

Bernd Gludovatz

List of Publications by Year in descending order

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74
papers

12,034
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61857

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76
all docs

76
docs citations

76
times ranked

8934
citing authors

#	ARTICLE	IF	CITATIONS
1	Atom Probe Analysis of a Zr-based Bulk Metallic Glass. <i>Microscopy and Microanalysis</i> , 2022, 28, 1348-1358.	0.2	1
2	Fracture properties of high-entropy alloys. <i>MRS Bulletin</i> , 2022, 47, 176-185.	1.7	11
3	Impact of test environment on the fracture resistance of cortical bone. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2022, 129, 105155.	1.5	7
4	Effect of heat treatment on the strength and fracture resistance of a laser powder bed fusion-processed 18Ni-300 maraging steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 844, 143167.	2.6	25
5	Deformation-induced medium-range order changes in bulk metallic glasses. <i>Physical Review Materials</i> , 2022, 6, .	0.9	4
6	Design considerations for high entropy alloys in advanced nuclear applications. <i>Journal of Nuclear Materials</i> , 2022, 567, 153814.	1.3	36
7	Medium-range order dictates local hardness in bulk metallic glasses. <i>Materials Today</i> , 2021, 44, 48-57.	8.3	47
8	Fracture resistance of AlSi10Mg fabricated by laser powder bed fusion. <i>Acta Materialia</i> , 2021, 211, 116869.	3.8	108
9	Compositional variations in equiatomic CrMnFeCoNi high-entropy alloys. <i>Materials Characterization</i> , 2021, 180, 111437.	1.9	11
10	An <i>in situ</i> ambient and cryogenic transmission electron microscopy study of the effects of temperature on dislocation behavior in CrCoNi-based high-entropy alloys with low stacking-fault energy. <i>Applied Physics Letters</i> , 2021, 119, .	1.5	8
11	On the Room-Temperature Mechanical Properties of an Ion-Irradiated TiZrNbHfTa Refractory High Entropy Alloy. <i>Jom</i> , 2020, 72, 130-138.	0.9	34
12	Machine-learning assisted laser powder bed fusion process optimization for AlSi10Mg: New microstructure description indices and fracture mechanisms. <i>Acta Materialia</i> , 2020, 201, 316-328.	3.8	133
13	The role of collagen in the dermal armor of the boxfish. <i>Journal of Materials Research and Technology</i> , 2020, 9, 13825-13841.	2.6	7
14	Nacre toughening due to cooperative plastic deformation of stacks of co-oriented aragonite platelets. <i>Communications Materials</i> , 2020, 1, .	2.9	24
15	Role of pre-existing shear band morphology in controlling the fracture behavior of a Zr-Ti-Cu-Ni-Al bulk metallic glass. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 786, 139396.	2.6	8
16	Anisotropic fracture resistance of avian eggshell. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2020, 110, 103888.	1.5	6
17	Real-time observations of TRIP-induced ultrahigh strain hardening in a dual-phase CrMnFeCoNi high-entropy alloy. <i>Nature Communications</i> , 2020, 11, 826.	5.8	165
18	On the Fracture Behavior of Bulk Metallic Glasses. <i>Structural Integrity</i> , 2019, , 331-332.	0.8	0

