

Oliver Gutfleisch

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482
papers

16,971
citations

62
h-index

109
g-index

512
ext. papers

19,418
ext. citations

4.6
avg, IF

6.78
L-index

#	Paper	IF	Citations
482	Magnetic materials and devices for the 21st century: stronger, lighter, and more energy efficient. <i>Advanced Materials</i> , 2011 , 23, 821-42	24	1884
481	Giant magnetocaloric effect driven by structural transitions. <i>Nature Materials</i> , 2012 , 11, 620-6	27	1053
480	Hydrogen storage in magnesium-based hydrides and hydride composites. <i>Scripta Materialia</i> , 2007 , 56, 841-846	5.6	388
479	Hydrogen sorption properties of MgH ₂ /LiBH ₄ composites. <i>Acta Materialia</i> , 2007 , 55, 3951-3958	8.4	325
478	The 2017 Magnetism Roadmap. <i>Journal Physics D: Applied Physics</i> , 2017 , 50, 363001	3	229
477	Novel design of La(Fe,Si) ₁₃ alloys towards high magnetic refrigeration performance. <i>Advanced Materials</i> , 2010 , 22, 3735-9	24	220
476	Controlling the properties of high energy density permanent magnetic materials by different processing routes. <i>Journal Physics D: Applied Physics</i> , 2000 , 33, R157-R172	3	218
475	REE Recovery from End-of-Life NdFeB Permanent Magnet Scrap: A Critical Review. <i>Journal of Sustainable Metallurgy</i> , 2017 , 3, 122-149	2.7	209
474	Evolution of magnetic domain structures and coercivity in high-performance SmCo _{2:17} -type permanent magnets. <i>Acta Materialia</i> , 2006 , 54, 997-1008	8.4	161
473	Understanding the microstructure and coercivity of high performance NdFeB-based magnets. <i>Scripta Materialia</i> , 2012 , 67, 536-541	5.6	158
472	Hydrogen storage in different carbon nanostructures. <i>Applied Physics Letters</i> , 2002 , 80, 2985-2987	3.4	153
471	Systematic study of the microstructure, entropy change and adiabatic temperature change in optimized LaBeBi alloys. <i>Acta Materialia</i> , 2011 , 59, 3602-3611	8.4	147
470	Mastering hysteresis in magnetocaloric materials. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2016 , 374,	3	146
469	Large magnetocaloric effect in melt-spun LaFe ₁₃ Si ₆ . <i>Journal of Applied Physics</i> , 2005 , 97, 10M305	2.5	146
468	A quantitative criterion for determining the order of magnetic phase transitions using the magnetocaloric effect. <i>Nature Communications</i> , 2018 , 9, 2680	17.4	144
467	Multiple metamagnetic transitions in the magnetic refrigerant La(Fe,Si) ₁₃ Hx. <i>Physical Review Letters</i> , 2008 , 101, 177203	7.4	144
466	Confinement of NaAlH ₄ in Nanoporous Carbon: Impact on H ₂ Release, Reversibility, and Thermodynamics. <i>Journal of Physical Chemistry C</i> , 2010 , 114, 4675-4682	3.8	141

