Oliver Gutfleisch

List of Publications by Year
in descending order

497 papers	21,921 citations	13099 68 h-index	15732 125 g-index
512 all docs	512 docs citations	512 times ranked	9760 citing authors

#	Article	IF	Citations
1	Magnetic Materials and Devices for the 21st Century: Stronger, Lighter, and More Energy Efficient. Advanced Materials, 2011, 23, 821-842.	21.0	2,546
2	Giant magnetocaloric effect driven by structural transitions. Nature Materials, 2012, 11, 620-626.	27.5	1,266
3	Hydrogen storage in magnesium-based hydrides and hydride composites. Scripta Materialia, 2007, 56, 841-846.	5.2	430
4	REE Recovery from End-of-Life NdFeB Permanent Magnet Scrap: A Critical Review. Journal of Sustainable Metallurgy, 2017, 3, 122-149.	2.3	365
5	Hydrogen sorption properties of MgH2â€“LiBH4 composites. Acta Materialia, 2007, 55, 3951-3958.	7.9	350
6	The 2017 Magnetism Roadmap. Journal Physics D: Applied Physics, 2017, 50, 363001.	2.8	279
7	A quantitative criterion for determining the order of magnetic phase transitions using the magnetocaloric effect. Nature Communications, 2018, 9, 2680.	12.8	273
8	Controlling the properties of high energy density permanent magnetic materials by different processing routes. Journal Physics D: Applied Physics, 2000, 33, R157-R172.	2.8	264
9	Novel Design of La(Fe,Si)₁₃ Alloys Towards High Magnetic Refrigeration Performance. Advanced Materials, 2010, 22, 3735-3739.	21.0	264
10	Mastering hysteresis in magnetocaloric materials. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20150308.	3.4	210
11	Evolution of magnetic domain structures and coercivity in high-performance SmCo 2:17-type permanent magnets. Acta Materialia, 2006, 54, 997-1008.	7.9	200
12	Understanding the microstructure and coercivity of high performance NdFeB-based magnets. Scripta Materialia, 2012, 67, 536-541.	5.2	192
13	Large reversible magnetocaloric effect in Ni-Mn-In-Co. Applied Physics Letters, 2015, 106, .	3.3	181
14	Systematic study of the microstructure, entropy change and adiabatic temperature change in optimized Laâ€“Feâ€“Si alloys. Acta Materialia, 2011, 59, 3602-3611.	7.9	177
15	Hydrogen storage in different carbon nanostructures. Applied Physics Letters, 2002, 80, 2985-2987.	3.3	171
16	Large magnetocaloric effect in melt-spun LaFe13âˆ’xSix. Journal of Applied Physics, 2005, 97, 10M305.	2.5	170
17	A multicaloric cooling cycle that exploits thermal hysteresis. Nature Materials, 2018, 17, 929-934.	27.5	158
18	Exploring La(Fe,Si)13-based magnetic refrigerants towards application. Scripta Materialia, 2012, 67, 584-589.	5.2	157

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19	Confinement of NaAlH₄in Nanoporous Carbon: Impact on H₂Release, Reversibility, and Thermodynamics. Journal of Physical Chemistry C, 2010, 114, 4675-4682.	3.1	156
20	Multiple Metamagnetic Transitions in the Magnetic Refrigerant<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>La</mml:mi><mml:mo stretchy="false">(</mml:mo><mml:mi>Fe</mml:mi><mml:mo>,</mml:mo><mml:mi>Si</mml:mi><mml:msub><mml:mo) Tj ETQq0 0 0 mathvariant="normal">H</mml:mi><mml:mi>x</mml:mi></mml:msub></mml:math>. Physical Review Letters, 2008, 101, 177203.	7.8	155
21	Heavy rare earth free, free rare earth and rare earth free magnets - Vision and reality. Scripta Materialia, 2018, 154, 289-294.	5.2	149
22	Influence of annealing on magnetic field-induced structural transformation and magnetocaloric effect in Niâ€“Mnâ€“Inâ€“Co ribbons. Acta Materialia, 2009, 57, 4911-4920.	7.9	146
23	High performance hard magnetic NdFeB thick films for integration into micro-electro-mechanical systems. Applied Physics Letters, 2007, 90, 092509.	3.3	145
24	Giant adiabatic temperature change in FeRh alloys evidenced by direct measurements under cyclic conditions. Acta Materialia, 2016, 106, 15-21.	7.9	145
25	Making a Cool Choice: The Materials Library of Magnetic Refrigeration. Advanced Energy Materials, 2019, 9, 1901322.	19.5	140
26	Temperature-dependent Dy diffusion processes in Ndâ€“Feâ€“B permanent magnets. Acta Materialia, 2015, 83, 248-255.	7.9	139
27	Correlation of microchemistry of cell boundary phase and interface structure to the coercivity of Sm(Co0.784Fe0.100Cu0.088Zr0.028)7.19 sintered magnets. Acta Materialia, 2017, 126, 1-10.	7.9	129
28	Effects of hydrostatic pressure on the magnetism and martensitic transition of Niâ€“Mnâ€“In magnetic superelastic alloys. Applied Physics Letters, 2008, 92, .	3.3	126
29	FePt Hard Magnets. Advanced Engineering Materials, 2005, 7, 208-212.	3.5	120
30	Hysteresis and magnetocaloric effect at the magnetostructural phase transition of Ni-Mn-Ga and Ni-Mn-Co-Sn Heusler alloys. Physical Review B, 2012, 85, .	3.2	119
31	Textured polymer bonded composites with Niâ€“Mnâ€“Ga magnetic shape memory particles. Acta Materialia, 2007, 55, 2707-2713.	7.9	114
32	Contradictory role of the magnetic contribution in inverse magnetocaloric Heusler materials. Physical Review B, 2016, 93, .	3.2	112
33	Atomic structure and domain wall pinning in samarium-cobalt-based permanent magnets. Nature Communications, 2017, 8, 54.	12.8	112
34	Selective laser melting of La(Fe,Co,Si)13 geometries for magnetic refrigeration. Journal of Applied Physics, 2013, 114, .	2.5	111
35	Grain boundary diffusion of different rare earth elements in Nd-Fe-B sintered magnets by experiment and FEM simulation. Acta Materialia, 2017, 124, 421-429.	7.9	111
36	The role of local anisotropy profiles at grain boundaries on the coercivity of Nd2Fe14B magnets. Applied Physics Letters, 2010, 97, .	3.3	108

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37	Systematic investigation of Mn substituted La(Fe,Si)13 alloys and their hydrides for room-temperature magnetocaloric application. Journal of Alloys and Compounds, 2014, 598, 27-32.	5.5	107
38	Magnetic entropy change in melt-spun MnFePGe (invited). Journal of Applied Physics, 2006, 99, 08K903.	2.5	105
39	Magnetocaloric effect in LaFe11.8â^'xCoxSi1.2 melt-spun ribbons. Journal of Alloys and Compounds, 2008, 450, 18-21.	5.5	103
40	Reversibility of magnetostructural transition and associated magnetocaloric effect in Niâ€"Mnâ€"Inâ€"Co. Applied Physics Letters, 2008, 93, .	3.3	99
41	Peculiarities of the magnetocaloric properties in Ni-Mn-Sn ferromagnetic shape memory alloys. Physical Review B, 2010, 81, .	3.2	96
42	In situ pressure and temperature monitoring during the conversion of Mg into MgH2 by high-pressure reactive ball milling. Journal of Alloys and Compounds, 2007, 427, 204-208.	5.5	93
43	Desorption characteristics of rare earth (R) hydrides (R=Y, Ce, Pr, Nd, Sm, Gd and Tb) in relation to the HDDR behaviour of Râ€"Fe-based-compounds. Journal of Alloys and Compounds, 1997, 253-254, 128-133.	5.5	92
44	Microstructural and magnetic properties of Mn-Fe-P-Si (Fe2 P-type) magnetocaloric compounds. Acta Materialia, 2017, 132, 222-229.	7.9	92
45	Towards high-performance permanent magnets without rare earths. Journal of Physics Condensed Matter, 2014, 26, 064205.	1.8	91
46	Synthesis and decomposition of Mg2FeH6 prepared by reactive milling. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2004, 108, 28-32.	3.5	87
47	Fundamental and practical aspects of the hydrogenation, disproportionation, desorption and recombination process. Journal Physics D: Applied Physics, 1996, 29, 2255-2265.	2.8	86
48	La(Fe,Si)13-based magnetic refrigerants obtained by novel processing routes. Journal of Magnetism and Magnetic Materials, 2008, 320, 2252-2258.	2.3	84
49	Epoxy-bonded Laâ€"Feâ€"Coâ€"Si magnetocaloric plates. Journal of Magnetism and Magnetic Materials, 2015, 375, 65-73.	2.3	82
50	On the S(T) diagram of magnetocaloric materials with first-order transition: Kinetic and cyclic effects of Heusler alloys. Acta Materialia, 2016, 107, 1-8.	7.9	82
51	Magnetic field dependence of the maximum magnetic entropy change. Physical Review B, 2011, 83, .	3.2	81
52	Evolution of interaction domains in textured fine-grained Nd2Fe14B magnets. Journal of Applied Physics, 2007, 102, .	2.5	80
53	Identification and recovery of rare-earth permanent magnets from waste electrical and electronic equipment. Waste Management, 2017, 68, 482-489.	7.4	80
54	Impact of different Nd-rich crystal-phases on the coercivity of Ndâ€"Feâ€"B grain ensembles. Scripta Materialia, 2014, 70, 35-38.	5.2	79

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55	Hysteresis Design of Magnetocaloric Materialsâ€"From Basic Mechanisms to Applications. Energy Technology, 2018, 6, 1397-1428.	3.8	79
56	The study of magnetocaloric effect in R2Fe17(R = Y, Pr) alloys. Journal Physics D: Applied Physics, 2004, 37, 2628-2631.	2.8	78
57	Comprehensive Study of Melt Infiltration for the Synthesis of NaAlH4/C Nanocomposites. Chemistry of Materials, 2010, 22, 2233-2238.	6.7	78
58	Element-Resolved Thermodynamics of Magnetocaloric<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>LaFe</mml:mi><mml:mrow><mml:mn>13</mml:mn><mml:mo>â^'</mml:mo><mml:mi>x</mml Physical Review Letters, 2015, 114, 057202.	7.8	78
59	The effect of the thermal decomposition reaction on the mechanical and magnetocaloric properties of La(Fe,Si,Co)13. Acta Materialia, 2012, 60, 4268-4276.	7.9	76
60	The influence of Co and Ga additions on the corrosion behavior of nanocrystalline NdFeB magnets. Corrosion Science, 2002, 44, 1857-1874.	6.6	75
61	Structure and magnetic entropy change of melt-spun LaFe11.57Si1.43 ribbons. Journal of Applied Physics, 2005, 97, 036102.	2.5	75
62	Direct evidence for Cu concentration variation and its correlation to coercivity in Sm(Co0.74Fe0.1Cu0.12Zr.04)7.4 ribbons. Scripta Materialia, 2009, 60, 764-767.	5.2	75
63	Magnetocrystalline anisotropy in L10FePt and exchange coupling in FePt/Fe3Pt nanocomposites. Journal of Physics Condensed Matter, 2005, 17, 4157-4170.	1.8	74
64	Large magnetostrain in polycrystalline Niâ€"Mnâ€"Inâ€"Co. Applied Physics Letters, 2009, 95, .	3.3	74
65	First-principles calculation of the instability leading to giant inverse magnetocaloric effects. Physical Review B, 2014, 89, .	3.2	73
66	On the preparation of La(Fe,Mn,Si)13H polymer-composites with optimized magnetocaloric properties. Journal of Magnetism and Magnetic Materials, 2015, 396, 228-236.	2.3	73
67	Grain boundary diffusion in nanocrystalline Nd-Fe-B permanent magnets with low-melting eutectics. Acta Materialia, 2016, 115, 354-363.	7.9	73
68	Fast development of high coercivity in melt-spun Sm(Co,Fe,Cu,Zr)z magnets. Applied Physics Letters, 2002, 80, 1243-1245.	3.3	72
69	Reversibility and irreversibility of magnetocaloric effect in a metamagnetic shape memory alloy under cyclic action of a magnetic field. Applied Physics Letters, 2010, 97, 052503.	3.3	71
70	High-performance solid-state cooling materials: Balancing magnetocaloric and non-magnetic properties in dual phase La-Fe-Si. Acta Materialia, 2017, 125, 506-512.	7.9	71
71	Memory of texture during HDDR processing of NdFeB. IEEE Transactions on Magnetics, 2003, 39, 2926-2931.	2.1	70
72	Influence of thermal hysteresis and field cycling on the magnetocaloric effect in LaFe11.6Si1.4. Journal of Alloys and Compounds, 2013, 552, 310-317.	5.5	70

