Bernhard VÃ¶lker

List of Publications by Year
in descending order

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37 papers	1,784 citations	471509 17 h-index	330143 37 g-index
37 all docs	37 docs citations	37 times ranked	1871 citing authors

#	Article	IF	Citations
1	Mechanical properties, microstructure and thermal stability of a nanocrystalline CoCrFeMnNi high-entropy alloy after severe plastic deformation. Acta Materialia, 2015, 96, 258-268.	7.9	952
2	Thermodynamic instability of a nanocrystalline, single-phase TiZrNbHfTa alloy and its impact on the mechanical properties. Acta Materialia, 2018, 142, 201-212.	7.9	196
3	Ultra-strong and damage tolerant metallic bulk materials: A lesson from nanostructured pearlitic steel wires. Scientific Reports, 2016, 6, 33228.	3.3	49
4	Influence of Annealing on Microstructure and Mechanical Properties of a Nanocrystalline CrCoNi Medium-Entropy Alloy. Materials, 2018, 11, 662.	2.9	48
5	Microstructure and metallic ion release of pure titanium and Tiâ€“13Nbâ€“13Zr alloy processed by high pressure torsion. Materials and Design, 2016, 91, 340-347.	7.0	43
6	Microstructure, Texture, and Strength Development during High-Pressure Torsion of CrMnFeCoNi High-Entropy Alloy. Crystals, 2020, 10, 336.	2.2	39
7	Phase Decomposition of a Singleâ€Phase AlTiVNb Highâ€Entropy Alloy after Severe Plastic Deformation and Annealing. Advanced Engineering Materials, 2017, 19, 1600674.	3.5	36
8	Experimental conditions affecting the measured fracture toughness at the microscale: Notch geometry and crack extension measurement. Materials and Design, 2020, 191, 108582.	7.0	30
9	Crystal orientation changes: A comparison between a crystal plasticity finite element study and experimental results. Acta Materialia, 2012, 60, 2379-2386.	7.9	29
10	Remote Tracking of Phase Changes in Cr2AlC Thin Films by In-situ Resistivity Measurements. Scientific Reports, 2019, 9, 8266.	3.3	28
11	Combined TEM and XPS studies of metal - polymer interfaces for space applications. Surface and Coatings Technology, 2017, 332, 368-375.	4.8	24
12	Two-stage cracking of metallic bi-layers on polymer substrates under tension. Scripta Materialia, 2018, 145, 5-8.	5.2	24
13	Influence of testing orientation on mechanical properties of Ti45Nb deformed by high pressure torsion. Materials and Design, 2017, 114, 40-46.	7.0	22
14	Stress-Dependent Elasticity of TiAlN Coatings. Coatings, 2019, 9, 24.	2.6	20
15	In-situ observations of the fracture and adhesion of Cu/Nb multilayers on polyimide substrates. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 735, 456-462.	5.6	19
16	Influence of annealing on microstructure and mechanical properties of ultrafine-grained Ti45Nb. Materials and Design, 2019, 179, 107864.	7.0	19
17	Mechanical and optical degradation of flexible optical solar reflectors during simulated low earth orbit thermal cycling. Acta Astronautica, 2020, 175, 277-289.	3.2	19
18	Influence of extreme thermal cycling on metal-polymer interfaces. Microelectronic Engineering, 2017, 167, 17-22.	2.4	18

#	Article	IF	Citations
19	Synthesis and Properties of Orthorhombic MoAlB Coatings. Coatings, 2019, 9, 510.	2.6	17
20	Thin Film Adhesion of Flexible Electronics Influenced by Interlayers. Advanced Engineering Materials, 2017, 19, 1600665.	3.5	14
21	Crack path identification in a nanostructured pearlitic steel using atom probe tomography. Scripta Materialia, 2018, 142, 66-69.	5.2	13
22	Interfacial mutations in the Alâ€polyimide system. Surface and Interface Analysis, 2018, 50, 579-586.	1.8	12
23	Metastable phase formation of Pt-X (Xâ€‰=â€‰Ir, Au) thin films. Scientific Reports, 2018, 8, 10198.	3.3	11
24	How tensile tests allow a screening of the fracture toughness of hard coatings. Surface and Coatings Technology, 2020, 390, 125645.	4.8	10
25	On the fracture behavior of Cr2AlC coatings. Materials and Design, 2021, 206, 109757.	7.0	10
26	Crack deflection in multi-layered four-point bending samples. International Journal of Fracture, 2014, 190, 167-176.	2.2	9
27	Downscaling metal-dielectric interface fracture experiments to sub-micron dimensions: A feasibility study using TEM. Surface and Coatings Technology, 2015, 270, 1-7.	4.8	9
28	Optimizing mechanical properties of Fe26.7Co26.7Ni26.7Si8.9B11 high entropy alloy by inducing hypoeutectic to quasi-duplex microstructural transition. Scientific Reports, 2019, 9, 360.	3.3	9
29	Designing a multifunctional Ti-2Cu-4Ca porous biomaterial with favorable mechanical properties and high bioactivity. Journal of Alloys and Compounds, 2017, 727, 338-345.	5.5	8
30	Ab Initio Guided Low Temperature Synthesis Strategy for Smooth Faceâ€“Centred Cubic FeMn Thin Films. Metals, 2018, 8, 384.	2.3	8
31	Mechanical and chemical investigation of the interface between tungsten-based metallizations and annealed borophosphosilicate glass. Thin Solid Films, 2015, 583, 170-176.	1.8	7
32	Auâ€“Sn solders applied in transient liquid phase bonding: Microstructure and mechanical behavior. Materialia, 2019, 8, 100503.	2.7	7
33	Interface fracture and chemistry of a tungsten-based metallization on borophosphosilicate glass. Philosophical Magazine, 2015, 95, 1967-1981.	1.6	6
34	Fracture of severely plastically deformed Ta and Nb. International Journal of Refractory Metals and Hard Materials, 2017, 64, 143-150.	3.8	6
35	Strength and ductility of heavily deformed pearlitic microstructures. IOP Conference Series: Materials Science and Engineering, 2017, 219, 012003.	0.6	6
36	Following crack path selection in multifilm structures with weak and strong interfaces by in situ 4-point-bending. Journal of Materials Research, 2015, 30, 1090-1097.	2.6	4

#	Article	IF	Citations
37	Exploring stability of a nanoscale complex solid solution thin film by in situ heating transmission electron microscopy. MRS Bulletin, 2022, 47, 371-378.	3.5	3