465	Large reversible magnetocaloric effect in Ni-Mn-In-Co. <i>Applied Physics Letters</i> , 2015 , 106, 021901	3.4	136
464	Influence of annealing on magnetic field-induced structural transformation and magnetocaloric effect in NiMnInCo ribbons. <i>Acta Materialia</i> , 2009 , 57, 4911-4920	8.4	133
463	Exploring La(Fe,Si) ₁₃ -based magnetic refrigerants towards application. <i>Scripta Materialia</i> , 2012 , 67, 584-589	5.89	125
462	High performance hard magnetic NdFeB thick films for integration into micro-electro-mechanical systems. <i>Applied Physics Letters</i> , 2007 , 90, 092509	3.4	125
461	Effects of hydrostatic pressure on the magnetism and martensitic transition of NiMnIn magnetic superelastic alloys. <i>Applied Physics Letters</i> , 2008 , 92, 012515	3.4	113
460	Textured polymer bonded composites with NiMnGa magnetic shape memory particles. <i>Acta Materialia</i> , 2007 , 55, 2707-2713	8.4	105
459	Hysteresis and magnetocaloric effect at the magnetostructural phase transition of Ni-Mn-Ga and Ni-Mn-Co-Sn Heusler alloys. <i>Physical Review B</i> , 2012 , 85,	3.3	104
458	Giant adiabatic temperature change in FeRh alloys evidenced by direct measurements under cyclic conditions. <i>Acta Materialia</i> , 2016 , 106, 15-21	8.4	101
457	Temperature-dependent Dy diffusion processes in NdFeB permanent magnets. <i>Acta Materialia</i> , 2015 , 83, 248-255	8.4	98
456	The role of local anisotropy profiles at grain boundaries on the coercivity of Nd ₂ Fe ₁₄ B magnets. <i>Applied Physics Letters</i> , 2010 , 97, 232511	3.4	97
455	Magnetic entropy change in melt-spun MnFePGe (invited). <i>Journal of Applied Physics</i> , 2006 , 99, 08K903	2.5	97
454	Heavy rare earth free, free rare earth and rare earth free magnets - Vision and reality. <i>Scripta Materialia</i> , 2018 , 154, 289-294	5.6	96
453	A multicaloric cooling cycle that exploits thermal hysteresis. <i>Nature Materials</i> , 2018 , 17, 929-934	27	96
452	Magnetocaloric effect in LaFe _{11.8} CoxSi _{1.2} melt-spun ribbons. <i>Journal of Alloys and Compounds</i> , 2008 , 450, 18-21	5.7	92
451	Reversibility of magnetostructural transition and associated magnetocaloric effect in NiMnInCo. <i>Applied Physics Letters</i> , 2008 , 93, 102512	3.4	92
450	Correlation of microchemistry of cell boundary phase and interface structure to the coercivity of Sm(Co _{0.784} Fe _{0.100} Cu _{0.088} Zr _{0.028}) _{7.19} sintered magnets. <i>Acta Materialia</i> , 2017 , 126, 1-10	8.4	89
449	Contradictory role of the magnetic contribution in inverse magnetocaloric Heusler materials. <i>Physical Review B</i> , 2016 , 93,	3.3	88
448	Systematic investigation of Mn substituted La(Fe,Si) ₁₃ alloys and their hydrides for room-temperature magnetocaloric application. <i>Journal of Alloys and Compounds</i> , 2014 , 598, 27-32	5.7	86

447	In situ pressure and temperature monitoring during the conversion of Mg into MgH ₂ by high-pressure reactive ball milling. <i>Journal of Alloys and Compounds</i> , 2007 , 427, 204-208	5.7	83
446	Peculiarities of the magnetocaloric properties in Ni-Mn-Sn ferromagnetic shape memory alloys. <i>Physical Review B</i> , 2010 , 81,	3.3	82
445	Selective laser melting of La(Fe,Co,Si) ₁₃ geometries for magnetic refrigeration. <i>Journal of Applied Physics</i> , 2013 , 114, 043907	2.5	75
444	La(Fe,Si) ₁₃ -based magnetic refrigerants obtained by novel processing routes. <i>Journal of Magnetism and Magnetic Materials</i> , 2008 , 320, 2252-2258	2.8	75
443	Synthesis and decomposition of Mg ₂ FeH ₆ prepared by reactive milling. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2004 , 108, 28-32	3.1	75
442	Atomic structure and domain wall pinning in samarium-cobalt-based permanent magnets. <i>Nature Communications</i> , 2017 , 8, 54	17.4	72
441	Epoxy-bonded LaFeCoBi magnetocaloric plates. <i>Journal of Magnetism and Magnetic Materials</i> , 2015 , 375, 65-73	2.8	71
440	Comprehensive Study of Melt Infiltration for the Synthesis of NaAlH ₄ /C Nanocomposites. <i>Chemistry of Materials</i> , 2010 , 22, 2233-2238	9.6	71
439	Magnetic field dependence of the maximum magnetic entropy change. <i>Physical Review B</i> , 2011 , 83,	3.3	71
438	Desorption characteristics of rare earth (R) hydrides (R=Y, Ce, Pr, Nd, Sm, Gd and Tb) in relation to the HDDR behaviour of RFe-based-compounds. <i>Journal of Alloys and Compounds</i> , 1997 , 253-254, 128-133	5.7	71
437	The study of magnetocaloric effect in R ₂ Fe ₁₇ (R = Y, Pr) alloys. <i>Journal Physics D: Applied Physics</i> , 2004 , 37, 2628-2631	3	71
436	Towards high-performance permanent magnets without rare earths. <i>Journal of Physics Condensed Matter</i> , 2014 , 26, 064205	1.8	70
435	Making a Cool Choice: The Materials Library of Magnetic Refrigeration. <i>Advanced Energy Materials</i> , 2019 , 9, 1901322	21.8	68
434	Grain boundary diffusion of different rare earth elements in Nd-Fe-B sintered magnets by experiment and FEM simulation. <i>Acta Materialia</i> , 2017 , 124, 421-429	8.4	68
433	Magnetocrystalline anisotropy in L ₁₀ FePt and exchange coupling in FePt/Fe ₃ Pt nanocomposites. <i>Journal of Physics Condensed Matter</i> , 2005 , 17, 4157-4170	1.8	68
432	Fundamental and practical aspects of the hydrogenation, disproportionation, desorption and recombination process. <i>Journal Physics D: Applied Physics</i> , 1996 , 29, 2255-2265	3	68
431	Evolution of interaction domains in textured fine-grained Nd ₂ Fe ₁₄ B magnets. <i>Journal of Applied Physics</i> , 2007 , 102, 023912	2.5	66
430	On the S(T) diagram of magnetocaloric materials with first-order transition: Kinetic and cyclic effects of Heusler alloys. <i>Acta Materialia</i> , 2016 , 107, 1-8	8.4	65