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73	Production and properties of metal-bonded La(Fe,Mn,Si)13H composite material. Acta Materialia, 2017, 127, 389-399.	7.9	70
74	Nanocrystalline high performance permanent magnets. Journal of Magnetism and Magnetic Materials, 2002, 242-245, 1277-1283.	2.3	69
75	Ultrastrong and Ductile Soft Magnetic Highâ€Entropy Alloys via Coherent Ordered Nanoprecipitates. Advanced Materials, 2021, 33, e2102139.	21.0	69
76	Absence of magnetic domain wall motion during magnetic field induced twin boundary motion in bulk magnetic shape memory alloys. Applied Physics Letters, 2007, 90, 192504.	3.3	68
77	Dynamical Effects of the Martensitic Transition in Magnetocaloric Heusler Alloys from Direct<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi mathvariant="normal">Î”</mml:mi><mml:msub><mml:mi>T</mml:mi><mml:mi>ad</mml:mi></mml:msub></mml:math>Measurements under Different Magnetic-Field-Sweep Rates. Physical Review Applied, 2016, 5, .	3.8	68
78	Characterisation of solid-HDDR processed Nd16Fe76B8 alloys by means of electron microscopy. Journal of Magnetism and Magnetic Materials, 1995, 147, 320-330.	2.3	67
79	Magnetic field-induced twin boundary motion in polycrystalline Niâ€"Mnâ€"Ga fibres. New Journal of Physics, 2008, 10, 073002.	2.9	67
80	Multi-phase EBSD mapping and local texture analysis in NdFeB sintered magnets. Acta Materialia, 2011, 59, 1026-1036.	7.9	67
81	Al₃Li₄(BH₄)₁₃: A Complex Doubleâ€Cation Borohydride with a New Structure. Chemistry - A European Journal, 2010, 16, 8707-8712.	3.3	66
82	Heat exchangers made of polymer-bonded La(Fe,Si)13. Journal of Applied Physics, 2014, 115, .	2.5	66
83	HRTEM studies of grain boundaries in die-upset Ndâ€"Feâ€"Coâ€"Gaâ€"B magnets. Journal of Alloys and Compounds, 2004, 365, 286-290.	5.5	65
84	Atomic-scale features of phase boundaries in hot deformed Ndâ€"Feâ€"Coâ€"Bâ€"Ga magnets infiltrated with a Ndâ€"Cu eutectic liquid. Acta Materialia, 2014, 77, 111-124.	7.9	65
85	Microstructure and magnetic properties of Mnâ€"Alâ€"C alloy powders prepared by ball milling. Journal of Alloys and Compounds, 2015, 622, 524-528.	5.5	65
86	Tailoring magnetocaloric effect in all-d-metal Ni-Co-Mn-Ti Heusler alloys: a combined experimental and theoretical study. Acta Materialia, 2020, 201, 425-434.	7.9	65
87	Recycling Used Ndâ€Feâ€B Sintered Magnets via a Hydrogenâ€Based Route to Produce Anisotropic, Resin Bonded Magnets. Advanced Energy Materials, 2013, 3, 151-155.	19.5	63
88	Manipulation of matter by electric and magnetic fields: Toward novel synthesis and processing routes of inorganic materials. Materials Today, 2018, 21, 527-536.	14.2	63
89	Influence of defect thickness on the angular dependence of coercivity in rare-earth permanent magnets. Applied Physics Letters, 2014, 104, .	3.3	62
90	Magnetic properties of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mo>(</mml:mo><mml:msub><mml:mi>Fe</mml:mi><mml:m /><mml:mn>2</mml:mn></mml:msub><mml:mi mathvariant="normal">B</mml:mi></mml:mrow></mml:math>alloys and the effect of doping by<mml:math xmlns:mml="http://www.w3.org/1998/Mat. Physical Review B, 2015, 92, .	3.2	62

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91	Assessment of the magnetocaloric effect in La,Pr(Fe,Si) under cycling. Journal of Magnetism and Magnetic Materials, 2016, 406, 259-265.	2.3	62
92	Microchemistry and magnetization reversal mechanism in melt-spun 2:17-type Sm-Co magnets. Applied Physics Letters, 2003, 83, 2208-2210.	3.3	60
93	Microstructure, microchemistry, and magnetic properties of melt-spun Sm(Co,Fe,Cu,Zr)z magnets. Journal of Applied Physics, 2003, 93, 7975-7977.	2.5	60
94	Magnetocaloric effect of gadolinium in high magnetic fields. Physical Review B, 2019, 99, .	3.2	60
95	Martensitic transformation and magnetic properties in Niâ€“Feâ€“Gaâ€“Co magnetic shape memory alloys. Acta Materialia, 2008, 56, 3177-3186.	7.9	59
96	Effect of Transition Metal Fluorides on the Sorption Properties and Reversible Formation of Ca(BH₄)₂. Journal of Physical Chemistry C, 2011, 115, 2497-2504.	3.1	58
97	A new type of La(Fe,Si)13-based magnetocaloric composite with amorphous metallic matrix. Scripta Materialia, 2015, 95, 50-53.	5.2	57
98	La(Fe,Si)13-based magnetic refrigerants obtained by novel processing routes. Journal of Magnetism and Magnetic Materials, 2009, 321, 3571-3577.	2.3	55
99	A Matter of Size and Stress: Understanding the Firstâ€Order Transition in Materials for Solidâ€State Refrigeration. Advanced Functional Materials, 2017, 27, 1606735.	14.9	55
100	Texture in a ternary Nd16.2Fe78.2B5.6 powder using a modified hydrogenationâ€“disproportionationâ€“desorptionâ€“recombination process. Journal of Magnetism and Magnetic Materials, 2000, 210, 5-9.	2.3	54
101	Determination of the Heat of Hydride Formation/Decomposition by High-Pressure Differential Scanning Calorimetry (HP-DSC). Journal of Physical Chemistry B, 2007, 111, 13301-13306.	2.6	54
102	Evaluation of the reliability of the measurement of key magnetocaloric properties: A round robin study of La(Fe,Si,Mn)HÎ´ conducted by the SSEEC consortium of European laboratories. International Journal of Refrigeration, 2012, 35, 1528-1536.	3.4	54
103	Asymmetric first-order transition and interlocked particle state in magnetocaloric La(Fe,Si)₁₃. Physica Status Solidi - Rapid Research Letters, 2015, 9, 136-140.	2.4	54
104	Magnetostructural transition and adiabatic temperature change in Mnâ€“Coâ€“Ge magnetic refrigerants. Scripta Materialia, 2012, 66, 642-645.	5.2	53
105	Experimental and computational analysis of magnetization reversal in (Nd,Dy)-Fe-B core shell sintered magnets. Acta Materialia, 2017, 127, 498-504.	7.9	53
106	Critical raw materials â€“ Advanced recycling technologies and processes: Recycling of rare earth metals out of end of life magnets by bioleaching with various bacteria as an example of an intelligent recycling strategy. Minerals Engineering, 2019, 134, 104-117.	4.3	53
107	Resistivity measurements on hydrogenation disproportionation desorption recombination phenomena in Ndî—,Feî—,B alloys with Co, Ga and Zr additions. Journal of Alloys and Compounds, 1997, 260, 284-291.	5.5	52
108	Magnetostructural transformation in Niâ€“Mnâ€“Inâ€“Co ribbons. Applied Physics Letters, 2008, 92, 162509.	3.3	52

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109	Magnetic Shape Memory Phenomena. , 2009, , 399-439.		51
110	Near net shape production of radially oriented NdFeB ring magnets by backward extrusion. Journal of Materials Processing Technology, 2003, 135, 358-365.	6.3	50
111	Magnetocaloric materials with first-order phase transition: thermal and magnetic hysteresis in LaFe11.8Si1.2 and Ni2.21Mn0.77Ga1.02 (invited). Journal of Applied Physics, 2012, 111, .	2.5	50
112	Magnetocaloric materials for refrigeration near room temperature. MRS Bulletin, 2018, 43, 269-273.	3.5	50
113	Constrained crystals deep convolutional generative adversarial network for the inverse design of crystal structures. Npj Computational Materials, 2021, 7, .	8.7	50
114	Phase transformations during the disproportionation stage in the solid HDDR process in a Nd16Fe76B8 alloy. Journal of Alloys and Compounds, 1994, 215, 227-233.	5.5	49
115	Corrosion studies on highly textured Ndâ€“Feâ€“B sintered magnets. Journal of Alloys and Compounds, 2006, 415, 111-120.	5.5	49
116	Mechanism of the texture development in hydrogen-disproportionationâ€“desorption-recombination (HDDR) processed Ndâ€“Feâ€“B powders. Acta Materialia, 2015, 85, 42-52.	7.9	49
117	Constraint-dependent twin variant distribution in Ni2MnGa single crystal, polycrystals and thin film: An EBSD study. Acta Materialia, 2010, 58, 4629-4638.	7.9	47
118	Enhancement of coercivity and saturation magnetization of Al3+ substituted M-type Sr-hexaferrites. Journal of Alloys and Compounds, 2017, 690, 979-985.	5.5	47
119	Local texture in Ndâ€“Feâ€“B sintered magnets with maximised energy density. Journal of Alloys and Compounds, 2004, 365, 259-265.	5.5	46
120	Large entropy change, adiabatic temperature change, and small hysteresis in La(Fe,Mn)11.6Si1.4 strip-cast flakes. Journal of Magnetism and Magnetic Materials, 2015, 377, 90-94.	2.3	46
121	Improved hot workability and magnetic properties in NdFeCoGaB hot deformed magnets. IEEE Transactions on Magnetics, 2000, 36, 3288-3290.	2.1	45
122	Thermodynamics of Feâ€“Sm, Feâ€“H, and Hâ€“Sm systems and its application to the hydrogenâ€“disproportionationâ€“desorptionâ€“recombination (HDDR) process for the system Fe17Sm2â€“H2. Journal of Alloys and Compounds, 2002, 339, 118-139.	5.5	45
123	Magnetocaloric effect in reactively-milled LaFe11.57Si1.43Hy intermetallic compounds. Journal of Applied Physics, 2007, 102, 053906.	2.5	45
124	Comparison of local and global texture in HDDR processed Ndâ€“Feâ€“B magnets. Acta Materialia, 2011, 59, 2029-2034.	7.9	45
125	A Comparative Study on the Magnetocaloric Properties of Niâ€Mnâ€X(â€Co) Heusler Alloys. Physica Status Solidi (B): Basic Research, 2018, 255, 1700331.	1.5	45
126	The role of Ni in modifying the order of the phase transition of La(Fe,Ni,Si)13. Acta Materialia, 2018, 160, 137-146.	7.9	45

