
Laboratory for Joining Technologies & Corrosion

Publications 2013

- A. von Steiger, M. Senn, M. Tuchschnid, H.J. Leber, E. Lehmann, D. Mannes, *Can we look over the shoulders of historical brasswind instrument makers? Aspects of the materiality of nineteenth-century brass instruments in France*, **Historic Brass Society Journal** (2013) 21-38 [DOI: [10.2153/0120130011002](https://doi.org/10.2153/0120130011002)].
- S. Jin, *Characterization and modeling of Au-Ge based high temperature lead-free solder systems*, **Thesis no. 5787**, École Polytechnique Fédérale de Lausanne, 2013 [[source](#)].
- W.J. Lee, B. Weber, C. Czaderski, G. Feltrin, M. Motavalli, C. Leinenbach, *Stress recovery behaviour of an Fe-Mn-Si-Cr-Ni-VC shape memory alloy used for prestressing*, **Smart Materials and Structures** 22 (2013) 125037 [DOI: [10.1088/0964-1726/22/12/125037](https://doi.org/10.1088/0964-1726/22/12/125037)].
- J. Tidblad, A. Gordon, K. Kreislova, M. Faller, D. De la Fuente, T. Yates, A. Verney-Carron, *Convention on long-range transboundary air pollution, UN/ECE international co-operative program on effects on materials, including historic and cultural monuments, Results of corrosion and soiling from the 2011-2012 exposure program for trend analysis 2013*, **Swerea Kimab, Stockholm, Sweden Report No 7272** (2013) 24 pp [[source](#)].
- Y.-C. Chen, E. Goering, L.P.H. Jeurgens, Z. Wang, F. Phillipp, J. Baier, Th. Tietze, G. Schütz, *Unexpected room-temperature ferromagnetism in bulk ZnO*, **Applied Physics Letters** 103 (2013) 162405 [DOI: [10.1063/1.4825268](https://doi.org/10.1063/1.4825268)].
- A. Beni, A. Braun, Th. Huthwelker, J. A. Van Bokhoven, *Meeting Report: Exploratory Workshop on Soft X-rays and Electrochemical Energy Storage and Converters*, **Synchrotron Radiation News** 26 (2013), 36-38 [DOI: [10.1080/08940886.2013.832590](https://doi.org/10.1080/08940886.2013.832590)].
- R. Transchel, F. Heini, J. Stirnimann, F. Kuster, C. Leinenbach, K. Wegener, *Influence of the clearance angle on the cutting efficiency of blunt, octahedral-shaped diamonds in an active filler alloy*, **International Journal of Machine Tools & Manufacture** 75 (2013) 9-15 [DOI: [10.1016/j.ijmachtools.2013.08.001](https://doi.org/10.1016/j.ijmachtools.2013.08.001)].
- N. Weyrich, C. Leinenbach, *Low temperature TLP bonding of Al₂O₃-ceramics using eutectic Au-(Ge, Si) alloys*, **Journal of Materials Science** 48 (2013) 7115-7124 [DOI: [10.1007/s10853-013-7526-z](https://doi.org/10.1007/s10853-013-7526-z)].
- M. Türpe, J. Janczak-Rusch, *Löten mit Nanolöten – Theorie versus Realität*, **Tagungsband vom 4. Symposium Produktionstechnik innovativ und interdisziplinär, Institut für Produktionstechnik, Westsächsische Hochschule Zwickau**, Heft 5, (April 2013) 49-52.
- Y.J. Cho, W.J. Lee, S.K. Park, Y.H. Park, *Effect of Pore Morphology on Deformation Behaviors in Porous Al by FEM Simulations*, **Advanced Engineering Materials** 15 (2013) 166-169 [DOI: [10.1002/adem.201200145](https://doi.org/10.1002/adem.201200145)].
- A. Elrefaey, L. Wojarski, J. Janczak-Rusch, W. Tillmann, *Vacuum brazing titanium using thin nickel layer deposited by PVD technique*, **Materials Science and Engineering A** 565 (2013) 180-186 [DOI: [10.1016/j.msea.2012.12.028](https://doi.org/10.1016/j.msea.2012.12.028)].
- G. Piskoty, L. Wullschleger, R. Loser, A. Herwig, M. Tuchschnid, G. Terrasi, *Failure analysis of a collapsed flat gymnasium roof*, **Engineering Failure Analysis** (2013) [DOI: [10.1016/j.engfailanal.2012.12.006](https://doi.org/10.1016/j.engfailanal.2012.12.006)].
- M. Koster, C. Kenel, A. Stutz, W.J. Lee, A. Lis, C. Affolter, C. Leinenbach, *Fatigue and cyclic deformation behavior of brazed steel joints*, **Materials Science & Engineering A** 581 (2013) 90-97 [DOI: [10.1016/j.msea.2013.05.083](https://doi.org/10.1016/j.msea.2013.05.083)].
- J.K. Parle, A. Beni, V.R. Dhanak, J.A. Smerdon, P. Schmutz, M. Wardé, M.-G. Barthés-Labrousse, B. Bauer, P. Gille, H.R. Sharma, R. McGrath, *STM and XPS investigation of the oxidation of the Al₄(Cr,Fe) quasicrystal approximant*, **Applied Surface Science** 283 (2013) 276-282 [DOI: [10.1016/j.apsusc.2013.06.101](https://doi.org/10.1016/j.apsusc.2013.06.101)].

