

# Vitalij K Pecharsky

## List of Publications by Citations

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139  
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304  
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22,028  
ext. citations

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#	Paper	IF	Citations
288	Giant Magnetocaloric Effect in Gd <sub>5</sub> (Si <sub>2</sub> Ge <sub>2</sub> ). <i>Physical Review Letters</i> , <b>1997</b> , 78, 4494-4497	7.4	3346
287	Recent developments in magnetocaloric materials. <i>Reports on Progress in Physics</i> , <b>2005</b> , 68, 1479-1539	14.4	2706
286	Magnetocaloric effect and magnetic refrigeration. <i>Journal of Magnetism and Magnetic Materials</i> , <b>1999</b> , 200, 44-56	2.8	1168
285	Magnetocaloric Materials. <i>Annual Review of Materials Research</i> , <b>2000</b> , 30, 387-429		1019
284	Magnetic phase transitions and the magnetothermal properties of gadolinium. <i>Physical Review B</i> , <b>1998</b> , 57, 3478-3490	3.3	723
283	Magnetocaloric effect from indirect measurements: Magnetization and heat capacity. <i>Journal of Applied Physics</i> , <b>1999</b> , 86, 565-575	2.5	649
282	Tunable magnetic regenerator alloys with a giant magnetocaloric effect for magnetic refrigeration from ~20 to ~290 K. <i>Applied Physics Letters</i> , <b>1997</b> , 70, 3299-3301	3.4	628
281	Thirty years of near room temperature magnetic cooling: Where we are today and future prospects. <i>International Journal of Refrigeration</i> , <b>2008</b> , 31, 945-961	3.8	514
280	Making and breaking covalent bonds across the magnetic transition in the giant magnetocaloric material Gd <sub>5</sub> (Si <sub>2</sub> Ge <sub>2</sub> ). <i>Physical Review Letters</i> , <b>2000</b> , 84, 4617-20	7.4	332
279	Thermodynamics of the magnetocaloric effect. <i>Physical Review B</i> , <b>2001</b> , 64,	3.3	295
278	Effect of alloying on the giant magnetocaloric effect of Gd <sub>5</sub> (Si <sub>2</sub> Ge <sub>2</sub> ). <i>Journal of Magnetism and Magnetic Materials</i> , <b>1997</b> , 167, L179-L184	2.8	277
277	Phase relationships and crystallography in the pseudobinary system Gd <sub>5</sub> Si <sub>4</sub> ?Gd <sub>5</sub> Ge <sub>4</sub> . <i>Journal of Alloys and Compounds</i> , <b>1997</b> , 260, 98-106	5.7	266
276	The giant magnetocaloric effect of optimally prepared Gd <sub>5</sub> Si <sub>2</sub> Ge <sub>2</sub> . <i>Journal of Applied Physics</i> , <b>2003</b> , 93, 4722-4728	2.5	244
275	Massive magnetic-field-induced structural transformation in Gd <sub>5</sub> Ge <sub>4</sub> and the nature of the giant magnetocaloric effect. <i>Physical Review Letters</i> , <b>2003</b> , 91, 197204	7.4	233
274	Some common misconceptions concerning magnetic refrigerant materials. <i>Journal of Applied Physics</i> , <b>2001</b> , 90, 4614-4622	2.5	225
273	Advanced magnetocaloric materials: What does the future hold?. <i>International Journal of Refrigeration</i> , <b>2006</b> , 29, 1239-1249	3.8	194
272	Titanium catalyzed solid-state transformations in LiAlH <sub>4</sub> during high-energy ball-milling. <i>Journal of Alloys and Compounds</i> , <b>2001</b> , 329, 108-114	5.7	189

271	Mechanically induced solid-state generation of phosphorus ylides and the solvent-free Wittig reaction. <i>Journal of the American Chemical Society</i> , <b>2002</b> , 124, 6244-5	16.4	183
270	Magnetic refrigeration materials (invited). <i>Journal of Applied Physics</i> , <b>1999</b> , 85, 5365-5368	2.5	172
