Zh Nie

List of Publications by Year
in descending order

113 papers	3,588 citations	159525 30 h-index	149623 56 g-index
113 all docs	113 docs citations	113 times ranked	3115 citing authors

#	Article	IF	Citations
1	Effects of inorganic ions, organic particles, blood cells, and cyclic loading on in vitro corrosion of Mg Al alloys. Journal of Magnesium and Alloys, 2023, 11, 2429-2441.	5.5	4
2	Mechanical response and microstructural evolution of Ni-27ÂW alloys during uniaxial tension. Journal of Alloys and Compounds, 2022, 891, 161972.	2.8	3
3	Local chemical fluctuation mediated ultra-sluggish martensitic transformation in high-entropy intermetallics. Materials Horizons, 2022, 9, 804-814.	6.4	15
4	Influences of Extrusion and Silver Content on the Degradation of Mg-Ag Alloys In Vitro and In Vivo. Bioinorganic Chemistry and Applications, 2022, 2022, 1-19.	1.8	0
5	Cell and dendrite growth of tungsten by atmospheric pressure chemical vapor deposition. Journal of Alloys and Compounds, 2022, 922, 166161.	2.8	5
6	Enhanced negative thermal expansion of boron-doped Fe43Mn28Ga28.97B0.03 alloy. Journal of Alloys and Compounds, 2021, 857, 157572.	2.8	6
7	A high-entropy high-temperature shape memory alloy with large and complete superelastic recovery. Materials Research Letters, 2021, 9, 263-269.	4.1	29
8	Improved fracture behavior and microstructural characterization of heterogeneous-structured tungsten. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 805, 140813.	2.6	8
9	Enhancement of mechanical properties in FeCo magnetostrictive alloys with an addition of NiMn. Intermetallics, 2021, 131, 107128.	1.8	4
10	Effect of second phase particles on the dynamic recrystallization in Ni-W alloys during thermal compression. Journal of Alloys and Compounds, 2021, 865, 158872.	2.8	13
11	A Low-Cost Niâ€“Mnâ€“Tiâ€“B High-Temperature Shape Memory Alloy with Extraordinary Functional Properties. ACS Applied Materials & Interfaces, 2021, 13, 31870-31879.	4.0	15
12	Dynamic response of Ti-6.5Alâ€“1Moâ€“1Vâ€“2Zr-0.1B alloy fabricated by wire arc additive manufacturing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 800, 140310.	2.6	18
13	Studies of intergranular and intragranular stresses in cold-rolled CuNiSi alloys. Journal of Alloys and Compounds, 2020, 818, 152896.	2.8	12
14	Ï‰ precipitation: Deformation regulator in metastable titanium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 772, 138687.	2.6	12
15	Effect of grain boundary misorientation angle on diffusion behavior in molybdenum-tungsten systems. Journal of Alloys and Compounds, 2020, 819, 152975.	2.8	15
16	Large room-temperature elastocaloric effect in a bulk polycrystalline Ni-Ti-Cu-Co alloy with low isothermal stress hysteresis. Applied Materials Today, 2020, 21, 100844.	2.3	13
17	In situ investigation of the deformation behaviors of Fe20Co30Cr25Ni25 and Fe20Co30Cr30Ni20 high entropy alloys by high-energy X-ray diffraction. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 795, 139936.	2.6	8
18	The anomalous staircase-like magnetization behavior and giant magnetocaloric effect in a Feâ€“Mn-Ga magnetic shape memory alloy. Intermetallics, 2020, 127, 106975.	1.8	4