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127	Tunable first order transition in La(Fe,Cr,Si)13 compounds: Retaining magnetocaloric response despite a magnetic moment reduction. Acta Materialia, 2019, 175, 406-414.	7.9	45
128	Hydrogenation disproportionation desorption recombination in Smâ€“Co alloys by means of reactive milling. Applied Physics Letters, 1998, 73, 3001-3003.	3.3	44
129	Texture memory effect of Ndâ€“Feâ€“B during hydrogen treatment. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 1282-1285.	2.3	44
130	Influence of composition and order on the magnetism of Feâ€“Pt alloys: Neutron powder diffraction and theory. Applied Physics Letters, 2006, 89, 032506.	3.3	44
131	Structural, magnetic, and mechanical properties of 5Î¼m thick SmCo films suitable for use in microelectromechanical systems. Journal of Applied Physics, 2008, 103, .	2.5	44
132	Large reversible magnetocaloric effect in RNi compounds. Journal Physics D: Applied Physics, 2008, 41, 245006.	2.8	44
133	Reversible solid-state hydrogen-pump driven by magnetostructural transformation in the prototype system La(Fe,Si)13H<i>y</i>. Journal of Applied Physics, 2012, 112, .	2.5	44
134	Impact of lattice dynamics on the phase stability of metamagnetic FeRh: Bulk and thin films. Physical Review B, 2016, 94, .	3.2	44
135	Interaction domains in high-performance NdFeB thick films. Scripta Materialia, 2009, 60, 826-829.	5.2	43
136	Experimental Evidence of Ca[B12H12] Formation During Decomposition of a Ca(BH4)2 + MgH2 Based Reactive Hydride Composite. Journal of Physical Chemistry C, 2011, 115, 18010-18014.	3.1	43
137	High-performance nanocrystalline PrFeB-based magnets produced by intensive milling. Journal of Applied Physics, 2002, 91, 8159.	2.5	42
138	High-coercivity Ndâ€“Feâ€“B thick films without heavy rare earth additions. Acta Materialia, 2013, 61, 4920-4927.	7.9	42
139	Effect of milling parameters on SmCo5 nanoflakes prepared by surfactant-assisted high energy ball milling. Journal of Applied Physics, 2013, 113, .	2.5	42
140	Multiferroic Clusters: A New Perspective for Relaxorâ€Type Roomâ€Temperature Multiferroics. Advanced Functional Materials, 2016, 26, 2111-2121.	14.9	42
141	Reversibility of minor hysteresis loops in magnetocaloric Heusler alloys. Applied Physics Letters, 2017, 110, .	3.3	42
142	Grain growth effects on the corrosion behavior of nanocrystalline NdFeB magnets. Corrosion Science, 2002, 44, 1097-1112.	6.6	41
143	Effect of additives on the synthesis and reversibility of Ca(BH4)2. Journal of Alloys and Compounds, 2010, 493, 281-287.	5.5	41
144	Effect of carbon on magnetocaloric effect of LaFe11.6Si1.4 compounds and on the thermal stability of its hydrides. Journal of Applied Physics, 2012, 111, .	2.5	41

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145	<i>In situ</i> magnetic force microscope studies of magnetization reversal of interaction domains in hot deformed Nd-Fe-B magnets. Journal of Applied Physics, 2012, 111, .	2.5	41
146	Database of novel magnetic materials for high-performance permanent magnet development. Computational Materials Science, 2019, 168, 188-202.	3.0	41
147	A comparison of the magnetic properties and deformation behaviour of Nd-Fe-B magnets made from melt-spun, mechanically alloyed and HDDR powders. Journal Physics D: Applied Physics, 1998, 31, 1660-1666.	2.8	39
148	Fully dense MgB2 superconductor textured by hot deformation. Journal of Alloys and Compounds, 2001, 329, 285-289.	5.5	39
149	Hydrogen sorption properties of Mgâ€“1 wt.% Niâ€“0.2 wt.% Pd prepared by reactive milling. Journal of Alloys and Compounds, 2005, 404-406, 413-416.	5.5	39
150	Magnetic field dependence of the maximum adiabatic temperature change. Applied Physics Letters, 2011, 99, .	3.3	39
151	Electrical and magnetic properties of hot-deformed Nd-Fe-B magnets with different DyF3 additions. Journal of Applied Physics, 2013, 114, .	2.5	39
152	The Resource Basis of Magnetic Refrigeration. Journal of Industrial Ecology, 2017, 21, 1291-1300.	5.5	39
153	Texture inducement during HDDR processing of NdFeB. IEEE Transactions on Magnetics, 2002, 38, 2958-2960.	2.1	38
154	NiMnâ€Based Alloys and Composites for Magnetically Controlled Dampers and Actuators. Advanced Engineering Materials, 2012, 14, 653-667.	3.5	38
155	Predicting the tricritical point composition of a series of LaFeSi magnetocaloric alloys via universal scaling. Journal Physics D: Applied Physics, 2017, 50, 414004.	2.8	38
156	Synthesis, morphology, thermal stability and magnetic properties of Î±â€³-Fe16N2 nanoparticles obtained by hydrogen reduction of Î³-Fe2O3 and subsequent nitrogenation. Acta Materialia, 2017, 123, 214-222.	7.9	38
157	Hydrogenation properties of nanocrystalline Mg- and Mg2Ni-based compounds modified with platinum group metals (PGMs). Journal of Alloys and Compounds, 2003, 356-357, 598-602.	5.5	37
158	Net-shape and crack-free production of Ndâ€“Feâ€“B magnets by hot deformation. Journal of Alloys and Compounds, 2014, 589, 301-306.	5.5	37
159	Calculating temperature-dependent properties of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Nd</mml:mi><mml:mn>2</mml:mn></mml mathvariant="normal">B</mml:mi></mml:mrow></mml:math> permanent magnets by atomistic spin model simulations. Physical Review B, 2019, 99, .	3.2	37
160	Ca(BH₄)₂ + MgH₂: Desorption Reaction and Role of Mg on Its Reversibility. Journal of Physical Chemistry C, 2013, 117, 3846-3852.	3.1	35
161	Giant induced anisotropy ruins the magnetocaloric effect in gadolinium. Journal of Magnetism and Magnetic Materials, 2013, 331, 33-36.	2.3	34
162	Effect of reactive milling in hydrogen on the magnetic and magnetocaloric properties of LaFe11.57Si1.43. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 673-675.	2.3	33

#	Article	IF	Citations
163	Mechanochemical synthesis and XPS analysis of sodium alanate with different additives. Acta Materialia, 2009, 57, 5563-5570.	7.9	33
164	Increased magnetic moment induced by lattice expansion from <i>Î±</i>-Fe to Î±â€²-Fe8N. Journal of Applied Physics, 2015, 117, .	2.5	33
165	Growth, structure, and magnetic properties of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si0011.gif" overflow="scroll"><mml:msup><mml:mrow><mml:mi mathvariant="bold-italic">Î³</mml:mi></mml:mrow><mml:mrow><mml:mo>â€²</mml:mo></mml:mrow></mml:msup><mml:msub><m mathvariant="normal">-Fe</mml:mi></mml:mrow><mml:mrow><mml:mn mathvariant="bold">4</mml:mn></mml:mrow></mml:msub><mml:mi mathvariant="normal">N</mml:mi	2.8	33
166	A systematic study of HDDR processing conditions for the recycling of end-of-life Nd-Fe-B magnets. Journal of Alloys and Compounds, 2017, 724, 51-61.	5.5	33
167	HDDR of Smâ€“Co alloys using high hydrogen pressures. Journal of Magnetism and Magnetic Materials, 1999, 192, 73-76.	2.3	32
168	Corrosion behaviour of hot-pressed and die-upset nanocrystalline NdFeB-based magnets. Journal of Magnetism and Magnetic Materials, 2002, 248, 121-133.	2.3	32
169	Hydride formation in ball-milled and cryomilled Mgâ€“Fe powder mixtures. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2009, 158, 19-25.	3.5	32
170	Enhanced reversibility of H2 sorption in nanoconfined complex metal hydrides by alkali metal addition. Journal of Materials Chemistry, 2012, 22, 13209.	6.7	32
171	Investigations of the corrosion behaviour of nanocrystalline Ndâ€“Feâ€“B hot pressed magnets. Journal of Alloys and Compounds, 2000, 311, 299-304.	5.5	31
172	Replacement and Original Magnet Engineering Options (ROMEOs): A European Seventh Framework Project to Develop Advanced Permanent Magnets Without, or with Reduced Use of, Critical Raw Materials. Jom, 2015, 67, 1306-1317.	1.9	31
173	Micromagnetic simulations on the grain shape effect in Nd-Fe-B magnets. Journal of Applied Physics, 2016, 120, .	2.5	31
174	Twins â€" A weak link in the magnetic hardening of ThMn12-type permanent magnets. Acta Materialia, 2021, 214, 116968.	7.9	31
175	Corrosion behavior of textured and isotropic nanocrystalline NdFeB-based magnets. IEEE Transactions on Magnetics, 2002, 38, 2979-2981.	2.1	30
176	Effect of pressure on the magnetocaloric properties of nickel-rich Niâ€“Mnâ€“Ga Heusler alloys. Journal of Applied Physics, 2009, 105, .	2.5	30
177	Magnetocaloric and magnetic properties of Ni2Mn1â^'<i>x</i>Cu<i>x</i>Ga Heusler alloys: An insight from the direct measurements and <i>ab initio</i> and Monte Carlo calculations. Journal of Applied Physics, 2013, 114, .	2.5	30
178	Diffusion processes in hot-deformed Ndâ€“Feâ€“B magnets with DyF3 additions. Journal of Magnetism and Magnetic Materials, 2014, 358-359, 163-169.	2.3	30
179	First-Order Reversal Curve (FORC) Analysis of Magnetocaloric Heusler-Type Alloys. IEEE Magnetics Letters, 2016, 7, 1-4.	1.1	30
180	Influence of magnetic field, chemical pressure and hydrostatic pressure on the structural and magnetocaloric properties of the Mnâ€“Niâ€“Ge system. Journal Physics D: Applied Physics, 2017, 50, 464005.	2.8	30