269	The room temperature metastable/stable phase relationships in the pseudo-binary Gd <sub>5</sub> Si <sub>4</sub> Gd <sub>5</sub> Ge <sub>4</sub> system. <i>Journal of Alloys and Compounds</i> , <b>2002</b> , 338, 126-135	5.7	150
268	Influence of the crystalline electrical field on the magnetocaloric effect of DyAl <sub>2</sub> , ErAl <sub>2</sub> , and DyNi <sub>2</sub> . <i>Physical Review B</i> , <b>1998</b> , 58, 12110-12116	3.3	144
267	Magnetic-field and temperature dependencies of the electrical resistance near the magnetic and crystallographic first-order phase transition of Gd <sub>5</sub> (Si <sub>2</sub> Ge <sub>2</sub> ). <i>Physical Review B</i> , <b>1999</b> , 60, 7993-7997	3.3	138
266	On the nature of the magnetocaloric effect of the first-order magnetostructural transition. <i>Scripta Materialia</i> , <b>2012</b> , 67, 572-577	5.6	137
265	Solid state phase transformations in LiAlH <sub>4</sub> during high-energy ball-milling. <i>Journal of Alloys and Compounds</i> , <b>2000</b> , 313, 69-74	5.7	137
264	Material-based figure of merit for caloric materials. <i>Journal of Applied Physics</i> , <b>2018</b> , 123, 034902	2.5	119
263	A 3850 K fast automatic small sample calorimeter. <i>Review of Scientific Instruments</i> , <b>1997</b> , 68, 4196-4207	1.7	118
262	Magnetic correlations induced by magnetic field and temperature in Gd <sub>5</sub> Ge <sub>4</sub> . <i>Physical Review B</i> , <b>2002</b> , 65,	3.3	116
261	The correlation of the magnetic properties and the magnetocaloric effect in (Gd <sub>1-x</sub> Er <sub>x</sub> )NiAl alloys. <i>Journal of Applied Physics</i> , <b>1998</b> , 84, 5677-5685	2.5	108
260	Evidence of a magnetic glass state in the magnetocaloric material Gd <sub>5</sub> Ge <sub>4</sub> . <i>Physical Review B</i> , <b>2006</b> , 74,	3.3	104
259	Comment on "Direct measurement of the 'Giant' adiabatic temperature change in Gd <sub>5</sub> Si <sub>2</sub> Ge <sub>2</sub> ". <i>Physical Review Letters</i> , <b>2000</b> , 85, 4190; 4192	7.4	104
258	Barocaloric effect in the magnetocaloric prototype Gd <sub>5</sub> Si <sub>2</sub> Ge <sub>2</sub> . <i>Applied Physics Letters</i> , <b>2012</b> , 101, 071906	5.4	102
257	The nonpareil R <sub>5</sub> (SixGe <sub>1-x</sub> ) <sub>4</sub> phases. <i>Journal of Alloys and Compounds</i> , <b>2000</b> , 303-304, 214-222	5.7	100
256	Electrical resistivity, electronic heat capacity, and electronic structure of Gd <sub>5</sub> Ge <sub>4</sub> . <i>Physical Review B</i> , <b>2001</b> , 64,	3.3	95
255	Rapid solid-state transformation of tetrahedral [AlH <sub>4</sub> ] into octahedral [AlH <sub>6</sub> ] <sup>3-</sup> in lithium aluminohydride. <i>Chemical Communications</i> , <b>2000</b> , 1665-1666	5.8	88
254	The effect of varying the crystal structure on the magnetism, electronic structure and thermodynamics in the Gd <sub>5</sub> (Si <sub>x</sub> Ge <sub>1-x</sub> ) <sub>4</sub> system near x=0.5. <i>Journal of Solid State Chemistry</i> , <b>2003</b> , 171, 57-68	3.3	83

- 253 Unusual magnetic behavior in  $Gd_5(Si_{1.5}Ge_{2.5})$  and  $Gd_5(Si_2Ge_2)$ . *Physical Review B*, **2000**, 62, R14625-R14628 82
- 252 New type of magnetocaloric effect: Implications on low-temperature magnetic refrigeration using an Ericsson cycle. *Applied Physics Letters*, **1994**, 64, 2739-2741 3.4 80
- 251 Interplay between reversible and irreversible magnetic phase transitions in polycrystalline  $Gd_5Ge_4$ . *Physical Review B*, **2004**, 69, 3.3 79