429	Large magnetostrain in polycrystalline NiMnInCo. <i>Applied Physics Letters</i> , 2009 , 95, 232515	3.4	65
428	Absence of magnetic domain wall motion during magnetic field induced twin boundary motion in bulk magnetic shape memory alloys. <i>Applied Physics Letters</i> , 2007 , 90, 192504	3.4	65
427	Characterisation of solid-HDDR processed Nd ₁₆ Fe ₇₆ B ₈ alloys by means of electron microscopy. <i>Journal of Magnetism and Magnetic Materials</i> , 1995 , 147, 320-330	2.8	65
426	Fast development of high coercivity in melt-spun Sm(Co,Fe,Cu,Zr) _z magnets. <i>Applied Physics Letters</i> , 2002 , 80, 1243-1245	3.4	64
425	Microstructural and magnetic properties of Mn-Fe-P-Si (Fe ₂ P-type) magnetocaloric compounds. <i>Acta Materialia</i> , 2017 , 132, 222-229	8.4	63
424	Reversibility and irreversibility of magnetocaloric effect in a metamagnetic shape memory alloy under cyclic action of a magnetic field. <i>Applied Physics Letters</i> , 2010 , 97, 052503	3.4	63
423	The influence of Co and Ga additions on the corrosion behavior of nanocrystalline NdFeB magnets. <i>Corrosion Science</i> , 2002 , 44, 1857-1874	6.8	63
422	Impact of different Nd-rich crystal-phases on the coercivity of NdFeB grain ensembles. <i>Scripta Materialia</i> , 2014 , 70, 35-38	5.6	61
421	Nanocrystalline high performance permanent magnets. <i>Journal of Magnetism and Magnetic Materials</i> , 2002 , 242-245, 1277-1283	2.8	61
420	Al ₃ Li ₄ (BH ₄) ₁₃ : a complex double-cation borohydride with a new structure. <i>Chemistry - A European Journal</i> , 2010 , 16, 8707-12	4.8	60
419	Magnetic field-induced twin boundary motion in polycrystalline NiMnGa fibres. <i>New Journal of Physics</i> , 2008 , 10, 073002	2.9	60
418	Element-resolved thermodynamics of magnetocaloric LaFe(13-x)Si(x). <i>Physical Review Letters</i> , 2015 , 114, 057202	7.4	59
417	Influence of thermal hysteresis and field cycling on the magnetocaloric effect in LaFe _{11.6} Si _{1.4} . <i>Journal of Alloys and Compounds</i> , 2013 , 552, 310-317	5.7	58
416	On the preparation of La(Fe,Mn,Si) ₁₃ H polymer-composites with optimized magnetocaloric properties. <i>Journal of Magnetism and Magnetic Materials</i> , 2015 , 396, 228-236	2.8	57
415	First-principles calculation of the instability leading to giant inverse magnetocaloric effects. <i>Physical Review B</i> , 2014 , 89,	3.3	57
414	Direct evidence for Cu concentration variation and its correlation to coercivity in Sm(Co _{0.74} Fe _{0.1} Cu _{0.12} Zr _{0.04}) _{7.4} ribbons. <i>Scripta Materialia</i> , 2009 , 60, 764-767	5.6	57
413	Memory of texture during HDDR Processing of NdFeB. <i>IEEE Transactions on Magnetics</i> , 2003 , 39, 2926-2931		57
412	Heat exchangers made of polymer-bonded La(Fe,Si) ₁₃ . <i>Journal of Applied Physics</i> , 2014 , 115, 17A941	2.5	56