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19	Biomimetics: On the Origins of Fracture Toughness in Advanced Teleosts: How the Swordfish Sword's Bone Structure and Composition Allow for Slashing under Water to Kill or Stun Prey (Adv. Sci.) Tj ETQq1 1 0.7843146BT /Overlock 10	1.8	21
20	On the onset of deformation twinning in the CrFeMnCoNi high-entropy alloy using a novel tensile specimen geometry. Intermetallics, 2019, 110, 106469.	1.8	21
21	Temperature and load-ratio dependent fatigue-crack growth in the CrMnFeCoNi high-entropy alloy. Journal of Alloys and Compounds, 2019, 794, 525-533.	2.8	74
22	On the Origins of Fracture Toughness in Advanced Teleosts: How the Swordfish Sword's Bone Structure and Composition Allow for Slashing under Water to Kill or Stun Prey. Advanced Science, 2019, 6, 1900287.	5.6	14
23	Mechanical Competence and Bone Quality Develop During Skeletal Growth. Journal of Bone and Mineral Research, 2019, 34, 1461-1472.	3.1	41
24	Real-time nanoscale observation of deformation mechanisms in CrCoNi-based medium- to high-entropy alloys at cryogenic temperatures. Materials Today, 2019, 25, 21-27.	8.3	167
25	Bioinspired nacre-like alumina with a bulk-metallic glass-forming alloy as a compliant phase. Nature Communications, 2019, 10, 961.	5.8	106
26	High-temperature damage-tolerance of coextruded, bioinspired (â€œnacre-likeâ€), alumina/nickel compliant-phase ceramics. Scripta Materialia, 2019, 158, 110-115.	2.6	25
27	Fracture toughness of ultra-high molecular weight polyethylene: A basis for defining the crack-initiation toughness in polymers. Journal of the Mechanics and Physics of Solids, 2019, 122, 435-449.	2.3	9
28	A study of size effects in bioinspired, â€œnacre-likeâ€, metal-compliant-phase (nickel-alumina) coextruded ceramics. Acta Materialia, 2018, 148, 147-155.	3.8	56
29	Increasing M_{2} Loading in Selective Mixed-Matrix Membranes: A Rubber Toughening Approach. Chemistry of Materials, 2018, 30, 1484-1495.	3.2	41
30	Contributions of Material Properties and Structure to Increased Bone Fragility for a Given Bone Mass in the UCD-T2DM Rat Model of Type 2 Diabetes. Journal of Bone and Mineral Research, 2018, 33, 1066-1075.	3.1	57
31	Electrically reversible cracks in an intermetallic film controlled by an electric field. Nature Communications, 2018, 9, 41.	5.8	53
32	On the understanding of the effects of sample size on the variability in fracture toughness of bulk metallic glasses. Acta Materialia, 2017, 126, 494-506.	3.8	37
33	Dislocation mechanisms and 3D twin architectures generate exceptional strength-ductility-toughness combination in CrCoNi medium-entropy alloy. Nature Communications, 2017, 8, 14390.	5.8	344
34	Effect of temperature on the fatigue-crack growth behavior of the high-entropy alloy CrMnFeCoNi. Intermetallics, 2017, 88, 65-72.	1.8	160
35	Multiscale structure and damage tolerance of coconut shells. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 76, 76-84.	1.5	50
36	Synchrotron X-ray micro-tomography at the Advanced Light Source: Developments in high-temperature in-situ mechanical testing. Journal of Physics: Conference Series, 2017, 849, 012043.	0.3	6

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37	Atypical fracture with long-term bisphosphonate therapy is associated with altered cortical composition and reduced fracture resistance. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 8722-8727.	3.3	122
38	Osteocyte-Intrinsic TGF- β 2 Signaling Regulates Bone Quality through Perilacunar/Canalicular Remodeling. Cell Reports, 2017, 21, 2585-2596.	2.9	128
39	Damage tolerance of nuclear graphite at elevated temperatures. Nature Communications, 2017, 8, 15942.	5.8	34
40	High temperature x-ray micro-tomography. AIP Conference Proceedings, 2016, , .	0.3	6
41	Bioinspired Hydroxyapatite/Poly(methyl methacrylate) Composite with a Nacre-like Mimetic Architecture by a Bidirectional Freezing Method. Advanced Materials, 2016, 28, 50-56.	11.1	319
42	A Novel Approach to Developing Biomimetic (‘Nacre-like’) Metal-compliant Phase (Nickel-Alumina) Ceramics through Coextrusion. Advanced Materials, 2016, 28, 10061-10067.	11.1	83
43	Intrinsic mechanical behavior of femoral cortical bone in young, osteoporotic and bisphosphonate-treated individuals in low- and high energy fracture conditions. Scientific Reports, 2016, 6, 21072.	1.6	65
44	Exceptional damage-tolerance of a medium-entropy alloy CrCoNi at cryogenic temperatures. Nature Communications, 2016, 7, 10602.	5.8	1,175
45	Notch fatigue of ultrahigh molecular weight polyethylene (UHMWPE) used in total joint replacements. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 60, 267-279.	1.5	19
46	Modifications to Nano- and Microstructural Quality and the Effects on Mechanical Integrity in Paget's Disease of Bone. Journal of Bone and Mineral Research, 2015, 30, 264-273.	3.1	50
47	Nanoscale origins of the damage tolerance of the high-entropy alloy CrMnFeCoNi. Nature Communications, 2015, 6, 10143.	5.8	608
48	Developing strength and toughness in bio-inspired silicon carbide hybrid materials containing a compliant phase. Acta Materialia, 2015, 98, 141-151.	3.8	106
49	On the tear resistance of skin. Nature Communications, 2015, 6, 6649.	5.8	297
50	Alendronate treatment alters bone tissues at multiple structural levels in healthy canine cortical bone. Bone, 2015, 81, 352-363.	1.4	58
51	Processing, Microstructure and Mechanical Properties of the CrMnFeCoNi High-Entropy Alloy. Jom, 2015, 67, 2262-2270.	0.9	177
52	Size-dependent fracture toughness of bulk metallic glasses. Acta Materialia, 2014, 70, 198-207.	3.8	83
53	Fracture resistance of human cortical bone across multiple length-scales at physiological strain rates. Biomaterials, 2014, 35, 5472-5481.	5.7	125
54	Protective role of Arapaima gigas fish scales: Structure and mechanical behavior. Acta Biomaterialia, 2014, 10, 3599-3614.	4.1	161