- 250 Short-range anisotropic ferromagnetic correlations in the paramagnetic and antiferromagnetic phases of  $Gd_5Ge_4$ . *Physical Review B*, **2006**, 74, 3.3 75
- 249  $(Dy_{0.5}Er_{0.5})Al_2$ : A large magnetocaloric effect material for low-temperature magnetic refrigeration. *Applied Physics Letters*, **1994**, 64, 253-255 3.4 72
- 248 Making the most of the magnetic and lattice entropy changes. *Journal of Magnetism and Magnetic Materials*, **2009**, 321, 3541-3547 2.8 71
- 247 X-ray powder diffractometer for in situ structural studies in magnetic fields from 0 to 35 kOe between 2.2 and 315 K. *Review of Scientific Instruments*, **2004**, 75, 1081-1088 1.7 68
- 246 Overview No. 145 Metamagnetic transitions, phase coexistence and metastability in functional magnetic materials. *Acta Materialia*, **2008**, 56, 5895-5906 8.4 65
- 245 Experimental device for studying the magnetocaloric effect in pulse magnetic fields. *Review of Scientific Instruments*, **1997**, 68, 2432-2437 1.7 63
- 244 Hydrostatic pressure control of the magnetostructural phase transition in  $Gd_5Si_2Ge_2$  single crystals. *Physical Review B*, **2005**, 72, 3.3 62
- 243 Preparation, crystal structure, magnetic and magnetothermal properties of  $(Gd_xR_{5-x})Si_4$ , where  $R=Pr$  and  $Tb$ , alloys. *Journal of Applied Physics*, **2001**, 89, 1738 2.5 62
- 242 The Giant Magnetocaloric Effect in  $Gd_5(SixGe_{1-x})_4$  Materials for Magnetic Refrigeration **1998**, 1729-1736 62
- 241 Role of Ge in bridging ferromagnetism in the giant magnetocaloric  $Gd_5(Ge_{1-x}Si_x)_4$  alloys. *Physical Review Letters*, **2007**, 98, 247205 7.4 61
- 240 Structure, magnetism, and thermodynamics of the novel rare earth-based  $R_5T_4$  intermetallics. *Pure and Applied Chemistry*, **2007**, 79, 1383-1402 2.1 61
- 239 On the high-temperature phase transition of  $Gd_5Si_2Ge_2$ . *Journal of the American Chemical Society*, **2005**, 127, 317-24 16.4 61
- 238 Preparation, crystal structure, heat capacity, magnetism, and the magnetocaloric effect of  $Pr_5Ni_{1.9}Si_3$  and  $PrNi$ . *Physical Review B*, **2003**, 68, 3.3 61
- 237 Transformations in the  $Gd_5(Si_{1.95}Ge_{2.05})$  alloy induced by the temperature and magnetic-field cycling through the first-order magnetic-martensitic phase transition. *Physical Review B*, **2001**, 63, 3.3 61
- 236 Real and imaginary components of the alternating current magnetic susceptibility of  $RA_2$  ( $R=Gd$ ,  $Dy$ , and  $Er$ ) in the ferromagnetic region. *Journal of Applied Physics*, **2001**, 90, 6255-6262 2.5 60

235	Rare Earths and Magnetic Refrigeration. <i>Journal of Rare Earths</i> , <b>2006</b> , 24, 641-647	3-7	59
234	Crystal structure-magnetic property relationships of Gd <sub>5</sub> Ge <sub>4</sub> examined by in situ x-ray powder diffraction. <i>Physical Review B</i> , <b>2005</b> , 72,	3-3	59
233	Uncovering the structure-property relationships in R <sub>5</sub> (SixGe <sub>4</sub> ) intermetallic phases. <i>Journal of Alloys and Compounds</i> , <b>2002</b> , 344, 362-368	5-7	59
232	Metastable magnetic response across the antiferromagnetic to ferromagnetic transition in Gd <sub>5</sub> Ge <sub>4</sub> . <i>Physical Review B</i> , <b>2004</b> , 70,	3-3	58
231	Metamagnetism Seeded by Nanostructural Features of Single-Crystalline Gd <sub>5</sub> Si <sub>2</sub> Ge <sub>2</sub> . <i>Advanced Materials</i> , <b>2009</b> , 21, 3780-3783	24	57