#	Article	IF	Citations
181	Consolidation of cobalt nanorods: A new route for rare-earth free nanostructured permanent magnets. Acta Materialia, 2018, 145, 290-297.	7.9	30
182	Microstructure engineering of metamagnetic Ni-Mn-based Heusler compounds by Fe-doping: A roadmap towards excellent cyclic stability combined with large elastocaloric and magnetocaloric effects. Acta Materialia, 2021, 221, 117390.	7.9	30
183	Interaction domains in die-upset NdFeB magnets in dependence on the degree of deformation. Journal of Magnetism and Magnetic Materials, 2004, 272-276, E1937-E1939.	2.3	29
184	Prediction of the oxidation behaviour of Smâ€“Co-based magnets. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 1226-1229.	2.3	29
185	The maximal cooling power of magnetic and thermoelectric refrigerators with La(FeCoSi)13 alloys. Journal of Applied Physics, 2013, 113, .	2.5	29
186	Multicaloric effects in metamagnetic Heusler Ni-Mn-In under uniaxial stress and magnetic field. Applied Physics Reviews, 2020, 7, .	11.3	29
187	Corrosion Behavior of Smâ€“Co-Based Permanent Magnets in Oxidizing Environments. IEEE Transactions on Magnetics, 2004, 40, 2931-2933.	2.1	28
188	Contributions to the entropy change in melt-spun LaFe_{11.6}Si_{1.4}. Journal Physics D: Applied Physics, 2010, 43, 132001.	2.8	28
189	Polymer-Bonded La(Fe,Mn,Si)₁₃H_{<i>x</i>} Plates for Heat Exchangers. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	28
190	Direct Measurement of the Magnetocaloric Effect in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>La</mml:mi><mml:mo stretchy="false">(</mml:mo><mml:mi>Fe</mml:mi><mml:mo>,</mml:mo><mml:mi>Si</mml:mi><mml:mo>,</mml:mo><mml:mi>Co</ in Pulsed Magnetic Fields. Physical Review Applied, 2017, 8, .	3.8	28
191	Microstructural origin of hysteresis in Ni-Mn-In based magnetocaloric compounds. Acta Materialia, 2018, 147, 342-349.	7.9	28
192	Microstructure and magnetization reversal in nanocomposite SmCo5/Sm2Co17 magnets. Journal of Applied Physics, 2002, 91, 2192-2196.	2.5	27
193	Nanocrystalline hard magnetic FePt powders. Journal of Applied Physics, 2004, 95, 7474-7476.	2.5	27
194	Rheology of Perfluorinated Polyether-based MR Fluids with Nanoparticles. Journal of Intelligent Material Systems and Structures, 2010, 21, 1051-1060.	2.5	27
195	Structure and Magnetic Properties of L10-Ordered Feâ€“Pt Alloys and Nanoparticles. Handbook of Magnetic Materials, 2011, , 291-407.	0.6	27
196	Preparation, Characterization, and Modeling of Ultrahigh Coercivity Smâ€“Co Thin Films. Advanced Electronic Materials, 2015, 1, 1500009.	5.1	27
197	The influence of magnetocrystalline anisotropy on the magnetocaloric effect: A case study on Co2B. Applied Physics Letters, 2016, 109, .	3.3	27
198	Development of high coercivity anisotropic Nd-Fe-B/Fe nanocomposite powder using hydrogenation disproportionation desorption recombination process. Acta Materialia, 2019, 175, 276-285.	7.9	27

#	Article	IF	Citations
199	Textured NdFeB HDDR magnets produced by die-upsetting and backward extrusion. Journal Physics D: Applied Physics, 1998, 31, 807-811.	2.8	26
200	High temperature magnetic properties of 2:17 Smâ€“Co magnets. Journal of Magnetism and Magnetic Materials, 2002, 242-245, 1347-1349.	2.3	26
201	Ordering of nanocrystalline Feâ€“Pt alloys studied byin situneutron powder diffraction. Journal of Applied Physics, 2006, 100, 094308.	2.5	26
202	High energy product in Battenberg structured magnets. Applied Physics Letters, 2014, 105, .	3.3	26
203	Nanocrystalline Sm-based 1:12 magnets. Acta Materialia, 2020, 200, 652-658.	7.9	26
204	An accelerating approach of designing ferromagnetic materials via machine learning modeling of magnetic ground state and Curie temperature. Materials Research Letters, 2021, 9, 169-174.	8.7	26
205	Designing of magnetic MAB phases for energy applications. Journal of Materials Chemistry A, 2021, 9, 8805-8813.	10.3	26
206	Highly coercive SmCo5 magnets prepared by a modified hydrogenation-disproportionation-desorption-recombination process. Journal of Applied Physics, 1999, 85, 5666-5668.	2.5	25
207	Effect of composition and cooling rate on the structure and magnetic entropy change in Gd5SixGe4â^'x. Journal of Applied Physics, 2004, 95, 7064-7066.	2.5	25
208	Niâ€“Mnâ€“Inâ€“Co single-crystalline particles for magnetic shape memory composites. Applied Physics Letters, 2009, 95, 152503.	3.3	25
209	Catalysis of H2 sorption in NaAlH4: General description and new insights. Acta Materialia, 2011, 59, 1725-1733.	7.9	25
210	Influence of sample geometry on determination of magnetocaloric effect for Gd60Co30Al10 glassy ribbons using direct and indirect methods. Journal of Magnetism and Magnetic Materials, 2011, 323, 1782-1786.	2.3	25
211	Reversible Magnetic Field Induced Strain in Ni₂MnGaâ€Polymerâ€Composites. Advanced Engineering Materials, 2012, 14, 20-27.	3.5	25
212	Chemical State, Distribution, and Role of Ti- and Nb-Based Additives on the Ca(BH₄)₂ System. Journal of Physical Chemistry C, 2013, 117, 4394-4403.	3.1	25
213	Towards an Alloy Recycling of Ndâ€“Feâ€“B Permanent Magnets in a Circular Economy. Journal of Sustainable Metallurgy, 2018, 4, 163-175.	2.3	25
214	Magnetocaloric effect in GdNi2 for cryogenic gas liquefaction studied in magnetic fields up to 50â€‰T. Journal of Applied Physics, 2020, 127, .	2.5	25
215	In-situ electrical resistivity measurements: study of magnetic and phase transitions and solid-HDDR processes in Nd-Fe-B-type alloys. Journal of Materials Science, 1995, 30, 1397-1404.	3.7	24
216	High coercivity of Ndâ€“Dyâ€“Feâ€“(C,â€ŠB) ribbons prepared by melt spinning. Applied Physics Letters, 2000, 76, 3627-3629.	3.3	24

#	Article	IF	Citations
217	Influence of Fe, Zr, and Cu on the microstructure and crystallographic texture of melt-spun 2:17 Smâ€“Co ribbons. Journal of Applied Physics, 2002, 91, 8825.	2.5	24
218	Novel sodium aluminium borohydride containing the complex anion [Al(BH4,Cl)4]â^'. Faraday Discussions, 2011, 151, 231.	3.2	24
219	Dependence of coercivity on length ratios in sub-micron Nd2Fe14B particles with rectangular prism shape. Journal of Applied Physics, 2013, 114, .	2.5	24
220	Dependence of the inverse magnetocaloric effect on the field-change rate in Mn3GaC and its relationship to the kinetics of the phase transition. Journal of Applied Physics, 2015, 117, 233902.	2.5	24
221	On the synthesis and microstructure analysis of high performance MnBi. AIP Advances, 2016, 6, .	1.3	24
222	Rapid solidification of Nd1+XFe11Ti compounds: Phase formation and magnetic properties. Acta Materialia, 2019, 180, 15-23.	7.9	24
223	Development of microstructure of the disproportionated material during HDDR processes in a Nd16Fe76B8 alloy. Journal of Alloys and Compounds, 1994, 204, L21-L23.	5.5	23
224	Magnetization processes in two different types of anisotropic, fully dense NdFeB hydrogenation, disproportionation, desorption, and recombination magnets. Journal of Applied Physics, 2000, 87, 6119-6121.	2.5	23
225	Stability of magnetic properties of Sm/sub 2/Co/sub 17/-type magnets at operating temperatures higher than 400 Â°C. IEEE Transactions on Magnetics, 2003, 39, 2923-2925.	2.1	23
226	Phase transformations and thermodynamic properties of nanocrystalline FePt powders. Scripta Materialia, 2005, 53, 469-474.	5.2	23
227	Large negative magnetoresistance in nickel-rich Niâ€“Mnâ€“Ga Heusler alloys. Journal of Applied Physics, 2010, 107, .	2.5	23
228	Magnetocaloric effect of an Fe-based metallic glass compared to benchmark gadolinium. Journal of Applied Physics, 2012, 112, .	2.5	23
229	Effect of severe plastic deformation on the specific heat and magnetic properties of cold rolled Gd sheets. Journal of Applied Physics, 2015, 117, .	2.5	23
230	Magnetic, magnetocaloric and structural properties of manganese based monoborides doped with iron and cobalt â€“ A candidate for thermomagnetic generators. Acta Materialia, 2016, 113, 213-220.	7.9	23
231	Advanced characterization of multicaloric materials in pulsed magnetic fields. Journal of Applied Physics, 2020, 127, .	2.5	23
232	Structure and hysteresis properties of nanocrystalline FePt powders. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 547-550.	2.3	22
233	Compression-induced texture change in NiMnGa-polymer composites observed by synchrotron radiation. Journal of Applied Physics, 2007, 101, 09C501.	2.5	22
234	An Experimental Investigation of Unimodal and Bimodal Magnetorheological Fluids with an Application in Prosthetic Devices. Journal of Intelligent Material Systems and Structures, 2011, 22, 539-549.	2.5	22

#	Article	IF	Citations
235	Influence of thermal treatment on magnetocaloric properties of Gd cold rolled ribbons. Journal of Applied Physics, 2013, 113, 17A933.	2.5	22
236	Coercivity enhancement in hot-pressed Nd-Fe-B permanent magnets with low melting eutectics. Journal of Applied Physics, 2014, 115, 17A705.	2.5	22
237	Magnet properties of Mn70Ga30 prepared by cold rolling and magnetic field annealing. Journal of Magnetism and Magnetic Materials, 2015, 382, 265-270.	2.3	22
238	Pressure Dependence of Magnetic Properties in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:msub><mml:mrow><mml:mi>La</mml:mi><mml:mo>(</mml:mo><mml:mi>Fe</mml:mi><mml:mo>,</mml:mo : Multistimulus Responsiveness of Caloric Effects by Modeling and Experiment. Physical Review Applied, 2020, 13, .	3.8	22
239	Multifunctional antiperovskites driven by strong magnetostructural coupling. Npj Computational Materials, 2021, 7, .	8.7	22
240	Characterisation of rare earth-transition metal alloys with resistivity measurements. IEEE Transactions on Magnetics, 1993, 29, 2872-2874.	2.1	21
241	Phase transformations and magnetic structure of nanocrystalline Feâ€"Pd and Coâ€"Pt alloys studied by in situ neutron powder diffraction. Journal of Applied Physics, 2009, 105, 07A717.	2.5	21
242	Magnetic refrigeration: phase transitions, itinerant magnetism and spin fluctuations. Philosophical Magazine, 2012, 92, 292-303.	1.6	21
243	NaAlH4 confined in ordered mesoporous carbon. International Journal of Hydrogen Energy, 2013, 38, 8829-8837.	7.1	21
244	Bulk combinatorial analysis for searching new rare-earth free permanent magnets: Reactive crucible melting applied to the Fe-Sn binary system. Acta Materialia, 2017, 141, 434-443.	7.9	21
245	Normal and abnormal grain growth in fine-grained Nd-Fe-B sintered magnets prepared from He jet milled powders. Journal of Magnetism and Magnetic Materials, 2017, 426, 698-707.	2.3	21
246	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>L</mml:mi><mml:msub><mml:mn>1</mml:mn><mml:m rare-earth-free permanent magnets: The effects of twinning versus dislocations in Mn-Al magnets. Physical Review Materials, 2020, 4, .	2.4	21
247	Backward extruded NdFeB HDDR ring magnets. Journal of Magnetism and Magnetic Materials, 1998, 183, 359-364.	2.3	20
248	Hydrogenation and disproportionation of Sm2Fe17â^'xGax at high hydrogen pressures. Journal of Applied Physics, 1998, 83, 6905-6907.	2.5	20
249	Intergrain interactions in nanocrystalline isotropic prfeb-based magnets. IEEE Transactions on Magnetics, 2003, 39, 2944-2946.	2.1	20
250	Calculation of remanence and degree of texture from EBSD orientation histograms and XRD rocking curves in Ndâ€"Feâ€"B sintered magnets. Journal of Magnetism and Magnetic Materials, 2015, 382, 219-224.	2.3	20
251	Anisotropic local hardening in hot-deformed Nd-Fe-B permanent magnets. Acta Materialia, 2018, 147, 176-183.	7.9	20
252	Designing rare-earth free permanent magnets in heusler alloys via interstitial doping. Acta Materialia, 2020, 186, 355-362.	7.9	20

