

Subdivision 5, Publications 2018 – 2020

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Articles in journals

- 1) Turalaska, P., Homa, M., Sobczak, N., Gazda, A., Wierzbicka-Miernik, A., **Kaban, I.**, The effect of testing procedure on DSC measurements of Gd-Ti-Zr alloy using ZrO₂ container, Journal of Mining and Metallurgy, Section B: Metallurgy 3 56 (2020), S. 371-378
http://www.doiserbia.nb.rs/Article.aspx?id=1450-53392000027T#.X_MKMBYxmUk.
- 2) **Shin, D.**, Lee, C.H., **Kühn, U.**, Lee, S.C., Park, S.J., **Schwab, H.**, **Scudino, S.**, **Kosiba, K.**, Optimizing Laser Powder Bed Fusion of Ti-5Al-5V-5Mo-3Cr by Artificial Intelligence, Journal of Alloys and Compounds (2020), S. 158018/
<https://www.sciencedirect.com/science/article/abs/pii/S0925838820343826?via%3Dihub>.
- 3) Yi, C., Ke, Z., Zhang, L., **Tan, J.**, Jiang, Y., He, Z., Antibacterial Ti-Cu alloy with enhanced mechanical properties as implant applications, Materials Research Express 10 7 (2020), S. 105404/1-10 <https://doi.org/10.1088/2053-1591/abc371>.
- 4)* Zhang, H. , Gu, D. D., Ma, C., Guo, M., Yang, J., Zhang, H., Chen, H., Li, C., Svyarenko, K., **Kosiba, K.**, Understanding tensile and creep properties of WC reinforced nickel-based composites fabricated by selective laser melting, Materials Science and Engineering A 802 (2021), S. 140431/ <https://doi.org/10.1016/j.msea.2020.140431>.
- 5) **Thirathipviwat, P.**, Song, G., Bednarcik, J., **Kühn, U.**, **Gemming, T.**, **Niensch, K.**, **Han, J.**, Compositional complexity dependence of dislocation density and mechanical properties in high entropy alloy systems, Progress in Natural Science: Materials International 4 30 (2020), S. 545-551 <https://doi.org/10.1016/j.pnsc.2020.07.002>.
- 6) **Lu, T.**, **He, T.**, Chen, W., **Chen, H.**, Liu, Y., Wan, B., Fu, Z., **Scudino, S.**, Effect of solution time on the microstructure, precipitation behavior and mechanical properties of (Co_{0.5}NiFeCrTi_{0.5} + SiC)_p/7075Al hybrid composite, Materials Characterization 170 (2020), S. 110702
<https://www.sciencedirect.com/science/article/abs/pii/S1044580320321732#!>.
- 7) **Kosiba, K.**, **Scudino, S.**, Bednarčík, J., Bian, J.J., Gang, L., **Kühn, U.**, **Pauly, S.**, Guiding shear bands in bulk metallic glasses using stress fields: A perspective from the activation of flow units, Physical Review B 13 102 (2020), S. 134113/1-8
<https://journals.aps.org/prb/abstract/10.1103/PhysRevB.102.134113>.
- 8) Tirunilai, A., Hanemann, T., Weiss, K.P., **Freudenberger, J.**, Heilmaier, M., Kauffmann, A., Dislocation-based serrated plastic flow of high entropy alloys at cryogenic temperatures, Acta Materialia 200 (2020), S. 980-991
<https://www.sciencedirect.com/science/article/pii/S1359645420307461?via%3Dihub>.
- 9) **Wang, P.**, Eckert, J., Prashanth, K., Wu, M., **Kaban, I.**, **Xi, L.**, **Scudino, S.**, A review of particulate-reinforced aluminum matrix composites fabricated by selective laser melting, Transactions of Nonferrous Metals Society of China 8 30 (2020), S. 2001-2034
<https://www.sciencedirect.com/science/article/abs/pii/S1003632620653572?via%3Dihub>.
- 10) Vehlow, D., Wong, J., Urban, B., Weißpflog, J., **Gebert, A.**, Schumacher, M., Gelinsky, M., Stamm, M., Müller, M., Catechol Containing Polyelectrolyte Complex Nanoparticles as Local Drug Delivery System for Bortezomib at Bone Substitute Materials, Pharmaceutics 9 12 (2020), S. 799/1-23 <https://doi.org/10.3390/pharmaceutics12090799>.