230	Solid-state <sup>27</sup> Al NMR investigation of thermal decomposition of LiAlH <sub>4</sub> . <i>Journal of Solid State Chemistry</i> , <b>2004</b> , 177, 648-653	3-3	57
229	Non-hysteretic first-order phase transition with large latent heat and giant low-field magnetocaloric effect. <i>Nature Communications</i> , <b>2018</b> , 9, 2925	17.4	54
228	Magnetic and magnetocaloric properties and the magnetic phase diagram of single-crystal dysprosium. <i>Physical Review B</i> , <b>2005</b> , 71,	3-3	52
227	Magnetic field and temperature-induced first-order transition in Gd <sub>5</sub> (Si <sub>1.5</sub> Ge <sub>2.5</sub> ): a study of the electrical resistance behavior. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2000</b> , 210, 181-188	2.8	52
226	Reducing the operational magnetic field in the prototype magnetocaloric system Gd <sub>5</sub> Ge <sub>4</sub> by approaching the single cluster size limit. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 072501	3-4	51
225	Magnetic structure of Gd <sub>5</sub> Ge <sub>4</sub> . <i>Physical Review B</i> , <b>2005</b> , 71,	3-3	51
224	Mechanically induced reactions in organic solids: liquid eutectics or solid-state processes?. <i>New Journal of Chemistry</i> , <b>2010</b> , 34, 25-28	3.6	50
223	Electron correlation effects on the magnetostructural transition and magnetocaloric effect in Gd <sub>5</sub> Si <sub>2</sub> Ge <sub>2</sub> . <i>Physical Review B</i> , <b>2006</b> , 73,	3-3	50
222	Spontaneous generation of voltage in Gd <sub>5</sub> (SixGe <sub>4</sub> ) during a first-order phase transition induced by temperature or magnetic field. <i>Physical Review B</i> , <b>2001</b> , 63,	3-3	49
221	The giant magnetocaloric effect between 190 and 300K in the Gd <sub>5</sub> SixGe <sub>4</sub> alloys for 1.4?x?2.2. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2003</b> , 267, 60-68	2.8	48
220	Heat capacity near first order phase transitions and the magnetocaloric effect: An analysis of the errors, and a case study of Gd <sub>5</sub> (Si <sub>2</sub> Ge <sub>2</sub> ) and Dy. <i>Journal of Applied Physics</i> , <b>1999</b> , 86, 6315-6321	2-5	46
219	Reversible spin-flop and irreversible metamagneticlike transitions induced by a magnetic field in the layered Gd <sub>5</sub> Ge <sub>4</sub> antiferromagnet. <i>Physical Review B</i> , <b>2004</b> , 69,	3-3	45
218	Correlating the local magnetic properties of the magnetic phase transition in Gd <sub>5</sub> Ge <sub>4</sub> using scanning Hall probe imaging. <i>Physical Review B</i> , <b>2006</b> , 73,	3-3	44

217	Devitrification of the low temperature magnetic-glass state in Gd <sub>5</sub> Ge <sub>4</sub> . <i>Physical Review B</i> , <b>2007</b> , 75,	3-3	44
216	Disappearance and reappearance of magnetic ordering upon lanthanide substitution in (Er <sub>1-x</sub> Dy <sub>x</sub> )Al <sub>2</sub> . <i>Physical Review B</i> , <b>2003</b> , 68,	3-3	44
215	Giant enhancement of the magnetocaloric response in Ni <sub>2</sub> CoMnTi by rapid solidification. <i>Acta Materialia</i> , <b>2019</b> , 173, 225-230	8.4	42
214	Caloric effects in ferroic materials. <i>MRS Bulletin</i> , <b>2018</b> , 43, 264-268	3-2	41
213	Designed materials with the giant magnetocaloric effect near room temperature. <i>Acta Materialia</i> , <b>2019</b> , 180, 341-348	8.4	41
212	Novel Thermal Effects at the First Order Magnetic Phase Transition in Erbium, and a Comparison with Dysprosium. <i>Physical Review Letters</i> , <b>1997</b> , 78, 4281-4284	7-4	41