411	The effect of the thermal decomposition reaction on the mechanical and magnetocaloric properties of La(Fe,Si,Co) ₁₃ . <i>Acta Materialia</i> , 2012 , 60, 4268-4276	8.4	56
410	Multi-phase EBSD mapping and local texture analysis in NdFeB sintered magnets. <i>Acta Materialia</i> , 2011 , 59, 1026-1036	8.4	56
409	Microstructure and magnetic properties of MnAlC alloy powders prepared by ball milling. <i>Journal of Alloys and Compounds</i> , 2015 , 622, 524-528	5.7	54
408	Effect of Transition Metal Fluorides on the Sorption Properties and Reversible Formation of Ca(BH ₄) ₂ . <i>Journal of Physical Chemistry C</i> , 2011 , 115, 2497-2504	3.8	54
407	HRTEM studies of grain boundaries in die-upset NdFeCoGaB magnets. <i>Journal of Alloys and Compounds</i> , 2004 , 365, 286-290	5.7	54
406	Grain boundary diffusion in nanocrystalline Nd-Fe-B permanent magnets with low-melting eutectics. <i>Acta Materialia</i> , 2016 , 115, 354-363	8.4	53
405	La(Fe,Si) ₁₃ -based magnetic refrigerants obtained by novel processing routes. <i>Journal of Magnetism and Magnetic Materials</i> , 2009 , 321, 3571-3577	2.8	52
404	Atomic-scale features of phase boundaries in hot deformed NdFeCoBGa magnets infiltrated with a NdCu eutectic liquid. <i>Acta Materialia</i> , 2014 , 77, 111-124	8.4	51
403	Martensitic transformation and magnetic properties in NiFeGaCo magnetic shape memory alloys. <i>Acta Materialia</i> , 2008 , 56, 3177-3186	8.4	51
402	Determination of the heat of hydride formation/decomposition by high-pressure differential scanning calorimetry (HP-DSC). <i>Journal of Physical Chemistry B</i> , 2007 , 111, 13301-6	3.4	50
401	Microchemistry and magnetization reversal mechanism in melt-spun 2:17-type Sm-Co magnets. <i>Applied Physics Letters</i> , 2003 , 83, 2208-2210	3.4	50
400	Evaluation of the reliability of the measurement of key magnetocaloric properties: A round robin study of La(Fe,Si,Mn)H ₁₃ conducted by the SSEC consortium of European laboratories. <i>International Journal of Refrigeration</i> , 2012 , 35, 1528-1536	3.8	49
399	Resistivity measurements on hydrogenation disproportionation desorption recombination phenomena in Nd ₂ Fe ₇ B alloys with Co, Ga and Zr additions. <i>Journal of Alloys and Compounds</i> , 1997 , 260, 284-291	5.7	49
398	Texture in a ternary Nd _{16.2} Fe _{78.2} B _{5.6} powder using a modified hydrogenation-disproportionation-desorption-recombination process. <i>Journal of Magnetism and Magnetic Materials</i> , 2000 , 210, 5-9	2.8	49
397	Production and properties of metal-bonded La(Fe,Mn,Si) ₁₃ H composite material. <i>Acta Materialia</i> , 2017 , 127, 389-399	8.4	48
396	Magnetic properties of (Fe _{1-x} Co _x) ₂ B alloys and the effect of doping by 5d elements. <i>Physical Review B</i> , 2015 , 92,	3.3	48
395	Assessment of the magnetocaloric effect in La,Pr(Fe,Si) under cycling. <i>Journal of Magnetism and Magnetic Materials</i> , 2016 , 406, 259-265	2.8	48
394	Magnetostructural transition and adiabatic temperature change in MnCoGe magnetic refrigerants. <i>Scripta Materialia</i> , 2012 , 66, 642-645	5.6	48

