Andrea Bachmaier

List of Publications by Year
in descending order

59	2,100	361413 20	233421 45
papers	citations	h-index	g-index

59	59	59	1215
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Saturation of Fragmentation During Severe Plastic Deformation. Annual Review of Materials Research, 2010, 40, 319-343.	9.3	460
2	Nanomaterials by severe plastic deformation: review of historical developments and recent advances. Materials Research Letters, 2022, 10, 163-256.	8.7	215
3	Technical parameters affecting grain refinement by high pressure torsion. International Journal of Materials Research, 2009, 100, 1653-1661.	0.3	159
4	The formation of supersaturated solid solutions in Feâ€“Cu alloys deformed by high-pressure torsion. Acta Materialia, 2012, 60, 860-871.	7.9	144
5	Generation of metallic nanocomposites by severe plastic deformation. International Materials Reviews, 2013, 58, 41-62.	19.3	108
6	Deformationâ€Induced Supersaturation in Immiscible Material Systems during Highâ€Pressure Torsion. Advanced Engineering Materials, 2017, 19, 1600675.	3.5	96
7	New procedure to generate stable nanocrystallites by severe plastic deformation. Scripta Materialia, 2009, 61, 1016-1019.	5.2	74
8	New insights on the formation of supersaturated solid solutions in the Cuâ€“Cr system deformed by high-pressure torsion. Acta Materialia, 2014, 69, 301-313.	7.9	73
9	High-Pressure Torsion Deformation Induced Phase Transformations and Formations: New Material Combinations and Advanced Properties. Materials Transactions, 2019, 60, 1256-1269.	1.2	62
10	Phase separation of a supersaturated nanocrystalline Cuâ€“Co alloy and its influence on thermal stability. Acta Materialia, 2015, 96, 269-283.	7.9	56
11	On the process of co-deformation and phase dissolution in a hard-soft immiscible Cu Co alloy system during high-pressure torsion deformation. Acta Materialia, 2016, 115, 333-346.	7.9	47
12	Effect of oxide particles on the stabilization and final microstructure in aluminium. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 7589-7595.	5.6	37
13	Oxygen-mediated deformation and grain refinement in Cu-Fe nanocrystalline alloys. Acta Materialia, 2019, 166, 281-293.	7.9	37
14	Benefits of pattern formation by severe plastic deformation. Applied Materials Today, 2019, 15, 236-241.	4.3	36
15	Rate Independent and Rate Dependent Structural Evolution during Severe Plastic Deformation. Materials Transactions, 2010, 51, 8-13.	1.2	35
16	Ultrahigh-strength low carbon steel obtained from the martensitic state via high pressure torsion. Acta Materialia, 2019, 166, 168-177.	7.9	30
17	Structural evolution and strain induced mixing in Cuâ€“Co composites studied by transmission electron microscopy and atom probe tomography. Materials Characterization, 2015, 100, 178-191.	4.4	29
18	On the reinforcement homogenization in CNT/metal matrix composites during severe plastic deformation. Materials Characterization, 2018, 136, 375-381.	4.4	24

#	Article	IF	Citations
19	Study of the structural defects on carbon nanotubes in metal matrix composites processed by severe plastic deformation. Carbon, 2017, 125, 156-161.	10.3	22
20	Development of a New Testing Procedure for Performing Tensile Tests on Specimens with Sub-Millimetre Dimensions. Journal of Testing and Evaluation, 2013, 41, 635-646.	0.7	20
21	Impact of interfaces on the radiation response and underlying defect recovery mechanisms in nanostructured Cu-Fe-Ag. Materials and Design, 2018, 160, 1148-1157.	7.0	19
22	Effect of processing temperature on the microstructural characteristics of Cu-Ag nanocomposites: From supersaturation to complete phase decomposition. Acta Materialia, 2018, 154, 33-44.	7.9	19
23	Tailoring the magnetic properties of nanocrystalline Cu-Co alloys prepared by high-pressure torsion and isothermal annealing. Journal of Alloys and Compounds, 2017, 725, 744-749.	5.5	19
24	Frequency Dependence of the Coercivity of Soft Magnetic Materials. IEEE Transactions on Magnetics, 2012, 48, 1473-1476.	2.1	17
25	Supersaturation in Agâ€“Ni alloy by two-step high-pressure torsion processing. Philosophical Magazine Letters, 2014, 94, 9-17.	1.2	16
26	On the remarkable thermal stability of nanocrystalline cobalt via alloying. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 624, 41-51.	5.6	16
27	Magnetic Binary Supersaturated Solid Solutions Processed by Severe Plastic Deformation. Nanomaterials, 2019, 9, 6.	4.1	16
28	Electrodeposition of Fe-C Alloys from Citrate Baths: Structure, Mechanical Properties, and Thermal Stability. Metals, 2018, 8, 363.	2.3	15
29	Microstructural evolution during heating of CNT/Metal Matrix Composites processed by Severe Plastic Deformation. Scientific Reports, 2020, 10, 857.	3.3	15
30	Strain Induced Anisotropic Magnetic Behaviour and Exchange Coupling Effect in Fe-SmCo5 Permanent Magnets Generated by High Pressure Torsion. Crystals, 2020, 10, 1026.	2.2	13
31	Intermixing of Fe and Cu on the atomic scale by high-pressure torsion as revealed by DC- and AC-SQUID susceptometry and atom probe tomography. Acta Materialia, 2020, 196, 210-219.	7.9	11
32	Synthesis of nanodiamond reinforced silver matrix nanocomposites: Microstructure and mechanical properties. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 782, 139254.	5.6	11
33	The effect of grain size on bubble formation and evolution in helium-irradiated Cu-Fe-Ag. Materials Characterization, 2021, 171, 110822.	4.4	11
34	High strength nanocrystalline Cuâ€“Co alloys with high tensile ductility. Journal of Materials Research, 2019, 34, 58-68.	2.6	10
35	Microstructural Changes Influencing the Magnetoresistive Behavior of Bulk Nanocrystalline Materials. Applied Sciences (Switzerland), 2020, 10, 5094.	2.5	9
36	Mechanical properties of electrodeposited amorphous/crystalline multilayer structures in the Fe-P system. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 715, 83-91.	5.6	8