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19	Large tunable elastocaloric effect in additively manufactured Niâ€“Ti shape memory alloys. Acta Materialia, 2020, 194, 178-189.	3.8	87
20	Unprecedented non-hysteretic superelasticity of [001]-oriented NiCoFeGa single crystals. Nature Materials, 2020, 19, 712-718.	13.3	95
21	The effect of Ag on the growth of intermetallics at the interface of Sn5Zn/Cu interconnects. Materials Today Communications, 2020, 24, 100960.	0.9	2
22	Magnetic transitions and magnetocaloric effect of Gd4Nd1Si2Ge2. Journal of Alloys and Compounds, 2020, 826, 154117.	2.8	6
23	Tensile deformation behavior of a near-Î± titanium alloy Ti-6Al-2Zr-1Mo-1V under a wide temperature range. Journal of Materials Research and Technology, 2020, 9, 2818-2831.	2.6	28
24	Energy Release Characteristics of Niâ€“Alâ€“CuO Ternary Energetic Structural Material Processed by Cold Spraying. Journal of Thermal Spray Technology, 2020, 29, 1070-1081.	1.6	12
25	Degradation Behavior, Transport Mechanism and Osteogenic Activity of Mgâ€“Znâ€“RE Alloy Membranes in Critical-Sized Rat Calvarial Defects. Coatings, 2020, 10, 496.	1.2	9
26	Outstanding caloric performances for energy-efficient multicaloric cooling in a Ni-Mn-based multifunctional alloy. Acta Materialia, 2019, 177, 46-55.	3.8	44
27	Evidence for a short-range chemical order of Ge atoms and its critical role in inducing a giant magnetocaloric effect in Gd5Si1.5Ge2.5. Journal of Alloys and Compounds, 2019, 808, 151751.	2.8	6
28	Wide-temperature-range perfect superelasticity and giant elastocaloric effect in a high entropy alloy. Materials Research Letters, 2019, 7, 482-489.	4.1	51
29	Development of Fe100-(NiCoMn) magnetostrictive alloys with good mechanical properties. Journal of Alloys and Compounds, 2019, 810, 151931.	2.8	1
30	Effect of Î± phase on high-strain rate deformation behavior of laser melting deposited Ti-6.5Al-1Mo-1V-2Zr titanium alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 750, 81-90.	2.6	22
31	Colossal Elastocaloric Effect in Ferroelastic Ni-Mn-Ti Alloys. Physical Review Letters, 2019, 122, 255703.	2.9	245
32	Influence of Al12Mg17 Additive on Performance of Cold-Sprayed Ni-Al Reactive Material. Journal of Thermal Spray Technology, 2019, 28, 780-793.	1.6	8
33	Effect of reverse Î²-to-Ï‰ transformation on twinning and martensitic transformation in a metastable Î² titanium alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 759, 680-687.	2.6	33
34	Ultrahigh cyclability of a large elastocaloric effect in multiferroic phase-transforming materials. Materials Research Letters, 2019, 7, 137-144.	4.1	41
35	Evolution of Î² Mg17Al12 in Mg Al Zn Ag alloy over time. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 754, 470-478.	2.6	14
36	The dynamic response of the metastable Î² titanium alloy Ti-2Al-9.2Mo-2Fe at ambient temperature. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 751, 191-200.	2.6	33

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37	Microstructures and Kinetics of Tungsten Coating Deposited by Chemical Vapor Transport. Key Engineering Materials, 2019, 815, 70-80.	0.4	0
38	Abundant polymorphic transitions in the Al0.6CoCrFeNi high-entropy alloy. Materials Today Physics, 2019, 8, 1-9.	2.9	27
39	Large elastocaloric effect in a polycrystalline Ni45.7Co4.2Mn37.3Sb12.8 alloy with low transformation strain. Scripta Materialia, 2019, 162, 486-491.	2.6	61
40	Magnetic field-induced magnetostructural transition and huge tensile superelasticity in an oligocrystalline Niâ€“Cuâ€“Coâ€“Mnâ€“In microwire. IUCrJ, 2019, 6, 843-853.	1.0	15
41	Effect of Î±/Î² Forging on Microstructure and Texture Inhomogeneity in a Ti-1023 Forged Disk. Materials Research, 2019, 22, .	0.6	0
42	Stress-induced reverse martensitic transformation in a Ti-51Ni (at%) alloy aged under uniaxial stress. Scientific Reports, 2018, 8, 6099.	1.6	4
43	In-situ synchrotron X-ray diffraction study of dual-step strain variation in laser shock peened metallic glasses. Scripta Materialia, 2018, 149, 112-116.	2.6	4
44	Burst-like superelasticity and elastocaloric effect in [011] oriented Ni50Fe19Ga27Co4 single crystals. Scripta Materialia, 2018, 149, 6-10.	2.6	31
45	Enhanced reactivity of Ni-Al reactive material formed by cold spraying combined with cold-pack rolling. Journal of Alloys and Compounds, 2018, 741, 883-894.	2.8	29
46	Correlation between dislocation-density-based strain hardening and microstructural evolution in dual phase TC6 titanium alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 715, 101-107.	2.6	38
47	Low-field-actuated giant magnetocaloric effect and excellent mechanical properties in a NiMn-based multiferroic alloy. Acta Materialia, 2018, 146, 142-151.	3.8	66
48	Microstructure and growth mechanism of tungsten carbide coatings by atmospheric CVD. Surface and Coatings Technology, 2018, 344, 85-92.	2.2	18
49	Simultaneously achieved large reversible elastocaloric and magnetocaloric effects and their coupling in a magnetic shape memory alloy. Acta Materialia, 2018, 151, 41-55.	3.8	120
50	High Pressure Induced in Situ Solid-State Phase Transformation of Nonepitaxial Grown Metal@Semiconductor Nanocrystals. Journal of Physical Chemistry Letters, 2018, 9, 6544-6549.	2.1	5
51	Structural investigations of Fe-Ga alloys by high-energy x-ray diffraction. Journal of Alloys and Compounds, 2018, 763, 223-227.	2.8	17
52	Giant negative thermal expansion in Fe-Mn-Ga magnetic shape memory alloys. Applied Physics Letters, 2018, 113, .	1.5	19
53	Intergranular stress study of TC11 titanium alloy after laser shock peening by synchrotron-based high-energy X-ray diffraction. AIP Advances, 2018, 8, 055126.	0.6	7
54	Microstructure, Residual Stress and Corrosion Resistance in Electrodeposited Copper Foils. Lecture Notes in Mechanical Engineering, 2018, , 345-351.	0.3	1