393	Recycling Used Nd-Fe-B Sintered Magnets via a Hydrogen-Based Route to Produce Anisotropic, Resin Bonded Magnets. <i>Advanced Energy Materials</i> , 2013 , 3, 151-155	21.8	48
392	Microstructure, microchemistry, and magnetic properties of melt-spun Sm(Co,Fe,Cu,Zr) _z magnets. <i>Journal of Applied Physics</i> , 2003 , 93, 7975-7977	2.5	48
391	High-performance solid-state cooling materials: Balancing magnetocaloric and non-magnetic properties in dual phase La-Fe-Si. <i>Acta Materialia</i> , 2017 , 125, 506-512	8.4	47
390	Manipulation of matter by electric and magnetic fields: Toward novel synthesis and processing routes of inorganic materials. <i>Materials Today</i> , 2018 , 21, 527-536	21.8	46
389	Hysteresis Design of Magnetocaloric Materials From Basic Mechanisms to Applications. <i>Energy Technology</i> , 2018 , 6, 1397-1428	3.5	46
388	Identification and recovery of rare-earth permanent magnets from waste electrical and electronic equipment. <i>Waste Management</i> , 2017 , 68, 482-489	8.6	46
387	Magnetocaloric materials with first-order phase transition: thermal and magnetic hysteresis in LaFe _{11.8} Si _{1.2} and Ni _{2.21} Mn _{0.77} Ga _{1.02} (invited). <i>Journal of Applied Physics</i> , 2012 , 111, 07A910	2.5	46
386	Magnetostructural transformation in NiMnInCo ribbons. <i>Applied Physics Letters</i> , 2008 , 92, 162509	3.4	46
385	Magnetic Shape Memory Phenomena 2009 , 399-439		46
384	A Matter of Size and Stress: Understanding the First-Order Transition in Materials for Solid-State Refrigeration. <i>Advanced Functional Materials</i> , 2017 , 27, 1606735	15.6	45
383	Corrosion studies on highly textured NdFeB sintered magnets. <i>Journal of Alloys and Compounds</i> , 2006 , 415, 111-120	5.7	45
382	Phase transformations during the disproportionation stage in the solid HDDR process in a Nd ₁₆ Fe ₇₆ B ₈ alloy. <i>Journal of Alloys and Compounds</i> , 1994 , 215, 227-233	5.7	45
381	Dynamical Effects of the Martensitic Transition in Magnetocaloric Heusler Alloys from Direct In-Plane Measurements under Different Magnetic-Field-Sweep Rates. <i>Physical Review Applied</i> , 2016 , 5,	4.3	44
380	Influence of defect thickness on the angular dependence of coercivity in rare-earth permanent magnets. <i>Applied Physics Letters</i> , 2014 , 104, 182408	3.4	44
379	Magnetocaloric effect in reactively-milled LaFe _{11.57} Si _{1.43} H _y intermetallic compounds. <i>Journal of Applied Physics</i> , 2007 , 102, 053906	2.5	44
378	A new type of La(Fe,Si) ₁₃ -based magnetocaloric composite with amorphous metallic matrix. <i>Scripta Materialia</i> , 2015 , 95, 50-53	5.6	43
377	Constraint-dependent twin variant distribution in Ni ₂ MnGa single crystal, polycrystals and thin film: An EBSD study. <i>Acta Materialia</i> , 2010 , 58, 4629-4638	8.4	43
376	Structural, magnetic, and mechanical properties of 50 nm thick SmCo films suitable for use in microelectromechanical systems. <i>Journal of Applied Physics</i> , 2008 , 103, 043911	2.5	42

