

Veröffentlichungen

Ott, M., Tetzlaff, U. und Mughrabi, H.: Influence of Directional Coarsening on the Isothermal High-Temperature Fatigue Behaviour on the Monocrystalline Nickel-Base Superalloys CMSX-6 and CMSX-4, In Microstructural and Mechanical Properties of Metallic High-Temperature Materials, DFG research report, Hrsg.: Mughrabi, H., Gottstein, G., Riedel, H. und Tobolski, J., Wiley-VCH, Weinheim, (1999).

Tetzlaff, U. und Mughrabi, H.: Enhancement of the High-Temperature Tensile Creep Strength of Monocrystalline Nickel-Base Superalloys by Pre-Rafting in Compression, In "Superalloys 2000", Proc. of 9th Int. Symp. on Superalloys 2000, (2000).

Tetzlaff, U. und Mughrabi, H.: Can the High Temperature Tensile Strength of Nickel-Base Superalloys be Improved by Pre-Rafting?, In Intermetallics und Superalloys, Proc. of EUROMAT '99, Wiley-VCH, Weinheim, (2000).

Mughrabi, H. und Tetzlaff, U.: Microstructure and High-Temperature Strength of Nickel-Base Superalloys, Advanced Engineering Materials, (2000).

Biermann, H., Tetzlaff, U., von Großmann, B., Mughrabi, H. und Schulze, V.: Rafting in Monocrystalline Nickel-Base Superalloys Induced by Shot Peening, Scripta mater., (2000).

Biermann, H., Tetzlaff, U., Mughrabi, H., von Großmann, B., Mechsner, S. und Ungár, T.: Investigations on the Origin and Effect of Anomalous Rafting, In "Superalloys 2000", Proc. Of 9th Int. Symp. on Superalloys 2000, (2000).

Mughrabi, H., Ott, M. und Tetzlaff, U.: New Microstructural Concepts to Optimize the High-Temperature Strength of γ' -Hardened Monocrystalline Nickel-Base Superalloys, Mater. Sci. Eng. A 234-236, (1997).

Von Großmann, B., Biermann, H., Tetzlaff, U., Pyczak, F. und Mughrabi, H.: Measurement of Local Elastic Strains in Aged Monocrystalline Nickel-Base Superalloys by CBED, Scripta mater., (2000).

Neuner, F, Tetzlaff, U.; Mughrabi, H: Enhancement of thermomechanical fatigue resistance of a monocrystalline nickel-base superalloy by pre-rafting. In: M.A. McGaw, S. Kallur ; J. Bressers ; S.D. Peteves (Hrsg.) : Thermomechanical Fatigue Behaviour of Materials, ASTM STP 1428. Bd. 4. West Conshohocken, PA : ASTM International, 2003, S. 112-126.

Tetzlaff, U., Muck, M., und Schönbeck, T.: XRD as an economic method to determine the heat treatment process for industrial an academic applications, DGM Proceedings ECAA 2011, Frankfurt, Aluminum Science and Technology.

Kandaswamy, S. V., Tetzlaff, U., Derix, R, und Elger, G.: Analysis of Crack Length and Crack Position in the Solder Joints of High Power LEDs by Transient Thermal Measurements and Finite Element Simulations, S.V., IEEE IMAPS 2014, San Diego, Proceedings.

Goldmann, F., Hahn, O., Tetzlaff, U., und Kunze, S.: Gefügemorphologien beim Widerstandspunktschweißen von Aluminium-Stahl-Verbindungen, Schweißen und Schneiden 67 (2015) [5] 238 – 244

Goldmann, F., Hahn, O., Tetzlaff, U., und Kunze, S.: Structural morphologies in the case of the resistance spot welding of aluminium/steel joints, Welding and Cutting 15 (2016) No. 60 – 65

J. Thambi, U. Tetzlaff, A. Schiessl, K.-D. Lang, M. Waltz: High cycle fatigue behaviour and generalized fatigue model development of lead-free solder alloy based on local stress approach, *Microelectronics Reliability* 66, (2016), 98–105.

Thambi, J., Schießl, A., Waltz, M., Lang, K.-D., Tetzlaff, U.: Modified Constitutive Creep Laws With Micromechanical Modeling of Pb-Free Solder Alloys“, in: *Journal of Electronic Packaging* 139 (2017), S. 31002.

Georges Lemos, Márcio C. Fredel, Florian Pyczak und Ulrich Tetzlaff,: Development of a TiC_p Reinforced Ni-Based Superalloy MMC, with High Creep Resistance and Reduced Weight“, in: *Key Engineering Materials* 742 (2017), S. 189–196.

Gulden, F., Gramstat, S., Stich, A., Hoppel und Tetzlaff, U.: Properties and Limitation of an Oxide Coated Aluminum Brake Rotor,“ SAE Technical Paper 2018-01-1877, 2018, doi:10.4271/2018-01-1877.

Florian Gulden, Anton Stich, Sebastian Gramstat, Heinz Werner Höppel und Ulrich Tetzlaff, „Investigations of the third body using pin-on-disc and brake dynamometer on Al-MMC brake rotors“, in: *Proceeding of Euro Break, The Hague, Netherlands* (2018).