211	Phase relationships and structural, magnetic, and thermodynamic properties of alloys in the pseudobinary Er <sub>5</sub> Si <sub>4</sub> Er <sub>5</sub> Ge <sub>4</sub> system. <i>Physical Review B</i> , <b>2004</b> , 70,	3-3	41
210	Magnetic properties of single-crystal DyAl <sub>2</sub> . <i>Physical Review B</i> , <b>2005</b> , 72,	3-3	40
209	Best practices in evaluation of the magnetocaloric effect from bulk magnetization measurements. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2018</b> , 458, 301-309	2.8	38
208	Magnetism of Gd <sub>5</sub> Ge <sub>4</sub> from first principles. <i>Physical Review B</i> , <b>2007</b> , 75,	3-3	38
207	Crystallography, anisotropic metamagnetism, and magnetocaloric effect in Tb <sub>5</sub> Si <sub>2.2</sub> Ge <sub>1.8</sub> . <i>Physical Review B</i> , <b>2007</b> , 75,	3-3	38
206	Decoupling of the magnetic and structural transformations in Er <sub>5</sub> Si <sub>4</sub> . <i>Physical Review Letters</i> , <b>2003</b> , 91, 207205	7-4	38
205	Mechanochemical transformations in Li(Na)AlH <sub>4</sub> Li(Na)NH <sub>2</sub> systems. <i>Acta Materialia</i> , <b>2007</b> , 55, 3121-3130.	8.4	35
204	Crystallography, magnetic properties and magnetocaloric effect in Gd <sub>4</sub> (BixSb <sub>1-x</sub> ) <sub>3</sub> alloys. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2001</b> , 234, 193-206	2.8	35
203	Polymorphism of Gd <sub>5</sub> Si <sub>2</sub> Ge <sub>2</sub> : The equivalence of temperature, magnetic field, and chemical and hydrostatic pressures. <i>Physical Review B</i> , <b>2005</b> , 71,	3-3	33
202	Magnetostructural transition in Gd <sub>5</sub> Si <sub>0.5</sub> Ge <sub>3.5</sub> : Magnetic and x-ray powder diffraction measurements, and theoretical calculations. <i>Physical Review B</i> , <b>2008</b> , 77,	3-3	32
201	High-throughput search for caloric materials: the CaloriCool approach. <i>Journal Physics D: Applied Physics</i> , <b>2018</b> , 51, 024002	3	32
200	Unusual magnetism of Er <sub>0.75</sub> Dy <sub>0.25</sub> Al <sub>2</sub> . <i>Physical Review B</i> , <b>2007</b> , 76,	3-3	31

199	Tracking and understanding the first-order structural transition in Er <sub>5</sub> Si <sub>4</sub> . <i>Physical Review B</i> , <b>2004</b> , 69,	3.3	31
198	Phase relationships and structural, magnetic, and thermodynamic properties of the Yb <sub>5</sub> Si <sub>4</sub> –Y <sub>5</sub> Ge <sub>4</sub> pseudobinary system. <i>Physical Review B</i> , <b>2005</b> , 72,	3.3	31
197	Permanent magnet array for the magnetic refrigerator. <i>Journal of Applied Physics</i> , <b>2002</b> , 91, 8894	2.5	31
196	Controlling magnetism of a complex metallic system using atomic individualism. <i>Physical Review Letters</i> , <b>2010</b> , 105, 066401	7.4	30
195	Origins of ferromagnetism and antiferromagnetism in Gd <sub>5</sub> Ge <sub>4</sub> . <i>Journal of Physics Condensed Matter</i> , <b>2008</b> , 20, 235235	1.8	30
194	Magnetic field induced phase transitions in Gd <sub>5</sub> (Si <sub>1.95</sub> Ge <sub>2.05</sub> ) single crystal and the anisotropic magnetocaloric effect. <i>Journal of Applied Physics</i> , <b>2003</b> , 93, 8298-8300	2.5	30
193	Magnetic anisotropy and magnetic phase diagram of Gd <sub>5</sub> Ge <sub>4</sub> . <i>Physical Review B</i> , <b>2006</b> , 74,	3.3	29
192	Enhancement of $\beta$ -phase in PVDF films embedded with ferromagnetic Gd <sub>5</sub> Si <sub>4</sub> nanoparticles for piezoelectric energy harvesting. <i>AIP Advances</i> , <b>2017</b> , 7, 056411	1.5	28