375	Near net shape production of radially oriented NdFeB ring magnets by backward extrusion. <i>Journal of Materials Processing Technology</i> , 2003 , 135, 358-365	5.3	42
374	Asymmetric first-order transition and interlocked particle state in magnetocaloric La(Fe,Si) ₁₃ . <i>Physica Status Solidi - Rapid Research Letters</i> , 2015 , 9, 136-140	2.5	41
373	Local texture in NdFeB sintered magnets with maximised energy density. <i>Journal of Alloys and Compounds</i> , 2004 , 365, 259-265	5.7	40
372	Improved hot workability and magnetic properties in NdFeCoGaB hot deformed magnets. <i>IEEE Transactions on Magnetics</i> , 2000 , 36, 3288-3290	2	40
371	Hydrogenation disproportionation desorption recombination in SmCo alloys by means of reactive milling. <i>Applied Physics Letters</i> , 1998 , 73, 3001-3003	3.4	40
370	Large entropy change, adiabatic temperature change, and small hysteresis in La(Fe,Mn) _{11.6} Si _{1.4} strip-cast flakes. <i>Journal of Magnetism and Magnetic Materials</i> , 2015 , 377, 90-94	2.8	39
369	Comparison of local and global texture in HDDR processed NdFeB magnets. <i>Acta Materialia</i> , 2011 , 59, 2029-2034	8.4	39
368	Experimental Evidence of Ca[B12H12] Formation During Decomposition of a Ca(BH ₄) ₂ + MgH ₂ Based Reactive Hydride Composite. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 18010-18014	3.8	39
367	Effect of additives on the synthesis and reversibility of Ca(BH ₄) ₂ . <i>Journal of Alloys and Compounds</i> , 2010 , 493, 281-287	5.7	38
366	Interaction domains in high-performance NdFeB thick films. <i>Scripta Materialia</i> , 2009 , 60, 826-829	5.6	37
365	Influence of composition and order on the magnetism of FePt alloys: Neutron powder diffraction and theory. <i>Applied Physics Letters</i> , 2006 , 89, 032506	3.4	37
364	Multiferroic Clusters: A New Perspective for Relaxor-Type Room-Temperature Multiferroics. <i>Advanced Functional Materials</i> , 2016 , 26, 2111-2121	15.6	37
363	High-performance nanocrystalline PrFeB-based magnets produced by intensive milling. <i>Journal of Applied Physics</i> , 2002 , 91, 8159	2.5	35
362	Thermodynamics of FeSm, FeB, and HBm systems and its application to the hydrogen-disproportionation-desorption-recombination (HDDR) process for the system Fe ₁₇ Sm ₂ B ₂ . <i>Journal of Alloys and Compounds</i> , 2002 , 339, 118-139	5.7	35
361	Mechanism of the texture development in hydrogen-disproportionation-desorption-recombination (HDDR) processed NdFeB powders. <i>Acta Materialia</i> , 2015 , 85, 42-52	8.4	34
360	Effect of milling parameters on SmCo ₅ nanoflakes prepared by surfactant-assisted high energy ball milling. <i>Journal of Applied Physics</i> , 2013 , 113, 013913	2.5	34
359	Magnetic field dependence of the maximum adiabatic temperature change. <i>Applied Physics Letters</i> , 2011 , 99, 012501	3.4	34
358	Reversible solid-state hydrogen-pump driven by magnetostructural transformation in the prototype system La(Fe,Si) ₁₃ Hy. <i>Journal of Applied Physics</i> , 2012 , 112, 083918	2.5	34