Graf, K., Tetzlaff, U., Biscaia de Souza, G., Scheid, A.: Effect of Dilution on the Microstructure and Properties of CoCrMoSi alloy Coatings Processed on High-Carbon Substrate, *Materials Research*. 2019; 22(1): e20180502, DOI: <http://dx.doi.org/10.1590/1980-5373-MR-2018-0502>

C. C. da Silva, G. Volpato, M. Fredel, U. Tetzlaff, „Low-pressure processing and microstructural evaluation of unidirectional carbon fiber reinforced aluminum-nickel matrix composites“, in: *Journal of Materials Processing Technology* 2019, *Journal of Materials Processing Tech.* 269 (2019) 10–15.

Volpato, Guilherme; Fredel, Márcio; Tetzlaff, Ulrich. “Dry Sliding Wear and Fe Contamination of Investment-cast SiC Foam Reinforced Aluminum Matrix Composites”, *Proceeding of Euro Break 2019*, ISBN 978-0-9572076-3-9, (2019).

Guilherme Volpato, Márcio C. Fredel, Ulrich Tetzlaff, Dry Sliding Wear and Tribolayer Formation of Investment-Cast SiC Foam Reinforced Aluminum Matrix Composites, 7th European Conference on Tribology - EcoTrib2019, 2019.

G. Lemos, M. C. Fredel, F. Pyczak und Ulrich Tetzlaff, Influence of distinct manufacturing processes on the microstructure of Ni-based metal matrix composites submitted to long thermal exposure, ISSN: 1662-9795, Vol. 809, pp 79-86, doi:10.4028/www.scientific.net/KEM.809.79, 2019

U. Tetzlaff, A. Gerber, R. Amelang und G. Lemos,“ Investigation of the Creep Resistance of a Spray-Compacted Si-Particle Reinforced Al-Based MMC (Dispall® S270), *Key Engineering Materials*, ISSN: 1662-9795, Vol. 809, pp 87-93, doi:10.4028/www.scientific.net/KEM.809.87, 2019.

Omid Mokhtari, Fosca Conti, Sri Krishna Bhogaraju, Markus Meier, Helmut Schweigart, Ulrich Tetzlaff and Gordon Elger, Characterization of tin-oxides and tin-formate crystals obtained from SnAgCu solder alloy under formic acid vapor, *New J. Chem.*, 2019, 43, 10227

Gulden F., Reinhold B., Gramstat S., Stich A., Tetzlaff U., Höppel H.W. (2020) Investigation of the run-in and corrosion behavior of a PEO-coated aluminum brake disc. In: Pfeffer P. (eds) 10th International Munich Chassis Symposium 2019. Proceedings. Springer Vieweg, Wiesbaden. DOIhttps://doi.org/10.1007/978-3-658-26435-2_43

J. Thambi, U. Tetzlaff, A. Schiessl, K.-D. Lang, M. Waltz, Evaluation of the relationship between stress and lifetime of Pb-free solder joints subjected to vibration load using a generalized local stress approach, *Microelectronics Reliability* 106 (2020) 113560

S. Keim, U. Tetzlaff, und G. Elger, „The influence of different-sized Ni micro-and nanopowders on the processing and microstructural properties of Sn-Ag-Cu-solder with low Ag content“, in 2020 IEEE 70th Electronic Components and Technology Conference (ECTC), 2020, S. 2005–2012.

S. Krishna Bhogaraju, F. Conti, H. R. Kotadia, S. Keim, U. Tetzlaff, G. Elger, Novel approach to copper sintering using surface enhanced brass micro flakes for microelectronics packaging, *Journal of Alloys and Compounds*, Volume 844, 2020.

M. Schmitt, , A. Gottwalt, J. Winkler, T. Tobie, G. Schlick, K. Stahl, U. Tetzlaff, J. Schilp, G. Reinhart, Carbon Particle In-Situ Alloying of the Case-Hardening Steel 16MnCr5, *Laser Powder Bed Fusion*, *Laser Powder Bed Fusion. Metals*, 2021, 11, 896. <https://doi.org/10.3390/met11060896>

M. Handwerker, J. Wellnitz, H. Marzbania, U. Tetzlaff, Annealing of chopped and continuous fibre reinforced polyamide 6 produced by fused filament fabrication, *Composites Part B: Engineering*, Volume 223, 2021, 109119

Vorträge:

Tetzlaff, U., Muck, M., und Schönbeck, T.: XRD as an economic method to determine the heat treatment process for industrial an academic applications, DGM ECAA 2011, Frankfurt, Aluminum Science and Technology.

Tetzlaff, U.: New Material Concepts for Automotive Applications, Pimer Foro De Innovación y Electromovilidad, 12th November 2018, UTN Buenos Aires.

Tetzlaff, U. Gulden: Fachvortrag Long-life Aluminium-Bremsscheibe für elektrifiziertes Fahren, Zukunftsforum Mobilität, Mensch in Bewegung, 20.11.2020, Ingolstadt (Online).