191	Solvent-free mechanochemical synthesis and magnetic properties of rare-earth based metal-organic frameworks. <i>Journal of Alloys and Compounds</i> , <b>2017</b> , 696, 118-122	5.7	28
190	Anisotropy of the magnetoresistance in Gd <sub>5</sub> Si <sub>2</sub> Ge <sub>2</sub> . <i>Physical Review Letters</i> , <b>2004</b> , 93, 237203	7.4	28
189	Superheating and other unusual observations regarding the first order phase transition in Dy. <i>Scripta Materialia</i> , <b>1996</b> , 35, 843-848	5.6	28
188	(Magneto)caloric refrigeration: is there light at the end of the tunnel?. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , <b>2016</b> , 374,	3	28
187	Unusual magnetic properties of (Er <sub>1-x</sub> Gd <sub>x</sub> ) <sub>5</sub> Si <sub>4</sub> compounds. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	27
186	Anomalous Schottky specific heat and structural distortion in ferromagnetic PrAl <sub>2</sub> . <i>Physical Review Letters</i> , <b>2013</b> , 110, 186405	7.4	26
185	Microstructure and magnetocaloric effect in cast LaFe <sub>11.5</sub> Si <sub>1.5</sub> B <sub>x</sub> (x=0.5, 1.0). <i>Journal of Magnetism and Magnetic Materials</i> , <b>2010</b> , 322, 1710-1714	2.8	26
184	Thermochemical transformations in 2MNH <sub>2</sub> BMgH <sub>2</sub> systems (M = Li or Na). <i>International Journal of Hydrogen Energy</i> , <b>2010</b> , 35, 4562-4568	6.7	26
183	Phase relationships and low temperature heat capacities of alloys in the Y <sub>5</sub> Si <sub>4</sub> –Y <sub>5</sub> Ge <sub>4</sub> pseudo binary system. <i>Journal of Alloys and Compounds</i> , <b>2004</b> , 379, 127-134	5.7	26
182	Solvent-free mechanochemical synthesis of alane, AlH <sub>3</sub> : effect of pressure on the reaction pathway. <i>Green Chemistry</i> , <b>2014</b> , 16, 4378-4388	10	24

- 181 The role of demagnetization factor in determining the true value of the Curie temperature. *Journal of Magnetism and Magnetic Materials*, **2011**, 323, 2453-2457 2.8 24
- 180 Thermodynamic features of magnetization and magnetocaloric effect near the magnetic ordering temperature of Gd. *Journal of Magnetism and Magnetic Materials*, **2007**, 316, e555-e557 2.8 24
- 179 Magnetic and structural transitions in Dy<sub>5</sub>Si<sub>3</sub>Ge. *Physical Review B*, **2007**, 76, 3.3 24
- 178 Investigation of Room Temperature Ferromagnetic Nanoparticles of Gd<sub>5</sub>Si<sub>4</sub>. *IEEE Transactions on Magnetics*, **2015**, 51, 1-4 2 23
- 177 Cation-Poor Complex Metallic Alloys in Ba(Eu)-Au-Al(Ga) Systems: Identifying the Keys that Control Structural Arrangements and Atom Distributions at the Atomic Level. *Inorganic Chemistry*, **2015**, 54, 10296-10308<sup>23</sup> 5.1 23
- 176 Magnetic and crystal structures of Er<sub>5</sub>(SixGe<sub>1-x</sub>)<sub>4</sub>. *Journal of Physics Condensed Matter*, **2006**, 18, 3937-3950 2.3 23
- 175 The effect of cooling rate on magnetothermal properties of Fe<sub>49</sub>Rh<sub>51</sub>. *Journal of Magnetism and Magnetic Materials*, **2020**, 498, 166130 2.8 23
- 174 Magnetocaloric Behavior in Ternary Europium Indides EuT<sub>5</sub>In: Probing the Design Capability of First-Principles-Based Methods on the Multifaceted Magnetic Materials. *Chemistry of Materials*, **2017**, 29, 2599-2614 9.6 20
- 173 Magnetostructural phase transitions and magnetocaloric effect in (Gd<sub>5-x</sub>Sc<sub>x</sub>)Si<sub>1.8</sub>Ge<sub>2.2</sub>. *Acta Materialia*, **2018**, 145, 369-376 8.4 20