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55	Enhanced cyclability of elastocaloric effect in boron-microalloyed Ni-Mn-In magnetic shape memory alloys. Acta Materialia, 2017, 127, 33-42.	3.8	140
56	Reversible deformation-induced martensitic transformation in Al0.6CoCrFeNi high-entropy alloy investigated by in situ synchrotron-based high-energy X-ray diffraction. Acta Materialia, 2017, 128, 12-21.	3.8	93
57	Giant and reversible room-temperature magnetocaloric effect in Ti-doped Ni-Co-Mn-Sn magnetic shape memory alloys. Acta Materialia, 2017, 134, 236-248.	3.8	145
58	Microstructures of chemical vapor deposited high-purity tungsten achieved by two different precursors. Materials Characterization, 2017, 134, 1-8.	1.9	7
59	Low-hysteresis tensile superelasticity in a Ni-Co-Mn-Sn magnetic shape memory microwire. Journal of Alloys and Compounds, 2017, 728, 655-658.	2.8	21
60	In-situ studies of large magnetostriction in DyCo2 compound by synchrotron-based high-energy X-ray diffraction. Journal of Alloys and Compounds, 2017, 724, 1030-1036.	2.8	2
61	Large reversible magnetocaloric effect in a Ni-Co-Mn-In magnetic shape memory alloy. Applied Physics Letters, 2016, 108, .	1.5	84
62	On the tungsten single crystal coatings achieved by chemical vapor transportation deposition. Materials Characterization, 2016, 122, 36-44.	1.9	13
63	Work-hardening behavior, strain rate sensitivity, and failure behavior of in situ CuZr-based metallic glass matrix composite. Journal of Materials Science, 2016, 51, 5992-6001.	1.7	21
64	Evolution of residual stress, free volume, and hardness in the laser shock peened Ti-based metallic glass. Materials and Design, 2016, 111, 473-481.	3.3	22
65	Stable elastocaloric effect under tensile stress of iron-palladium alloy and its in situ X-ray observation. Acta Materialia, 2016, 118, 88-94.	3.8	21
66	Determination of the single-phase constitutive relations of Î±/Î² dual phase TC6 titanium alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 675, 138-146.	2.6	14
67	Elastic plastic deformation of TC6 titanium alloy analyzed by in-situ synchrotron based X-ray diffraction and microstructure based finite element modeling. Journal of Alloys and Compounds, 2016, 688, 787-795.	2.8	29
68	Temperature dependence of micro-deformation behavior of the porous tungsten/Zr-based metallic glass composite. Journal of Non-Crystalline Solids, 2016, 436, 9-17.	1.5	9
69	In-situ studies of low-field large magnetostriction in Tb1â^'xDyxFe2 compounds by synchrotron-based high-energy x-ray diffraction. Journal of Alloys and Compounds, 2016, 658, 372-376.	2.8	13
70	Observation of magnetic-field-induced transformation in MnCo0.78Fe0.22Ge alloys with colossal strain output and large magnetocaloric effect. Journal of Magnetism and Magnetic Materials, 2016, 406, 179-183.	1.0	9
71	Large elastocaloric effect in a Niâ€“Coâ€“Mnâ€“Sn magnetic shape memory alloy. Materials and Design, 2016, 92, 932-936.	3.3	63
72	Stress transfer during different deformation stages in a nano-precipitate-strengthened Ni-Ti shape memory alloy. Applied Physics Letters, 2015, 107, .	1.5	9

