**; Integration of Nanomaterials in Polymer Surfaces - Anti-Counterfeit Components by Integration -, Kunststoff Cluster Fachtagung - Kunststoffoberflächen-Trends und Innovationen, 09. Nov. 2011, Ansfelden, Austria.

Invited lecture: **N. Stelzer**; Hochleistungsverbundwerkstoffe für die Luft- und Raumfahrt, WKO Fachtagung - New Materials & Materials Technologies, 14. Juni 2012, Wien, Austria

Amir Habib, Nils Stelzer, Paul Angerer and Roland Haubner, „Effect of temperature and time on solvothermal synthesis of tetragonal BaTiO₃“, Bull. Mater. Sci., Vol. 34, No. 1, February 2011, pp. 19-23.

Scheerer, C. Bockenheimer, A. Dantele, Z. Djinovic, F. Graf, T. Natschläger, A. Peldszus, M. Reiterer, T. Sauter, R. Stössel: Development and testing of an ultrasonic phased array system based on piezo actuators and fiber optic sensors, Proc. of the 8th International Workshop on Structural Health Monitoring, September 2011, Stanford University, USA