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37	Influence of Processing Parameters on the Mechanical Properties of HPTâ€Deformed Nickel/Carbon Nanotube Composites. Advanced Engineering Materials, 2019, 21, 1800422.	3.5	8
38	Tuneable Magneto-Resistance by Severe Plastic Deformation. Metals, 2019, 9, 1188.	2.3	8
39	Nanostructured Low Carbon Steels Obtained from the Martensitic State via Severe Plastic Deformation, Precipitation, Recovery, and Recrystallization. Advanced Engineering Materials, 2019, 21, 1800202.	3.5	8
40	Effect of Carbon in Severe Plastically Deformed Metals. Advanced Engineering Materials, 2020, 22, 2000879.	3.5	8
41	Severe Plastic Deformation and Thermomechanical Processing: Nanostructuring and Properties. Metals, 2020, 10, 1306.	2.3	8
42	Thermal stabilization of metal matrix nanocomposites by nanocarbon reinforcements. Scripta Materialia, 2020, 186, 202-207.	5.2	7
43	Sampling the Cuâ€“Feâ€“Co phase diagram by severe plastic deformation for enhanced soft magnetic properties. Journal of Materials Research and Technology, 2021, 12, 1235-1242.	5.8	7
44	Manufacturing of Textured Bulk Fe-SmCo5 Magnets by Severe Plastic Deformation. Nanomaterials, 2022, 12, 963.	4.1	7
45	Magnetic dilution by severe plastic deformation. AIP Advances, 2020, 10, 015210.	1.3	6
46	Phase decomposition and nano structure evolution of metastable nanocrystalline Cu-Co solid solutions during thermal treatment. IOP Conference Series: Materials Science and Engineering, 2015, 89, 012017.	0.6	5
47	Friction and Tribo-Chemical Behavior of SPD-Processed CNT-Reinforced Composites. Lubricants, 2019, 7, 75.	2.9	5
48	Nanocrystalline FeCr alloys synthesised by severe plastic deformation â€“ A potential material for exchange bias and enhanced magnetostriction. Journal of Magnetism and Magnetic Materials, 2021, 534, 168017.	2.3	5
49	Temperature dependent structural evolution in nickel/carbon nanotube composites processed by high-pressure torsion. IOP Conference Series: Materials Science and Engineering, 2017, 194, 012019.	0.6	4
50	On the magnetic nanostructure of a Coâ€“Cu alloy processed by high-pressure torsion. Journal of Science: Advanced Materials and Devices, 2021, 6, 33-41.	3.1	4
51	Oxide-stabilized microstructure of severe plastically deformed CuCo alloys. Journal of Alloys and Compounds, 2022, 901, 163616.	5.5	4
52	Evolution of the microstructure in carbon nanotube reinforced Nickel matrix composites processed by high-pressure torsion. IOP Conference Series: Materials Science and Engineering, 2017, 258, 012008.	0.6	3
53	Soft Magnetic Properties of Ultra-Strong and Nanocrystalline Pearlitic Wires. Nanomaterials, 2022, 12, 23.	4.1	3
54	Microstructure and Properties of a Fe-Cu Composite Processed by HPT Powder Consolidation. Materials Science Forum, 2010, 667-669, 229-234.	0.3	2

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55	Microstructural evolution in immiscible alloys processed by High-Pressure Torsion. IOP Conference Series: Materials Science and Engineering, 2014, 63, 012023.	0.6	2
56	Mechanical Precision Preparation of Atom Probe Tips. Microscopy and Microanalysis, 2019, 25, 320-321.	0.4	2
57	Processing of Nanostructured Bulk Fe-Cr Alloys by Severe Plastic Deformation. Materials Science Forum, 0, 1016, 1603-1610.	0.3	2
58	In situ AC-hysteresis measurements of SPD-processed Cu20(Fe15Co85)80. AIP Advances, 2021, 11, 015033.	1.3	2
59	Strong and Stable Nanocomposites Prepared by High-Pressure Torsion of Cu-Coated Fe Powders. Metals, 2016, 6, 228.	2.3	1