#	Article	IF	Citations
253	Magnetic and phase transitions and HDDR processes in NdFeB-type alloys monitored by electrical resistivity measurements. Journal of Alloys and Compounds, 1993, 196, L19-L21.	5.5	19
254	A high-temperature coupling of martensitic and magnetic transformations and magnetic entropy change in Niâ€“Feâ€“Gaâ€“Co alloys. Scripta Materialia, 2008, 59, 1063-1066.	5.2	19
255	Effect of the presence of chlorides on the synthesis and decomposition of Ca(BH4)2. International Journal of Hydrogen Energy, 2011, 36, 247-253.	7.1	19
256	Mechanochemical synthesis of NaBH4 starting from NaHâ€“MgB2 reactive hydride composite system. International Journal of Hydrogen Energy, 2013, 38, 2363-2369.	7.1	19
257	The dynamics of spontaneous hydrogen segregation in LaFe13â^’<i>x</i>Si<i>x</i>H<i>y</i>. Journal of Applied Physics, 2014, 115, .	2.5	19
258	Temperature-dependent first-order reversal curve measurements on unusually hard magnetic low-temperature phase of MnBi. Physical Review B, 2017, 95, .	3.2	19
259	Plastically deformed Gd-X (Xâ€¯=â€¯Y, In, Zr, Ga, B) solid solutions for magnetocaloric regenerator of parallel plate geometry. Journal of Alloys and Compounds, 2018, 754, 207-214.	5.5	19
260	Design and Qualification of Prâ€“Feâ€“Cuâ€“B Alloys for the Additive Manufacturing of Permanent Magnets. Advanced Functional Materials, 2021, 31, 2102148.	14.9	19
261	Hydrogen disproportionation by reactive milling and recombination of Nd2(Fe1â^’xCox)14B alloys. Acta Materialia, 2000, 48, 4929-4934.	7.9	18
262	The influence of Er substitution on magnetic and magnetocaloric properties of Dy1â^’xErxCo2 solid solutions. Intermetallics, 2011, 19, 1656-1660.	3.9	18
263	On the reversible and fully repeatable increase in coercive field of sintered Ndâ€“Feâ€“B magnets following post sinter annealing. Journal of Magnetism and Magnetic Materials, 2014, 360, 157-164.	2.3	18
264	Sorption properties and reversibility of Ti(IV) and Nb(V)-fluoride doped-Ca(BH4)2â€“MgH2 system. Journal of Alloys and Compounds, 2015, 622, 989-994.	5.5	18
265	Temperature dependent low-field measurements of the magnetocaloric Î”<i>T</i> with sub-mK resolution in small volume and thin film samples. Applied Physics Letters, 2015, 106, .	3.3	18
266	Influence of microstructure on the application of Ni-Mn-In Heusler compounds for multicaloric cooling using magnetic field and uniaxial stress. Acta Materialia, 2021, 217, 117157.	7.9	18
267	<i>Ab initio</i> phase stabilities of Ce-based hard magnetic materials and comparison with experimental phase diagrams. Physical Review Materials, 2019, 3, .	2.4	18
268	Unveiling the mechanism of abnormal magnetic behavior of FeNiCoMnCu high-entropy alloys through a joint experimental-theoretical study. Physical Review Materials, 2020, 4, .	2.4	18
269	Determining anisotropy constants from a first-order magnetization process in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mi mathvariant="normal">Tb</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">Fe</mml:mi><mml:mn>17</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2008, 77, .	3.2	17
270	Magnetization reversal in textured NdFeBâ€“Fe composites observed by domain imaging. Journal of Magnetism and Magnetic Materials, 2010, 322, 3208-3213.	2.3	17

#	Article	IF	Citations
271	Er2Fe14B single crystal as magnetic refrigerant at the spin reorientation transition. Journal of Applied Physics, 2011, 109, .	2.5	17
272	High hydrogen content super-lightweight intermetallics fromÂthe Liâ€“Mgâ€“Si system. International Journal of Hydrogen Energy, 2013, 38, 5724-5737.	7.1	17
273	B1â€Mobilstor: Materials for Sustainable Energy Storage Techniques â€“ Lithium Containing Compounds for Hydrogen and Electrochemical Energy Storage. Advanced Engineering Materials, 2014, 16, 1189-1195.	3.5	17
274	The search for room temperature tetragonal phases of Fe-Mn-Ga: A reactive crucible melting approach. Journal of Alloys and Compounds, 2016, 683, 198-204.	5.5	17
275	Properties of magnetically semi-hard (FexCo1âˆ’x)3B compounds. Journal of Alloys and Compounds, 2017, 696, 543-547.	5.5	17
276	Ce and La as substitutes for Nd in Nd2Fe14B-based melt-spun alloys and hot-deformed magnets: a comparison of structural and magnetic properties. Journal of Magnetism and Magnetic Materials, 2019, 478, 198-205.	2.3	17
277	Tuning the magnetocrystalline anisotropy ofFe3Snby alloying. Physical Review B, 2019, 99, .	3.2	17
278	Magnetic Refrigeration with Recycled Permanent Magnets and Free Rareâ€Earth Magnetocaloric Laâ€“Feâ€“Si. Energy Technology, 2020, 8, 1901025.	3.8	17
279	Microstructure, coercivity and thermal stability of nanostructured (Nd,Ce)-(Fe,Co)-B hot-compacted permanent magnets. Acta Materialia, 2022, 235, 118062.	7.9	17
280	S-HDDR induced cavitation in NdFeB. Journal of Alloys and Compounds, 1996, 232, L22-L26.	5.5	16
281	Metastable borides and the inducement of texture in Pr/sub 2/Fe/sub 14/B-type magnets produced by HDDR. IEEE Transactions on Magnetics, 2001, 37, 2471-2473.	2.1	16
282	Magnetic Properties of (Fe,Co)₂B Alloys With Easy-Axis Anisotropy. IEEE Transactions on Magnetics, 2014, 50, 1-4.	2.1	16
283	Interface effects in NaAlH4â€“carbon nanocomposites for hydrogen storage. International Journal of Hydrogen Energy, 2014, 39, 10175-10183.	7.1	16
284	Direct measurement of the magnetocaloric effect in cementite. Journal of Magnetism and Magnetic Materials, 2016, 410, 105-108.	2.3	16
285	The effect of plastic deformation on magnetic and magnetocaloric properties of Gd-B alloys. Journal of Magnetism and Magnetic Materials, 2017, 442, 360-363.	2.3	16
286	Giant voltage-induced modification of magnetism in micron-scale ferromagnetic metals by hydrogen charging. Nature Communications, 2020, 11, 4849.	12.8	16
287	Textured (Ce,La,Y)â€“Feâ€“B permanent magnets by hot deformation. Journal of Materials Research and Technology, 2022, 17, 1459-1468.	5.8	16
288	Further studies of hydrogenation, disproportionation, desorption and recombination processes in a Nd5Fe2B6 boride. Journal of Alloys and Compounds, 1997, 253-254, 134-139.	5.5	15

#	Article	IF	Citations
289	A comparison of the micromagnetic and microstructural properties of four NdFeB-type materials processed by the HDDR route. Journal of Magnetism and Magnetic Materials, 1999, 202, 53-61.	2.3	15
290	Modified HDDR procedures applied to NdFeB alloys. IEEE Transactions on Magnetics, 1999, 35, 3250-3252.	2.1	15
291	Peg legs andbionic limbs: the development of lower extremity prosthetics. Interdisciplinary Science Reviews, 2003, 28, 139-148.	1.4	15
292	Magnetocaloric Effect in Niâ€“Mnâ€“Ga Alloys. IEEE Transactions on Magnetics, 2008, 44, 2993-2996.	2.1	15
293	Reproducibility of martensitic transformation and phase constitution in Niâ€“Coâ€“Al. Intermetallics, 2012, 20, 55-62.	3.9	15
294	Properties of isolated single crystalline and textured polycrystalline nano/sub-micrometre Nd2Fe14B particles obtained from milling of HDDR powder. Journal Physics D: Applied Physics, 2013, 46, 375004.	2.8	15
295	Insight into the decomposition pathway of the complex hydride Al3Li4(BH4)13. International Journal of Hydrogen Energy, 2013, 38, 2790-2795.	7.1	15
296	Modeling of Nd-Oxide Grain Boundary Phases in Nd-Fe-B Sintered Magnets. Jom, 2014, 66, 1138-1143.	1.9	15
297	Heat Exchangers From Metal-Bonded La(Fe,Mn,Si)₁₃H_{<i>x</i>}Powder. IEEE Transactions on Magnetics, 2017, 53, 1-7.	2.1	15
298	Multiscale Examination of Strain Effects in Nd-Fe-B Permanent Magnets. Physical Review Applied, 2017, 8, .	3.8	15
299	Structural and magnetic properties of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Ce</mml:mtext></mml:mrow><mml:mrow><mml:mn>1</mm Acta Materialia, 2019, 172, 131-138.	7.9	15
300	HDDR treatment of Ce-substituted Nd2Fe14B-based permanent magnetÂalloys - phase structure evolution, intergranular processes and magnetic property development. Journal of Alloys and Compounds, 2020, 814, 152215.	5.5	15
301	Influence of hydrogenation on the vibrational density of states of magnetocaloric <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>LaFe</mml:mi><mml:msub><mml:mrow /><mml:mrow><mml:mn>11.4</mml:mn></mml:mrow></mml:msub><mml:mi>Si</mml:mi><mml:msub><mml:mrow /><mml:mrow><mml:mn>1.6</mml:mn></mml:mrow></mml:msub><mml:mi mathvariant="normal">H</mml:mi><mml:msub><mml:mrow /><mml:mrow><mml:mn>1.6</mml:mn></mml:mrow></mml:msub></mml:math>. Physical Review B, 2020,	3.2	15
302	Intergrain interactions in nanocomposite Feâ€“Pt powders. Journal of Applied Physics, 2006, 99, 08E903.	2.5	14
303	Sequence of structural and magnetic transitions in Ni48Co2Mn39Sn11 shape memory alloy. Journal of Magnetism and Magnetic Materials, 2011, 323, 2519-2523.	2.3	14
304	Magnetic ordering in magnetic shape memory alloy Ni-Mn-In-Co. Physical Review B, 2015, 92, .	3.2	14
305	Magnetic anisotropy of La2Co7. Journal of Applied Physics, 2015, 118, .	2.5	14
306	A unified approach to describe the thermal and magnetic hysteresis in Heusler alloys. Applied Physics Letters, 2016, 109, .	3.3	14