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73	An in situ neutron diffraction study of anomalous superelasticity in a strain glass Ni₄₃Fe₁₈Ga₂₇Co₁₂ alloy. Journal of Applied Crystallography, 2015, 48, 1183-1191.	1.9	16
74	Micro-mechanical behavior of porous tungsten/Zr-based metallic glass composite under cyclic compression. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 643, 55-63.	2.6	3
75	Direct evidence for stress-induced transformation between coexisting multiple martensites in a Niâ€“Mnâ€“Ga multifunctional alloy. Journal Physics D: Applied Physics, 2015, 48, 265304.	1.3	13
76	Giant magnetocaloric effect in MnCoGe with minimal Ga substitution. Journal of Magnetism and Magnetic Materials, 2015, 387, 107-110.	1.0	40
77	Strain-induced dimensionality crossover of precursor modulations in Ni2MnGa. Applied Physics Letters, 2015, 106, 021910.	1.5	3
78	Superelasticity by reversible variants reorientation in a Niâ€“Mnâ€“Ga microwire with bamboo grains. Acta Materialia, 2015, 99, 373-381.	3.8	44
79	Large magnetic entropy change and magnetoresistance in a Ni41Co9Mn40Sn10 magnetic shape memory alloy. Journal of Alloys and Compounds, 2015, 647, 1081-1085.	2.8	54
80	Thermal Residual Stresses in W Fibers/Zr-based Metallic Glass Composites by High-energy Synchrotron X-ray Diffraction. Journal of Materials Science and Technology, 2015, 31, 159-163.	5.6	13
81	Interface stress development in the Cu/Ag nanostructured multilayered film during the tensile deformation. Applied Physics Letters, 2014, 105, .	1.5	4
82	Micro-deformation mechanism of Zr-based metallic glass/porous tungsten composite by in-situ high-energy X-ray diffraction and finite element modeling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 598, 407-412.	2.6	6
83	High-energy X-ray diffuse scattering studies on deformation-induced spatially confined martensitic transformations in multifunctional Tiâ€“24Nbâ€“4Zrâ€“8Sn alloy. Acta Materialia, 2014, 81, 476-486.	3.8	29
84	Crystal structural transformation accompanied by magnetic transition in MnCo1â^'Fe Ge alloys. Intermetallics, 2014, 52, 101-104.	1.8	34
85	Low-field large magnetostriction in DyCo2 due to field-induced rearrangement of tetragonal variants. Applied Physics Letters, 2013, 103, 111903.	1.5	13
86	First-order magnetostructural transformation in Fe doped Mnâ€“Coâ€“Ge alloys. Journal of Alloys and Compounds, 2013, 577, 486-490.	2.8	32
87	Interface coherency strain relaxation due to plastic deformation in single crystal Ni-base superalloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 568, 83-87.	2.6	7
88	Effect of the metallic glass volume fraction on the mechanical properties of Zr-based metallic glass reinforced with porous W composite. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 561, 152-158.	2.6	7
89	New intrinsic mechanism on gum-like superelasticity of multifunctional alloys. Scientific Reports, 2013, 3, 2156.	1.6	57
90	Transition in superelasticity for Ni _{55â^'x} Co _x Fe ₁₈ Ga ₂₇ alloys due to strain glass transition. Europhysics Letters, 2012, 98, 46004.	0.7	32

