Matthias BÃ¶nisch

List of Publications by Year
in descending order

33 papers	2,046 citations	279798 23 h-index	377865 34 g-index
35 all docs	35 docs citations	35 times ranked	1990 citing authors

#	Article	IF	Citations
1	Selective laser melting of in situ titaniumâ€“titanium boride composites: Processing, microstructure and mechanical properties. Acta Materialia, 2014, 76, 13-22.	7.9	483
2	Nanoindentation and wear properties of Ti and Ti-TiB composite materials produced by selective laser melting. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 688, 20-26.	5.6	225
3	Comparative study of microstructures and mechanical properties of in situ Tiâ€“TiB composites produced by selective laser melting, powder metallurgy, and casting technologies. Journal of Materials Research, 2014, 29, 1941-1950.	2.6	116
4	Thermal stability and phase transformations of martensitic Tiâ€“Nb alloys. Science and Technology of Advanced Materials, 2013, 14, 055004.	6.1	107
5	Composition optimization of low modulus and high-strength TiNb-based alloys for biomedical applications. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 65, 866-871.	3.1	100
6	Giant thermal expansion and Î±-precipitation pathways in Ti-alloys. Nature Communications, 2017, 8, 1429.	12.8	81
7	Production of Porous Î²-Type Tiâ€“40Nb Alloy for Biomedical Applications: Comparison of Selective Laser Melting and Hot Pressing. Materials, 2013, 6, 5700-5712.	2.9	77
8	Elastic softening of Î²-type Tiâ€“Nb alloys by indium (In) additions. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 39, 162-174.	3.1	73
9	Phase transformations and mechanical properties of biocompatible Tiâ€“16.1Nb processed by severe plastic deformation. Journal of Alloys and Compounds, 2015, 628, 434-441.	5.5	67
10	Composition-dependent magnitude of atomic shuffles in Tiâ€“Nb martensites. Journal of Applied Crystallography, 2014, 47, 1374-1379.	4.5	65
11	Processing of Ti-5553 with improved mechanical properties via an in-situ heat treatment combining selective laser melting and substrate plate heating. Materials and Design, 2017, 130, 83-89.	7.0	64
12	Factors influencing the elastic moduli, reversible strains and hysteresis loops in martensitic Tiâ€“Nb alloys. Materials Science and Engineering C, 2015, 48, 511-520.	7.3	63
13	Thermal stability and latent heat of Nbâ€“rich martensitic Ti-Nb alloys. Journal of Alloys and Compounds, 2017, 697, 300-309.	5.5	60
14	Hardening by slip-twin and twin-twin interactions in FeMnNiCoCr. Acta Materialia, 2018, 153, 391-403.	7.9	59
15	Effect of Nb addition on microstructure evolution and nanomechanical properties of a glass-forming Tiâ€“Zrâ€“Si alloy. Intermetallics, 2014, 46, 156-163.	3.9	45
16	Experimental determination of latent hardening coefficients in FeMnNiCoCr. International Journal of Plasticity, 2018, 105, 239-260.	8.8	44
17	Ab-initio and experimental study of phase stability of Ti-Nb alloys. Journal of Alloys and Compounds, 2017, 696, 481-489.	5.5	42
18	Î²-type Ti-based bulk metallic glass composites with tailored structural metastability. Journal of Alloys and Compounds, 2017, 708, 972-981.	5.5	36

#	Article	IF	Citations
19	Significant tensile ductility and toughness in an ultrafine-structured Ti 68.8 Nb 13.6 Co 6 Cu 5.1 Al 6.5 bi-modal alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 615, 457-463.	5.6	35
20	Phase formation, microstructure and deformation behavior of heavily alloyed TiNb- and TiV-based titanium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 733, 80-86.	5.6	32
21	Phase transformations in ball-milled Tiâ€“40Nb and Tiâ€“45Nb powders upon quenching from the ÃŸ-phase region. Powder Technology, 2014, 253, 166-171.	4.2	31
22	Tailoring the Bain strain of martensitic transformations in Ti Nb alloys by controlling the Nb content. International Journal of Plasticity, 2016, 85, 190-202.	8.8	31
23	Twinning-induced strain hardening in dual-phase FeCoCrNiAl0.5 at room and cryogenic temperature. Scientific Reports, 2018, 8, 10663.	3.3	28
24	Micro-to-nano-scale deformation mechanism of a Ti-based dendritic-ultrafine eutectic alloy exhibiting large tensile ductility. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 682, 673-678.	5.6	23
25	Routes to control diffusive pathways and thermal expansion in Ti-alloys. Scientific Reports, 2020, 10, 3045.	3.3	16
26	The analysis of severely deformed pure Fe structure aided by X-ray diffraction profile. Physics of Metals and Metallography, 2016, 117, 624-633.	1.0	10
27	Structural stability and thermal expansion of TiTaNbMoZr refractory high entropy alloy. Journal of Alloys and Compounds, 2022, 892, 162154.	5.5	10
28	Nano-precipitation leading to linear zero thermal expansion over a wide temperature range in Ti22Nb. Scripta Materialia, 2021, 205, 114222.	5.2	6
29	Thermal oxidation behavior of glass-forming Tiâ€“Zrâ€“(Nb)â€“Si alloys. Journal of Materials Research, 2016, 31, 1264-1274.	2.6	5
30	Nanostructural Evolution and Deformation Mechanisms of Severely Deformed Pure Fe. Metals and Materials International, 2021, 27, 1798-1807.	3.4	5
31	A general model for the crystal structure of orthorhombic martensite in Ti alloys. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2021, 77, 749-762.	1.1	2
32	Stabilization of Lattice Defects in HPT-Deformed Palladium Hydride. Materials Science Forum, 2010, 667-669, 427-432.	0.3	1
33	Unravelling Anisotropy Evolution during Spiral Pipe Forming: a Multiscale Approach. Procedia Manufacturing, 2020, 47, 1434-1441.	1.9	1