#	Article	IF	Citations
307	Momentâ€Volume Coupling in La(Fe_{1<i>â^'x</i>}Si_{<i>x</i>})₁₃. Physica Status Solidi (B): Basic Research, 2018, 255, 1700465.	1.5	14
308	Determining the vibrational entropy change in the giant magnetocaloric material <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi mathvariant="normal">LaFe</mml:mi></mml:mrow><mml:mrow><mml:mn>11.6</mml:mn></mml:mrow></mml:msub><mml:msub><m mathvariant="normal">Si</mml:mi></mml:mrow><mml:mrow><mml:mn>1.4</mml:mn></mml:mrow></mml:msub></mml:math> by nuclear resonant inelastic x-ray scattering. Physical Review B, 2018, 98, .	3.2	14
309	Experimental and computational analysis of binary Fe-Sn ferromagnetic compounds. Acta Materialia, 2019, 180, 126-140.	7.9	14
310	Computational study on microstructure evolution and magnetic property of laser additively manufactured magnetic materials. Computational Mechanics, 2019, 64, 917-935.	4.0	14
311	Anisotropic exchange in Ndâ€"Feâ€"B permanent magnets. Materials Research Letters, 2020, 8, 89-96.	8.7	14
312	The relation between the micromagnetic and microstructural properties of HDDR-processed Nd - Fe - B-type materials. Journal Physics D: Applied Physics, 1997, 30, 1854-1860.	2.8	13
313	Polyester-bonded textured composites with single-crystalline shape memory Niâ€"Mnâ€"Ga particles. Journal of Magnetism and Magnetic Materials, 2007, 310, 2785-2787.	2.3	13
314	Evolution of magnetic and microstructural properties of thick sputtered NdFeB films with processing temperature. Journal of Magnetism and Magnetic Materials, 2007, 316, 174-176.	2.3	13
315	Magnetic properties and magnetocaloric effect in Dy1â^'xScxNi2 solid solutions. Journal of Alloys and Compounds, 2010, 506, 626-630.	5.5	13
316	Synthesis of LiNH2 + LiH by reactive milling of Li3N. Faraday Discussions, 2011, 151, 253.	3.2	13
317	Local electronic and magnetic properties of pure and Mn-containing magnetocaloric LaFe_{13â^'<i>x</i>}Si_{<i>x</i>}compounds inferred from MÃ¶ssbauer spectroscopy and magnetometry. Journal Physics D: Applied Physics, 2015, 48, 305006.	2.8	13
318	Engineering perpendicular magnetic anisotropy in Fe via interstitial nitrogenation: N choose <i>K</i>. APL Materials, 2016, 4, .	5.1	13
319	Rotational Magnetocaloric Effect in the Er₂Fe₁₄B Single Crystal. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	13
320	Microstructure and magnetic properties of melt-spun Alnico-5 alloys. Journal of Magnetism and Magnetic Materials, 2016, 407, 230-234.	2.3	13
321	Room-temperature five-tesla coercivity of a rare-earth-free shell-ferromagnet. Applied Physics Letters, 2017, 110, .	3.3	13
322	Magnetocaloric effect in cold rolled foils of Gd100â^'In (xâ€¯=â€¯0, 1, 3). Journal of Magnetism and Magnetic Materials, 2018, 459, 46-48.	2.3	13
323	Efficient Process for Li-Ion Battery Recycling via Electrohydraulic Fragmentation. Materials Science Forum, 0, 959, 74-78.	0.3	13
324	Exchange stiffness of ferromagnets. European Physical Journal Plus, 2020, 135, 1.	2.6	13

#	Article	IF	Citations
325	Magnetoelectric Tuning of Pinningâ€Type Permanent Magnets through Atomicâ€Scale Engineering of Grain Boundaries. Advanced Materials, 2021, 33, 2006853.	21.0	13
326	Temperature dependence of magnetic properties for nanocomposite Nd2(Fe,Co,M)14B/Î±-Fe magnets. Journal of Magnetism and Magnetic Materials, 2000, 208, 163-168.	2.3	12
327	Coercivity mechanism of Sm2(Co,Cu,Fe,Zr)17-based magnets prepared by melt-spinning. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 1206-1209.	2.3	12
328	Magnetic properties and specific heat of Dy1â^'xLaxNi2 compounds. Journal of Magnetism and Magnetic Materials, 2009, 321, 2821-2826.	2.3	12
329	Infrared heating mediated synthesis and characterization of FeCo/C nanocomposites. Journal of Magnetism and Magnetic Materials, 2017, 429, 94-101.	2.3	12
330	Effects of severe plastic deformation on the magnetic properties of terbium. AIP Advances, 2018, 8, 048103.	1.3	12
331	Dynamics of the magnetoelastic phase transition and adiabatic temperature change in Mn1.3Fe0.7P0.5Si0.55. Journal of Magnetism and Magnetic Materials, 2019, 477, 287-291.	2.3	12
332	Accelerated crystallization and phase formation in Fe40Ni40B20 by electric current assisted annealing technique. Journal of Alloys and Compounds, 2020, 836, 155338.	5.5	12
333	Intrinsically weak magnetic anisotropy of cerium in potential hard-magnetic intermetallics. Npj Quantum Materials, 2021, 6, .	5.2	12
334	High-Temperature Samarium Cobalt Permanent Magnets. , 2009, , 337-372.		12
335	Detailed TEM analysis of solid-HDDR Nd/sub 16/Fe/sub 76/B/sub 8/ magnetic materials. IEEE Transactions on Magnetics, 1995, 31, 3635-3637.	2.1	11
336	Hydrogen-induced phase and magnetic transformations in Nd1.1Fe4B4. Journal of Magnetism and Magnetic Materials, 1996, 157-158, 119-120.	2.3	11
337	HDDR processes in Nd/sub 16/Fe/sub 76-x/Zr/sub x/B/sub 8/ alloys and the production of anisotropic magnets. IEEE Transactions on Magnetics, 1996, 32, 4368-4370.	2.1	11
338	Intergranular Melting of Ultrafine Grained Nd2Fe14B Studied by Means of Radiotracer Diffusion. Journal of Materials Science, 2001, 9, 337-341.	1.2	11
339	Observation of hydrogen induced intermediate borides in PrFeB based alloys by MÃ¶ssbauer effect spectroscopy. Physica B: Condensed Matter, 2002, 320, 312-315.	2.7	11
340	Grain-boundary diffusion of Nd147 in nanocrystalline Nd2Fe14B. Journal of Applied Physics, 2005, 98, 074314.	2.5	11
341	Ultra-fine grained Ndâ€"Feâ€"B by high pressure reactive milling and desorption. Journal of Magnetism and Magnetic Materials, 2012, 324, 2731-2735.	2.3	11
342	Co@CoSb Coreâ€"Shell Nanorods: From Chemical Coating at the Nanoscale to Macroscopic Consolidation. Chemistry of Materials, 2016, 28, 4982-4990.	6.7	11

#	Article	IF	Citations
343	Magnetic anisotropy of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">S</mml:mi><mml:msub><mml:mi mathvariant="normal">m</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi mathvariant="normal">F</mml:mi><mml:msub><mml:mi mathvariant="normal">e</mml:mi><mml:mn>17</mml:mn></mml:msub></mml:mrow></mml:math>single	3.2	11
344	Magnetic properties of Mo-stabilized bulk Fe3B magnet. Scripta Materialia, 2017, 130, 234-237.	5.2	11
345	Probing Structural and Magnetic Instabilities and Hysteresis in Heuslers by Density Functional Theory Calculations. Physica Status Solidi (B): Basic Research, 2018, 255, 1700296.	1.5	11
346	The quaternary system Sm-Fe-Mo-Al and the effect of Al substitution on magnetic and structural properties of its ThMn12 phase. Journal of Alloys and Compounds, 2019, 770, 301-307.	5.5	11
347	Kinetic studies on solidâ€HDDR processes in Ndâ€Feâ€Bâ€type alloys. Journal of Applied Physics, 1994, 76, 6256-6258.	2.5	10
348	Influence of M=Al, Ga and Si on microstructure and HDDR-processing of Sm2(Fe,M)17 and magnetic properties of their nitrides and carbides. Journal of Alloys and Compounds, 1999, 283, 296-303.	5.5	10
349	Coercivity variations with Pr- and Zr-substituted NdDyFeB-based HDDR powders. Journal of Magnetism and Magnetic Materials, 2001, 237, 267-275.	2.3	10
350	Microstructure and magnetic properties of two-phase exchange-coupled SmCo5/Sm2(Co, M)17 (M = Fe,) Tj ETQq0 0 0 rgBT /Overlock 1	2.8	10
351	Coercivity analysis of melt-spun Sm2(Co,Fe,Cu,Zr)17. Journal of Magnetism and Magnetic Materials, 2004, 272-276, 647-649.	2.3	10
352	Melt-spun precipitation hardened Sm(Co, Fe, Cu, Zr) magnets. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 375-377, 1169-1172.	5.6	10
353	Corrosion behavior of Ndâ€"Feâ€"B/Î±â€"Fe nanocomposite magnets. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 1251-1254.	2.3	10
354	Behaviour of the Young's modulus at the magnetocaloric transition in La(Fe,Co,Si)13. Journal of Alloys and Compounds, 2017, 697, 427-433.	5.5	10
355	Millisecond Dynamics of the Magnetocaloric Effect in a Firstâ€and Secondâ€Order Phase Transition Material. Energy Technology, 2018, 6, 1470-1477.	3.8	10
356	Influence of severe plastic deformation on magnetocaloric effect of dysprosium. Journal of Magnetism and Magnetic Materials, 2019, 479, 307-311.	2.3	10
357	Production of Fe nanoparticles from Î³-Fe2O3 by high-pressure hydrogen reduction. Nanoscale Advances, 2020, 2, 4777-4784.	4.6	10
358	Determination of the crystal field parameters in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Sm</mml:mi><mml:msub><mml:mi>Fe</mml:mi><mml:m Physical Review B, 2020, 102, .	3.2	10
359	Large magnetic entropy change in Nd2In near the boiling temperature of natural gas. Applied Physics Letters, 2021, 119, .	3.3	10
360	Magnetocaloric effect in the Laves-phase<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi>Ho</mml:mi></mml:mrow><mml:mrow><m in high magnetic fields. Physical Review Materials, 2021, 5, .	2.4	10