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91	The suppression and recovery of martensitic transformation in a Niâ€“Coâ€“Mnâ€“In magnetic shape memory alloy. Journal of Alloys and Compounds, 2012, 511, 41-44.	2.8	9
92	High-Energy Synchrotron X-Ray Diffraction for InÂSitu Study of Phase Transformation in Shape-Memory Alloys. Jom, 2012, 64, 150-160.	0.9	6
93	Structural Transitions and Magnetic Properties of Ni50Mn36.7In13.3 Particles with Amorphous-Like Phase. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 3062-3070.	1.1	6
94	Flexible Bamboo-Structured NiCoMnIn Microfibers with Magnetic-Field-Induced Reverse Martensite Transformation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 3581-3584.	1.1	2
95	Large internal stress-assisted twin-boundary motion in Ni2MnGa ferromagnetic shape memory alloy. Applied Physics Letters, 2011, 99, .	1.5	5
96	Phase-stress partition and stress-induced martensitic transformation in NbTi/NiTi nanocomposite. Applied Physics Letters, 2011, 99, 084103.	1.5	23
97	Magnetic-field-driven reversal phase transition in highly textured and self-accommodated martensites of Niâ€“Coâ€“Mnâ€“In composite. Journal of Strain Analysis for Engineering Design, 2011, 46, 607-613.	1.0	0
98	In-situ studies of stress- and magnetic-field-induced phase transformation in a polymer-bonded Niâ€“Coâ€“Mnâ€“In composite. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 3561-3571.	2.6	22
99	Formation of Deformation Textures in Face-Centered-Cubic Materials Studied by In-Situ High-Energy X-Ray Diffraction and Self-Consistent Model. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 1246-1254.	1.1	6
100	Evidence of two-length-scale kinetics of R-phase transformation by high-energy X-ray diffraction. Scripta Materialia, 2010, 62, 617-620.	2.6	2
101	Low Temperature Deformation Detwinningâ€”A Reverse Mode of Twinning. Advanced Engineering Materials, 2010, 12, 906-911.	1.6	21
102	Strain-induced dimensionality crossover and associated pseudoelasticity in the premartensitic phase of Ni2MnGa. Applied Physics Letters, 2010, 97, 171905.	1.5	12
103	Evidence for preferential rearrangements of martensite variants by magnetic field in antiferromagnetic CoO crystal. Applied Physics Letters, 2009, 95, 051914.	1.5	7
104	An in situ high-energy X-ray diffraction study of micromechanical behavior of multiple phases in advanced high-strength steels. Acta Materialia, 2009, 57, 3965-3977.	3.8	181
105	Preparation and application of magnetic Fe3O4 nanoparticles for wastewater purification. Separation and Purification Technology, 2009, 68, 312-319.	3.9	476
106	Tailoring size and structural distortion of Fe3O4 nanoparticles for the purification of contaminated water. Bioresource Technology, 2009, 100, 4139-4146.	4.8	142
107	New Sequences of Phase Transition in Ni-Mn-Ga Ferromagnetic Shape Memory Nanoparticles. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2008, 39, 466-469.	1.1	22
108	Phase Transition and Texture Evolution in the Ni-Mn-Ga Ferromagnetic Shape-Memory Alloys Studied by a Neutron Diffraction Technique. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2008, 39, 3113-3119.	1.1	6

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109	In situ high-energy X-ray studies of magnetic-field-induced phase transition in a ferromagnetic shape memory Niâ€“Coâ€“Mnâ€“In alloy. Acta Materialia, 2008, 56, 913-923.	3.8	42
110	In situneutron diffraction study of micromechanical interactions and phase transformation in Niâ€“Mnâ€“Ga alloy under uniaxial and hydrostatic stress. Journal of Physics Condensed Matter, 2008, 20, 104256.	0.7	2
111	Direct evidence of detwinning in polycrystalline Niâ€“Mnâ€“Ga ferromagnetic shape memory alloys during deformation. Journal of Applied Physics, 2008, 104, 103519.	1.1	9
112	Structural transition of ferromagnetic Ni2MnGa nanoparticles. Journal of Applied Physics, 2007, 101, 063530.	1.1	48
113	Direct evidence on magnetic-field-induced phase transition in a NiCoMnIn ferromagnetic shape memory alloy under a stress field. Applied Physics Letters, 2007, 90, 101917.	1.5	34