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55	A fracture-resistant high-entropy alloy for cryogenic applications. <i>Science</i> , 2014, 345, 1153-1158.	6.0	3,982
56	On the development of ice-templated silicon carbide scaffolds for nature-inspired structural materials. <i>Acta Materialia</i> , 2013, 61, 6948-6957.	3.8	90
57	Correction to Tetrapod Nanocrystals as Fluorescent Stress Probes of Electrospun Nanocomposites. <i>Nano Letters</i> , 2013, 13, 5762-5762.	4.5	1
58	A brief summary of the progress on the EFDA tungsten materials program. <i>Journal of Nuclear Materials</i> , 2013, 442, S173-S180.	1.3	69
59	Structure and fracture resistance of alligator gar (<i>Atractosteus spatula</i>) armored fish scales. <i>Acta Biomaterialia</i> , 2013, 9, 5876-5889.	4.1	116
60	Enhanced fatigue endurance of metallic glasses through a staircase-like fracture mechanism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 18419-18424.	3.3	43
61	Mechanical adaptability of the Bouligand-type structure in natural dermal armour. <i>Nature Communications</i> , 2013, 4, 2634.	5.8	277
62	A study into the crack propagation resistance of pure tungsten. <i>Engineering Fracture Mechanics</i> , 2013, 100, 76-85.	2.0	18
63	Tetrapod Nanocrystals as Fluorescent Stress Probes of Electrospun Nanocomposites. <i>Nano Letters</i> , 2013, 13, 3915-3922.	4.5	58
64	Recent progress in research on tungsten materials for nuclear fusion applications in Europe. <i>Journal of Nuclear Materials</i> , 2013, 432, 482-500.	1.3	610
65	A Highly Fatigue-Resistant Zr-Based Bulk Metallic Glass. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2013, 44, 5688-5693.	1.1	32
66	Natural Flexible Dermal Armor. <i>Advanced Materials</i> , 2013, 25, 31-48.	11.1	327
67	Nanocomposites of Titanium Dioxide and Polystyrene-Poly(ethylene oxide) Block Copolymer as Solid-State Electrolytes for Lithium Metal Batteries. <i>Journal of the Electrochemical Society</i> , 2013, 160, A1611-A1617.	1.3	96
68	On the fracture toughness of fine-grained Mo-3Si-1B (wt.%) alloys at ambient to elevated (1300°C) temperatures. <i>Intermetallics</i> , 2012, 20, 141-154.	1.8	41
69	Review on the EFDA programme on tungsten materials technology and science. <i>Journal of Nuclear Materials</i> , 2011, 417, 463-467.	1.3	157
70	Fracture behaviour of tungsten-vanadium and tungsten-tantalum alloys and composites. <i>Journal of Nuclear Materials</i> , 2011, 413, 166-176.	1.3	96
71	Influence of impurities on the fracture behaviour of tungsten. <i>Philosophical Magazine</i> , 2011, 91, 3006-3020.	0.7	93
72	High temperature fracture experiments on tungsten-rhenium alloys. <i>International Journal of Refractory Metals and Hard Materials</i> , 2010, 28, 692-697.	1.7	81

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73	Fracture toughness of polycrystalline tungsten alloys. International Journal of Refractory Metals and Hard Materials, 2010, 28, 674-678.	1.7	163
74	Technical parameters affecting grain refinement by high pressure torsion. International Journal of Materials Research, 2009, 100, 1653-1661.	0.1	159