#	Article	IF	Citations
361	Effect of N, C, and B interstitials on the structural and magnetic properties of alloys with Cu3Au structure. Physical Review Research, 2020, 2, .	3.6	10
362	Formation of pure $$au$$-phase in Mnâ€“Alâ€“C by fast annealing using spark plasma sintering. Journal of Materials Science, 2022, 57, 6056-6065.	3.7	10
363	NdDyFeBZr high-coercivity powders prepared by intensive milling and the HDDR process. Journal of Alloys and Compounds, 2001, 315, 243-250.	5.5	9
364	Highly coercive melt-spun Sm(Co,Fe,Cu,Zr)/sub z/ magnets prepared by simple processing. IEEE Transactions on Magnetics, 2002, 38, 2937-2939.	2.1	9
365	Phase formation and crystal structure of Sm2Fe17â^'Ga compounds during hydrogen disproportionation and desorption recombination (HDDR-process). Journal of Alloys and Compounds, 2002, 346, 235-243.	5.5	9
366	Comparative Study of Dense Bulk MgB2 Materials Prepared by Different Methods. Journal of Superconductivity and Novel Magnetism, 2002, 15, 599-601.	0.5	9
367	Influence of Zr addition on phase formation and magnetic properties of the Fe17Gd2 phase. Journal of Alloys and Compounds, 2003, 358, 1-6.	5.5	9
368	Self-Diffusion in Liquid Interfaces. Physical Review Letters, 2004, 92, 095901.	7.8	9
369	In Situ Raman Cell for High Pressure and Temperature Studies of Metal and Complex Hydrides. Analytical Chemistry, 2011, 83, 3199-3204.	6.5	9
370	Pathways for novel magnetocaloric materials: A processing prospect. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 1039-1042.	0.8	9
371	Intrinsic magnetic properties of hydrided and non-hydrided Nd5Fe17 single crystals. Journal of Alloys and Compounds, 2018, 741, 1012-1020.	5.5	9
372	In-situ magnetic force microscopy analysis of magnetization and demagnetization behavior in Al3+ substituted Sr-hexaferrite. Acta Materialia, 2018, 146, 85-96.	7.9	9
373	Low-temperature synthesis of nanoscale ferromagnetic Î±â€²-MnB. Dalton Transactions, 2020, 49, 131-135.	3.3	9
374	Magnetocaloric properties and specifics of the hysteresis at the first-order metamagnetic transition in Ni-doped FeRh. Physical Review Materials, 2021, 5, .	2.4	9
375	Upscaling the 2â€Powder Method for the Manufacturing of Heavy Rareâ€Earthâ€Lean Sintered didymiumâ€Based Magnets. Advanced Engineering Materials, 2021, 23, 2100459.	3.5	9
376	Multifunctional Ni-Mn-Ga and Ni-Mn-Cu-Ga Heusler particles towards the nanoscale by ball-milling technique. Journal of Alloys and Compounds, 2021, 872, 159747.	5.5	9
377	Phase-field modelling of paramagnetic austeniteâ€“ferromagnetic martensite transformation coupled with mechanics and micromagnetics. International Journal of Solids and Structures, 2022, 238, 111365.	2.7	9
378	On the Impact of Additive Manufacturing Processes on the Microstructure and Magnetic Properties of Coâ€“Niâ€“Ga Shape Memory Heusler Alloys. Advanced Engineering Materials, 2022, 24, .	3.5	9

#	Article	IF	Citations
379	Studies of HDDR processes in Sm2Fe17, Sm10.2Fe85.8Nb4 and Sm9.5Fe80.5Nb10 alloys. Journal of Alloys and Compounds, 1996, 233, 216-224.	5.5	8
380	Magnetic Domains and Coercivity in SmCo 2:17 Type Magnets. Journal of Iron and Steel Research International, 2006, 13, 48-59.	2.8	8
381	High Performance Î¼-Magnets for Microelectromechanical Systems (MEMS). , 2008, , 167-194.		8
382	Procedure for numerical integration of the magnetocaloric effect. Journal of Applied Physics, 2012, 112, 063920.	2.5	8
383	Impact of magnetization state on the corrosion of sintered Nd-Fe-B magnets for e-motor applications. Materials and Corrosion - Werkstoffe Und Korrosion, 2014, 65, 891-896.	1.5	8
384	Effect of DyF₃ on the corrosion behavior of hotâ€pressed Ndâ€“Feâ€“B permanent magnets. Materials and Corrosion - Werkstoffe Und Korrosion, 2015, 66, 152-157.	1.5	8
385	Towards manufacturing of Nd-Fe-B magnets by continuous rotary swaging of cast alloy. Journal of Magnetism and Magnetic Materials, 2019, 490, 165405.	2.3	8
386	Magnetic and magnetocaloric properties of the Co2-xMn B system by experiment and density functional theory. Acta Materialia, 2019, 165, 270-277.	7.9	8
387	Combined kinetic and Beanâ€“Rodbell approach for describing field-induced transitions in LaFe_{11.6}Si_{1.4} alloys. Journal Physics D: Applied Physics, 2021, 54, 135003.	2.8	8
388	Magnetische Materialien â€” SchlÃ¼sselkomponenten fÃ¼r neue Energietechnologien. , 2016, , 99-118.		8
389	On the ÎµÂâ†'Ï„ phase transformation and twinning in L10â€'MnAl alloys. Acta Materialia, 2022, 232, 117892.	7.9	8
390	The effect of hydrogen pressure on the kinetics of the HDDR-process of bulk Nd-Fe-B-type alloys. IEEE Transactions on Magnetics, 1994, 30, 642-644.	2.1	7
391	Evolution of recombination in a solid HDDR processed Nd14Fe79B7alloy. Journal of Applied Physics, 1994, 76, 6825-6827.	2.5	7
392	Homogenisation behaviour of Nd/sub 2/(Fe/sub 0.98/Nb/sub 0.02/)/sub 14/B alloy. IEEE Transactions on Magnetics, 1994, 30, 616-618.	2.1	7
393	Studies of hydrogen absorption-desorptionproperties and HDDR behaviour of a Nd5Co2B6 Ï•boride. International Journal of Hydrogen Energy, 1999, 24, 189-194.	7.1	7
394	Corrosion Behavior of Polymer-Bonded NdFeB-Based Nanocrystalline Magnets. IEEE Transactions on Magnetics, 2004, 40, 2864-2866.	2.1	7
395	Effect of hydrogen insertion on the magnetic properties of Er(Fe,Co)11Ti single crystals. Journal of Alloys and Compounds, 2005, 404-406, 181-184.	5.5	7
396	Comparative Study of Structural and Magnetic Properties of Bulk and Powder Ni$_{52}$Fe$_{17}$Ga$_{27}$Co$_{4}$ Magnetic Shape Memory Alloy. IEEE Transactions on Magnetics, 2008, 44, 3025-3027.	2.1	7

#	Article	IF	Citations
397	Local orientation analysis by electron backscatter diffraction in highly textured sintered, die-upset, and hydrogenation disproportionation desorption and recombination Ndâ€“Feâ€“B magnets. Journal of Applied Physics, 2011, 109, 07A764.	2.5	7
398	Adiabatic Temperature Change in Metamagnetic Ni(Co)-Mn-Al Heusler Alloys. Materials Science Forum, 0, 738-739, 446-450.	0.3	7
399	Adiabatic temperature change of micro- and nanocrystalline Y2Fe17 heat-exchangers for magnetic cooling. Journal of Alloys and Compounds, 2016, 668, 40-45.	5.5	7
400	Electronic entropy change in Ni-doped FeRh. Materials Today Physics, 2019, 9, 100129.	6.0	7
401	Recyclable Phosphor Films: Three Water-Soluble Binder Systems Enabling the Recovery of Phosphor Powders in White LEDs. Journal of Electronic Materials, 2019, 48, 2294-2300.	2.2	7
402	High-Throughput Screening of Rare-Earth-Lean Intermetallic 1-13-X Compounds for Good Hard-Magnetic Properties. Metals, 2019, 9, 1096.	2.3	7
403	Synthesis and magnetic properties of bulk Î±â€³-Fe16N2/SrAl2Fe10O19 composite magnets. Journal of Magnetism and Magnetic Materials, 2021, 518, 167414.	2.3	7
404	Correlating changes of the unit cell parameters and microstructure with magnetic properties in the CeFe11Ti compound. Journal of Alloys and Compounds, 2021, 867, 158805.	5.5	7
405	High-field magnetisation of SmCo5â^’xCux (xâ‰^2.5) determined in pulse fields up to 48T. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 420-423.	2.3	6
406	Magnetic and magnetocaloric effect in melt spun La1â^’xRxFe13â^’yAlyCz(R= Pr and Nd) compounds. Journal Physics D: Applied Physics, 2009, 42, 205003.	2.8	6
407	The texture of Nd oxide grains in Nd-Fe-B sintered magnets studied by synchrotron radiation. Journal of Applied Physics, 2011, 110, 026103.	2.5	6
408	An Experimental Investigation into the Off-State Viscosity of MR Fluids. Journal of Intelligent Material Systems and Structures, 2011, 22, 1763-1767.	2.5	6
409	Magnetic Materials for Energy Applications. Jom, 2012, 64, 750-751.	1.9	6
410	Structural and magnetic properties of heat-treated ultrafine single crystalline Nd2Fe14B particles obtained by ball-milling of dynamic hydrogenation disproportionation desorption and recombination powder. Scripta Materialia, 2014, 78-79, 33-36.	5.2	6
411	Verfahren zum Recycling von seltenerdhaltigen Permanentmagneten. Chemie-Ingenieur-Technik, 2015, 87, 1477-1485.	0.8	6
412	The effect of surface grain reversal on the AC losses of sintered Ndâ€“Feâ€“B permanent magnets. Journal of Magnetism and Magnetic Materials, 2015, 375, 43-48.	2.3	6
413	Alloying effect on the orderâ€“disorder transformation in tetragonal FeNi. Scientific Reports, 2021, 11, 5253.	3.3	6
414	Grain boundary segregation, phase formation, and their influence on the coercivity of rapidly solidified SmFe11Ti hard magnetic alloys. Physical Review Materials, 2020, 4, .	2.4	6

#	Article	IF	Citations
415	Influence of the martensitic transformation kinetics on the magnetocaloric effect in Ni-Mn-In. Physical Review Materials, 2020, 4, .	2.4	6
416	The disproportionated structure of Sm2Fe17 observed by high resolution scanning electron microscopy. Journal of Alloys and Compounds, 1996, 232, L12-L15.	5.5	5
417	A magnetic and compositional study of the disproportionated stage of the solid-HDDR process in NdFeB-type materials. Journal of Alloys and Compounds, 1998, 281, 12-16.	5.5	5
418	Microstructure and HDDR-processing of as-cast Sm10.5Fe88.5Zr1.0. Journal of Magnetism and Magnetic Materials, 1999, 196-197, 297-298.	2.3	5
419	Nd2(Fe,Co,M)14B-type magnet powders produced by the HDDR process. Journal of Alloys and Compounds, 1999, 292, 296-300.	5.5	5
420	Hot deformed (Nd,Pr)(Fe,Co)B magnets for low-temperature applications. Journal of Magnetism and Magnetic Materials, 2004, 272-276, E321-E322.	2.3	5
421	Spin-reorientation transitions in Nd2(Fe,Co)14B compounds and their hydrides. Journal of Magnetism and Magnetic Materials, 2006, 300, e465-e468.	2.3	5
422	High-Field Transitions in ErFe11Ti and HoFe11Ti Single Crystals. Journal of Low Temperature Physics, 2013, 170, 307-312.	1.4	5
423	Anisotropy control in magnetic nanostructures through field-assisted chemical vapor deposition. Nanoscale Advances, 2019, 1, 4290-4295.	4.6	5
424	Direct observation of paramagnetic spin fluctuations in LaFe_{13â^’x}Si_x. Journal of Physics Condensed Matter, 2020, 32, 115802.	1.8	5
425	A two-sublattice model for extracting rare-earth anisotropy constants from measurements on (Nd,Ce)2(Fe,Co)14B single crystals. Journal of Magnetism and Magnetic Materials, 2021, 520, 167470.	2.3	5
426	Magnetic properties and microstructure of Sm5Fe17-based composite magnets. Acta Materialia, 2021, 212, 116912.	7.9	5
427	Exploring V-Fe-Co-Ni-Al and V-Fe-Co-Ni-Cu high entropy alloys for magnetocaloric applications. Journal of Alloys and Compounds, 2022, 921, 166040.	5.5	5
428	Domain studies in thin sections of HDDR-processed Nd-Fe-B-type magnets by TEM. Journal of Magnetism and Magnetic Materials, 1998, 177-181, 978-979.	2.3	4
429	High pressure gas-solid interstitial modification with H and N atoms and HDDR processing of Nd(Fe,M)/sub 12/ (M=Ti,V,Mo). IEEE Transactions on Magnetics, 1999, 35, 3247-3249.	2.1	4
430	Solid-state amorphization of SmFe3 by hydrogenation. Scripta Materialia, 2000, 42, 1013-1016.	5.2	4
431	Effect of small Zr additions on the microstructure of Sm/sub 2/Fe/sub 17/. IEEE Transactions on Magnetics, 2000, 36, 3303-3305.	2.1	4
432	Highly coercive milled and melt-spun (Pr,Nd)FeB-type magnets and their hot workability. IEEE Transactions on Magnetics, 2001, 37, 2483-2485.	2.1	4