- W.J. Zhu, J. Wang, L.B. Liu, H.S. Liu, Z.P. Jin, C. Leinenbach, *Modeling and simulation of the TiC reaction layer growth during active brazing of diamond using DICTRA*, **Computational Materials Science** 78 (2013) 74–82 [DOI: [10.1016/j.commatsci.2013.05.025](https://doi.org/10.1016/j.commatsci.2013.05.025)].
- W.J. Lee, B. Weber, G. Feltrin, C. Czaderski, M. Motavalli, C. Leinenbach, *Phase transformation behaviour under uniaxial deformation of an Fe–Mn–Si–Cr–Ni–VC shape memory alloy*, **Materials Science & Engineering A** 581 (2013) 1-7 [DOI: [10.1016/j.msea.2013.06.002](https://doi.org/10.1016/j.msea.2013.06.002)].
- N. Ott, P. Schmutz, C. Ludwig, A. Ulrich, *Local, element-specific and time-resolved dissolution processes on a Mg-Y-RE alloy – influence of inorganic species and buffering systems*, **Corrosion Science** 75 (2013) 201-211 [DOI: [10.1016/j.corsci.2013.06.003](https://doi.org/10.1016/j.corsci.2013.06.003)].
- S. Jin, F. Valenza, R. Novakovic, C. Leinenbach, *Wetting behaviour of ternary Au-Ge-X (X=Sb,Sn) alloys on Cu and Ni*, **Journal of Electronic Materials** 42 (2013) 1024-1032 [DOI: [10.1007/s11664-013-2497-z](https://doi.org/10.1007/s11664-013-2497-z)].
- S. Buhl, C. Leinenbach, R. Spolenak, K. Wegener, *Failure mechanisms and cutting characteristics of brazed single diamond grains*, **International Journal of Advanced Manufacturing Engineering** 66 (2013) 775-786 [DOI: [10.1007/s00170-012-4365-z](https://doi.org/10.1007/s00170-012-4365-z)].
- M.C.J. Marker, L.I. Duarte, C. Leinenbach, K.W. Richter, *Characterization of the Fe-rich corner of Al-Fe-Si-Ti*, **Intermetallics** 39 (2013) 38-49 [DOI: [10.1016/j.intermet.2013.03.007](https://doi.org/10.1016/j.intermet.2013.03.007)].
- O. Guseva, J.A. DeRose, P. Schmutz, *Modelling the early stage time dependence of localised corrosion in aluminium alloys*, **Electrochimica Acta** 88 (2013) 821-831 [DOI: [10.1016/j.electacta.2012.10.059](https://doi.org/10.1016/j.electacta.2012.10.059)].
- D. Walaszek, M. Senn, M. Faller, L. Philippe, B. Wagner, *Metallurgical and chemical characterization of copper alloy reference materials within laser ablation inductively coupled plasma mass spectrometry: Method development for minimally-invasive analysis of ancient bronze objects*, **Spectrochimica Acta Part B: Atomic Spectroscopy** 79–80 (2013) 17–30 [DOI: [10.1016/j.sab.2012.11.001](https://doi.org/10.1016/j.sab.2012.11.001)].
- R. Longtin, H.-R. Elsener, J.R. Sanchez-Valencia, D. Cloetta, L-O Nilsson, C. Leinenbach, O. Gröning, P. Gröning, *High-temperature processable carbon–silicate nanocomposite cold electron cathodes for miniature X-ray sources*, **Journal of Materials Chemistry C** 1 (2013) 1368-1374 [DOI: [10.1039/c2tc00446a](https://doi.org/10.1039/c2tc00446a)].
- J.A. DeRose, T. Suter, T. Hack, R.A. Adey (eds.), *Aluminium Alloy Corrosion of Aircraft Structures: Modelling and Simulation*, **WIT Press, Southampton, UK** 1 (2013) 1-200 [URL: [source](https://www.witpress.com/Source/Document/Source)].
- H. Bo, L.I. Duarte, W.J. Zhu, L.B. Liu, H.S. Liu, Z.P. Jin, C. Leinenbach, *Experimental study and thermodynamic assessment of the Cu–Fe–Ti system*, **CALPHAD: Computer Coupling of Phase Diagrams and Thermochemistry** 40 (2013) 24–33 [DOI: [10.1016/j.calphad.2012.12.001](https://doi.org/10.1016/j.calphad.2012.12.001)].
- S.T. Haag, M-I Richard, V. Favre-Nicolin, U. Welzel, L.P.H. Jeurgens, S. Ravy, G. Richter, E.J. Mittemeijer, O. Thomas, *In situ coherent X-ray diffraction of isolated core-shell nanowires*, **Thin Solid Films** 530 (2013) 113-119 [DOI: [10.1016/j.tsf.2012.07.060](https://doi.org/10.1016/j.tsf.2012.07.060)].