357	Texture memory effect of NdFeB during hydrogen treatment. <i>Journal of Magnetism and Magnetic Materials</i> , 2005 , 290-291, 1282-1285	2.8	34
356	Grain growth effects on the corrosion behavior of nanocrystalline NdFeB magnets. <i>Corrosion Science</i> , 2002 , 44, 1097-1112	6.8	34
355	A comparison of the magnetic properties and deformation behaviour of Nd-Fe-B magnets made from melt-spun, mechanically alloyed and HDDR powders. <i>Journal Physics D: Applied Physics</i> , 1998 , 31, 1660-1666	3	34
354	In situ magnetic force microscope studies of magnetization reversal of interaction domains in hot deformed Nd-Fe-B magnets. <i>Journal of Applied Physics</i> , 2012 , 111, 103901	2.5	33
353	NiMn-Based Alloys and Composites for Magnetically Controlled Dampers and Actuators. <i>Advanced Engineering Materials</i> , 2012 , 14, 653-667	3.5	33
352	Large reversible magnetocaloric effect in RNi compounds. <i>Journal Physics D: Applied Physics</i> , 2008 , 41, 245006	3	33
351	Fully dense MgB ₂ superconductor textured by hot deformation. <i>Journal of Alloys and Compounds</i> , 2001 , 329, 285-289	5.7	33
350	Experimental and computational analysis of magnetization reversal in (Nd,Dy)-Fe-B core shell sintered magnets. <i>Acta Materialia</i> , 2017 , 127, 498-504	8.4	32
349	Impact of lattice dynamics on the phase stability of metamagnetic FeRh: Bulk and thin films. <i>Physical Review B</i> , 2016 , 94,	3.3	32
348	Ca(BH ₄) ₂ + MgH ₂ : Desorption Reaction and Role of Mg on Its Reversibility. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 3846-3852	3.8	32
347	Mechanochemical synthesis and XPS analysis of sodium alanate with different additives. <i>Acta Materialia</i> , 2009 , 57, 5563-5570	8.4	32
346	Effect of carbon on magnetocaloric effect of LaFe _{11.6} Si _{1.4} compounds and on the thermal stability of its hydrides. <i>Journal of Applied Physics</i> , 2012 , 111, 07A927	2.5	32
345	Texture inducement during HDDR processing of NdFeB. <i>IEEE Transactions on Magnetics</i> , 2002 , 38, 2958-2960		32
344	Tunable first order transition in La(Fe,Cr,Si) ₁₃ compounds: Retaining magnetocaloric response despite a magnetic moment reduction. <i>Acta Materialia</i> , 2019 , 175, 406-414	8.4	31
343	Magnetocaloric effect of gadolinium in high magnetic fields. <i>Physical Review B</i> , 2019 , 99,	3.3	31
342	Magnetocaloric materials for refrigeration near room temperature. <i>MRS Bulletin</i> , 2018 , 43, 269-273	3.2	31
341	High-coercivity NdFeB thick films without heavy rare earth additions. <i>Acta Materialia</i> , 2013 , 61, 4920-4927	7.4	31
340	Hydrogen sorption properties of Mg _{0.1} wt.% Ni _{0.2} wt.% Pd prepared by reactive milling. <i>Journal of Alloys and Compounds</i> , 2005 , 404-406, 413-416	5.7	31

- 339 HDDR of SmCo alloys using high hydrogen pressures. *Journal of Magnetism and Magnetic Materials*, **1999**, 192, 73-76 2.8 31
- 338 A Comparative Study on the Magnetocaloric Properties of Ni-Mn-X(-Co) Heusler Alloys. *Physica Status Solidi (B): Basic Research*, **2018**, 255, 1700331 1.3 31
- 337 Reversibility of minor hysteresis loops in magnetocaloric Heusler alloys. *Applied Physics Letters*, **2017**, 110, 223904 3.4 30
- 336 Enhancement of coercivity and saturation magnetization of Al³⁺ substituted M-type Sr-hexaferrites. *Journal of Alloys and Compounds*, **2017**, 690, 979-985 5.7 30
- 335 Hydride formation in ball-milled and cryomilled MgFe powder mixtures. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2009**, 158, 19-25 3.1 30
- 334 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 5.7 30
- 333 Effect of reactive milling in hydrogen on the magnetic and magnetocaloric properties of LaFe_{11.57}Si_{1.43}. *Journal of Magnetism and Magnetic Materials*, **2005**, 290-291, 673-675 2.8 30
- 332 Investigations of the corrosion behaviour of nanocrystalline NdFeB hot pressed magnets. *Journal of Alloys and Compounds*, **2000**, 311, 299-304 5.7 30
- 331 The role of Ni in modifying the order of the phase transition of La(Fe,Ni,Si)₁₃. *Acta Materialia*, **2018**, 160, 137-146 8.4 30
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