#	Article	IF	Citations
433	Magnetic Properties of Nd and Sm Rare-Earth Metals After Severe Plastic Deformation. IEEE Magnetics Letters, 2016, 7, 1-4.	1.1	4
434	Origin of field-induced discontinuous phase transitions in Nd2Fe17. Physical Review B, 2018, 97, .	3.2	4
435	Anomalous Hall effect in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>La</mml:mi><mml:msub><mml:mrow><mml:mo>(</m compounds. Physical Review B, 2019, 100, .	3.2	4
436	Element-resolved study on the evolution of magnetic response in FexN compounds. Journal of Magnetism and Magnetic Materials, 2020, 498, 166219.	2.3	4
437	Maximum performance of an active magnetic regenerator. Applied Physics Letters, 2021, 119, .	3.3	4
438	Hydrogenation Disproportionation Desorption Recombination Processes Applied to NdFeB-, SmFe- and SmCo-Type Alloys. Materials Research Society Symposia Proceedings, 1999, 577, 3.	0.1	3
439	Thermodynamics of the (Sm2Fe17â^’xGax+H2) system. Journal of Alloys and Compounds, 2000, 308, 275-279.	5.5	3
440	Magnetic properties of melt-spun (Nd,Dy)2Fe14(B,C). Journal of Alloys and Compounds, 2001, 316, 290-295.	5.5	3
441	Observation of texture for fully dense MgB2 superconductor processed by hot deformation. Physica C: Superconductivity and Its Applications, 2002, 372-376, 1248-1250.	1.2	3
442	Anisotropy Mechanism in HDDR Processed NdFeB. , 2003, , 37-44.		3
443	A secondary ion mass spectrometry study of hydrogen interaction with Nd2(Fe/Co)14B. Journal of Alloys and Compounds, 2003, 356-357, 679-682.	5.5	3
444	Hydrogen-Induced Effects in Alloys of Type Nd2(Fe/Co)14B Studied by X-ray Photoelectron Spectroscopy. Chemistry of Materials, 2004, 16, 3098-3105.	6.7	3
445	Self-diffusion behaviour and microstructure of ultrafine-grained Nd2Fe14B with intergranular melting transition. International Journal of Materials Research, 2004, 95, 895-903.	0.8	3
446	Corrosion Behavior of NdFeB-Based Nanocrystalline Permanent Magnets. Journal of Metastable and Nanocrystalline Materials, 2005, 24-25, 631-634.	0.1	3
447	Bidisperse Perfluorinated Polyether (PFPE)-Based Magneto-Rheological Fluids in a Prosthetic Knee. , 2009, , .		3
448	Hydrogen and Zr-based metallic glasses: Gas/solid absorption process and structure evolution. Journal of Alloys and Compounds, 2011, 509, 1636-1643.	5.5	3
449	Wireless and passive temperature indicator utilizing the large hysteresis of magnetic shape memory alloys. Applied Physics Letters, 2012, 101, 042412.	3.3	3
450	Scanning Hall Probe Imaging of LaFe_{13-x}Si_x. Advances in Science and Technology, 2014, 93, 219-224.	0.2	3

#	Article	IF	Citations
451	Viewpoint on the letter â€˜Self pumping magnetic coolingâ€™ by V Chaudhary <i>et al</i> (2017 <i>J. Phys. D:) Tj ETQq1 1 0.784314	2.8	3
452	Advanced magnetic materials could drive next-generation energy technologies. MRS Bulletin, 2018, 43, 918-919.	3.5	3
453	Recyclable phosphor sheet based on polyvinyl alcohol for LED lighting using remote phosphor technology. Materials Technology, 2019, 34, 178-183.	3.0	3
454	Neutron study of magnetic correlations in rare-earth-free Mn-Bi magnets. Physical Review Materials, 2021, 5, .	2.4	3
455	Influence of martensitic configuration on hysteretic properties of Heusler films studied by advanced imaging in magnetic field and temperature. Acta Materialia, 2021, 221, 117356.	7.9	3
456	Chemical long range ordering in all-d-metal Heusler alloys. Journal of Applied Physics, 2022, 131, .	2.5	3
457	Effect of size and disorder on martensitic phase transition and thermal hysteresis in milled Ni-Mn-In-Co microparticles. Journal of Alloys and Compounds, 2022, 906, 164377.	5.5	3
458	Determination of the fraction of t-Fe3B in hydrogen disproportionated Hf-doped Ndâ€“Feâ€“B alloy by MÃ¶ssbauer spectroscopy. Journal of Magnetism and Magnetic Materials, 2001, 226-230, 1461-1463.	2.3	2
459	Hard magnetic properties of melt-spun Râ€“Fe carbides. Journal of Magnetism and Magnetic Materials, 2001, 231, 4-8.	2.3	2
460	Characterisation of complex hydrides synthesised or modified by ball milling. International Journal of Materials Research, 2008, 99, 553-556.	0.3	2
461	Contributions to the entropy change in melt-spun LaFe_{11.6}Si_{1.4}. Journal Physics D: Applied Physics, 2012, 45, 179501.	2.8	2
462	Unusual oxidation behavior of light metal hydride by tetrahydrofuran solvent molecules confined in ordered mesoporous carbon. Journal of Materials Research, 2014, 29, 55-63.	2.6	2
463	Probing Structural and Magnetic Instabilities and Hysteresis in Heuslers by Density Functional Theory Calculations (Phys. Status Solidi B 2/2018). Physica Status Solidi (B): Basic Research, 2018, 255, 1870108.	1.5	2
464	The impact of Pr and Nd substitution on structure, hysteresis and magnetocaloric properties of La_{1â^’x}(Pr,Nd)_xFe_{11.6}Si_{1.4}. Journal Physics D: Applied Physics, 2021, 54, 225001.	2.8	2
465	Electric-field manipulation of the magnetocaloric effect in a Fe49Rh51/PZT composite. Journal Physics D: Applied Physics, 2021, 54, 505002.	2.8	2
466	Microwave synthesis and magnetic properties of Lavesâ€type Ti ₂ M ₃ Si (Mâ€‰=â€‰Mn) Tj ETQq0 0 0 rgB	0.8	2
467	Magnetic Properties and Specific Heat of Laves Phase Tb1-xScxNi2(x = 0.1, 0.2) Solid Solutions. Acta Physica Polonica A, 2010, 118, 877-878.	0.5	2
468	Characterisation Of Rare Earth-transition Metal Alloys With Resistivity Measurements. , 1993, , .		1

#	Article	IF	Citations
469	Microstructural and Magnetic Studies of Hddr Magnets from High Boron NdFeB(Zr) Alloys. Materials Research Society Symposia Proceedings, 1999, 577, 47.	0.1	1
470	Self-Diffusion of 147Nd in Nanocrystalline Nd2Fe14B. , 2005, , 767-772.		1
471	Influence of the dopant during the one step mechano-chemical synthesis of sodium alanate. Journal of Physics: Conference Series, 2009, 144, 012022.	0.4	1
472	Increased magnetic moment induced by lattice expansion from Î±-Fe to Î±-Fe₈N. , 2015, , .		1
473	High energy proton induced radiation damage of rare earth permanent magnet quadrupoles. Review of Scientific Instruments, 2017, 88, 125103.	1.3	1
474	Probing Glassiness in Heuslers via Density Functional Theory Calculations. Springer Series in Materials Science, 2018, , 153-182.	0.6	1
475	Dynamic unidirectional anisotropy in cubic FeGe with antisymmetric spin-spin-coupling. Scientific Reports, 2020, 10, 2861.	3.3	1
476	A SIMPLE SHEAR ANALYSIS OF MR FLUIDS. , 2011, , .		1
477	Simultaneous Multi-Property Probing During Magneto-Structural Phase Transitions: An Element-Specific and Macroscopic Hysteresis Characterization at ID12 of the ESRF. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-9.	4.7	1
478	Modified HDDR procedures applied to NdFeB alloys. , 1999, , .		0
479	Hydrogen-Induced Amorphization of SmFe₃. Journal of Metastable and Nanocrystalline Materials, 2000, 8, 557-561.	0.1	0
480	Hydrogen-Induced Amorphization of SmFe₃. Materials Science Forum, 2000, 343-346, 557-561.	0.3	0
481	Phase Formation and Crystal Structure of Sm2Fe17-yGay Compounds During Hydrogen Disproportionation and Desorption Recombination (HDDR-Process).. ChemInform, 2003, 34, no.	0.0	0
482	Thermodynamics of Feâ€"Sm, Feâ€"H, and Hâ€"Sm Systems and Its Application to the Hydrogenâ€"Disproportionationâ€"Desorptionâ€"Recombination (HDDR) Process for the System Fe17Sm2â€"H2.. ChemInform, 2003, 34, no.	0.0	0
483	Influence of Zr Addition on Phase Formation and Magnetic Properties of the Fe17Gd2 Phase.. ChemInform, 2003, 34, no.	0.0	0
484	Hydrogen-Induced Effects in Alloys of Type Nd2(Fe/Co)14B Studied by X-Ray Photoelectron Spectroscopy.. ChemInform, 2004, 35, no.	0.0	0
485	Relation Between High-Field Magnetization and Microstructure in Bulk SmCo$_2.5$Cu$_2.5$. IEEE Transactions on Magnetics, 2006, 42, 2903-2905.	2.1	0
486	Numerical Simulation of Magnetic Cooling Cycles. Solid State Phenomena, 2012, 190, 319-322.	0.3	0

#	Article	IF	Citations
487	Magnetocaloric Effect in Ho-Er-Gd-Co Multicomponent Compounds. Solid State Phenomena, 0, 190, 303-306.	0.3	0
488	Magnetocaloric and hysteretic properties of Ni-Mn based Heusler alloys. , 2015, , .		0
489	Polymer-bonded La(Fe, Mn, Si)<inf>13</inf>H<inf>x</inf> heat exchangers with optimized magnetocaloric properties. , 2015, , .		0
490	Multiferroics: Multiferroic Clusters: A New Perspective for Relaxor-Type Room-Temperature Multiferroics (Adv. Funct. Mater. 13/2016). Advanced Functional Materials, 2016, 26, 2110-2110.	14.9	0
491	Calculating the magnetocaloric effect in second-order-type material by micromagnetic simulations: A case study on Co2B. Scripta Materialia, 2020, 177, 218-222.	5.2	0
492	Permanent Magnet Materials. , 2021, , 1-65.		0
493	MODELING PERFLUORINATED POLYETHER BASED MR FLUIDS. , 2011, , .		0
494	INFLUENCE OF HYDROGEN ON MAGNETOCRYSTALLINE ANISOTROPY OF TbFe6Co5Ti SINGLE CRYSTAL. , 2007, , 485-492.		0
495	Permanent Magnet Materials and Applications. , 2021, , 1369-1433.		0
496	Angular dependence of saturation magnetization in single crystals with uniaxial magnetic anisotropy. Journal of Magnetism and Magnetic Materials, 2022, 547, 168947.	2.3	0
497	Self-diffusion behaviour and microstructure of ultrafine-grained Nd₂Fe₁₄B with intergranular melting transition. International Journal of Materials Research, 2022, 95, 895-903.	0.3	0