- 11) **He, T., Chen, S., Lu, T., Zhao, P., Chen, W., Scudino, S.** High-strength and ductile ultrafine-grained Al–Y–Ni–Co alloy for high-temperature applications, *Journal of Alloys and Compounds* 848 (2020), S. 156655 <https://doi.org/10.1016/j.jallcom.2020.156655>.
- 12) **Kosiba, K., Deng, L., Scudino, S.** Viscous Flow of Supercooled Liquid in a Zr-Based Bulk Metallic Glass Synthesized by Additive Manufacturing, *Materials* 17 13 (2020), S. 3803/1-10 <https://www.mdpi.com/1996-1944/13/17/3803>.
- 13) Costa Valente, M., Oliveira, T., Kreve, S., Batalha, R., Oliveira, D., **Pauly, S.**, Bolfarini, C., Bachmann, L., Reis, A., Analysis of the mechanical and physicochemical properties of Ti-6Al-4 V discs obtained by selective laser melting and subtractive manufacturing method, *Journal of Biomedical Materials Research B* (2020), S. 420-427 <https://doi.org/10.1002/jbm.b.34710>.
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- 17) Davani, F., Hilke, S., Rösner, H., **Geissler, D., Gebert, A.**, Wilde, G., Erratum to “On the shear-affected zone of shear bands in bulk metallic glasses” [*J. Alloys Compd.* 837 (2020) 155494], *Journal of Alloys and Compounds* 842 (2020), S. 155852/1 <https://doi.org/10.1016/j.jallcom.2020.155852>.
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- 19) Kruppke, B., Heinemann, C., **Gebert, A.**, Rohnke, M., Weiß, M., Henß, A., Wiesmann, H.-P., Hanke, T., Strontium substitution of gelatin modified calcium hydrogen phosphates as porous hard tissue substitutes, *Journal of Biomedical Materials Research A* (2020), S. 1-11 <https://onlinelibrary.wiley.com/doi/10.1002/jbm.a.37057>.
- 20) **He, T., Lu, T., Ciftci, N., Uhlenwinkel, V., Chen, W., Nielsch, K., Scudino, S.**, Interfacial characteristics and mechanical asymmetry in Al₂₀Zn₄ matrix composites containing Fe-based metallic glass particles, *Materials Science and Engineering A* 793 (2020), S. 139971 <https://www.sciencedirect.com/science/article/abs/pii/S092150932031042X?via%3Dihub>.
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- 22) Cialone, M., **Fernandez-Barcia, M.**, Celegato, F., Coisson, M., Barrera, G., **Uhlemann, M., Gebert, A.**, Sort, J., Pellicer, E., Rizzi, P., Tiberto, P., A comparative study of the influence of the deposition technique (electrodeposition versus sputtering) on the properties of

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 - 25) Davani, F.A., Hilke, S., Rösner, H., **Geissler, D.**, **Gebert, A.**, Wilde, G., Correlations between the ductility and medium-range order of bulk metallic glasses, *Journal of Applied Physics* 1 128 (2020), S. 015103/1-8 <https://aip.scitation.org/doi/10.1063/5.0007564>.
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 - 27) **Orava, J.**, **Kosiba, K.**, **Han, X.**, **Soldatov, I.**, Gutowski, O., Ivashko, O., Dippel, A.-C., v. Zimmermann, M., Rothkirch, A., Bednarcik, J., **Kühn, U.**, **Siegel, H.**, **Ziller, S.**, **Horst, A.**, **Peukert, K.**, **Voigtländer, R.**, **Lindackers, D.**, **Kaban, I.**, Fast-current-heating devices to study in situ phase formation in metallic glasses by using high-energy synchrotron radiation, *Review of Scientific Instruments* 7 91 (2020), S. 073901/1-8 <https://aip.scitation.org/doi/full/10.1063/5.0005732>.
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Individual contributions to edited volumes

- 1) **Zeisig, J.**, Fröhlich, A., **Hufenbach, J.K., Schädlich, N.**, Kräusel, V., **Kühn, U.**, New filler material for repair of high-performance steel tools by laser cladding (2019), S. 1-7.
- 2) **Schädlich, N., Hufenbach, J., Zeisig, J., Baumgart, K., Kühn, U.**, Novel high-performance steels for the development of cast tools (2019), S. 1-8.
- 3) **Freudenberger, J.**, Warlimont, H., Warlimont, H., Martienssen, W., *Copper and Copper Alloys Springer Handbook of Materials Data*, Springer Nature Switzerland AG, ISBN: 978-3-319-69741-3, Kap. B.12 (2018), S. 293-305.
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