- 172 Balancing structural distortions via competing 4f and itinerant interactions: a case of polymorphism in magnetocaloric HoCo<sub>2</sub>. *Journal of Materials Chemistry C*, **2016**, 4, 4521-4531 7.1 20
- 171 Unexpected magnetism, Griffiths phase, and exchange bias in the mixed lanthanide Pr<sub>0.6</sub>Er<sub>0.4</sub>Al<sub>2</sub>. *Physical Review B*, **2014**, 89, 3.3 19
- 170 Magnetocaloric effects in Er<sub>1-x</sub>TbxAl<sub>2</sub> alloys. *Journal of Applied Physics*, **2010**, 107, 09A904 2.5 19
- 169 Training effects in Gd<sub>5</sub>Ge<sub>4</sub>: role of microstructure. *Journal of Physics Condensed Matter*, **2006**, 18, 6017-6032 2.0 19
- 168 Effect of hydrostatic pressure upon the magnetic transitions in the Gd<sub>5</sub>(SixGe<sub>1-x</sub>)<sub>4</sub> giant magnetocaloric compounds: X-ray magnetic circular dichroism study. *Physical Review B*, **2007**, 76, 3.3 19
- 167 Evidence for a coupled magnetic-crystallographic transformation in Nd<sub>5</sub>(Si<sub>0.6</sub>Ge<sub>0.4</sub>)<sub>4</sub>. *Physical Review B*, **2004**, 70, 3.3 19
- 166 Neutron diffraction studies of the magnetoelastic compounds Tb<sub>5</sub>SixGe<sub>4-x</sub> (x=2.2 and 2.5). *Physical Review B*, **2005**, 72, 3.3 19
- 165 Manipulating the stability of crystallographic and magnetic sub-lattices: A first-order magnetoelastic transformation in transition metal based Laves phase. *Acta Materialia*, **2018**, 154, 365-374<sup>84</sup> 8.4 19
- 164 Field step size and temperature effects on the character of the magnetostructural transformation in a Gd<sub>5</sub>Ge<sub>4</sub> single crystal. *Physical Review B*, **2007**, 76, 3.3 18



163	Magnetic properties of Gd <sub>5</sub> (Si <sub>1.5</sub> Ge <sub>2.5</sub> ) near the temperature and magnetic field induced first order phase transition. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2001</b> , 231, 135-145	2.8	18
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33	A benign synthesis of alane by the composition-controlled mechanochemical reaction of sodium hydride and aluminum chloride. <i>Journal of Materials Science</i> , <b>2017</b> , 52, 11900-11910	4.3	2
32	Magnetic properties of $\text{Ho}_{1-x}\text{Er}_x\text{Al}_2$ alloys. <i>Journal of Applied Physics</i> , <b>2013</b> , 113, 17E106	2.5	2
31	Influence of Pr on the magnetic structure of Er. <i>Journal of Applied Physics</i> , <b>2002</b> , 91, 8531	2.5	2
30	Preparation and electrochemical properties of some $(\text{Sc}_{1-x}\text{Ti}_x)\text{Ni}$ alloys. <i>Journal of Alloys and Compounds</i> , <b>2000</b> , 296, 67-71	5.7	2
29	Magnetostructural properties of $\text{Ho}_{1-x}\text{Dy}_x\text{Al}_2$ ( $x = 0, 0.05, 0.10, 0.15, 0.25$ and $0.50$ ) compounds. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2022</b> , 544, 168705	2.8	2
28	Unlocking large compressive strains in thin active elastocaloric layers. <i>Applied Thermal Engineering</i> , <b>2021</b> , 190, 116850	5.8	2
27	The first-order magnetoelastic transition in $\text{Eu}_2\text{In}$ : A $^{151}\text{Eu}$ Mössbauer study. <i>AIP Advances</i> , <b>2019</b> , 9, 125137	5.7	2
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21	Magnetic and thermal properties of $\text{Er}_{75}\text{Dy}_{25}$ single crystals. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	1
20	Magnetocaloric Materials <b>2007</b> ,		1



19	Magneto-thermal Properties of Polycrystalline Gd <sub>2</sub> In <b>2002</b> , 457-464		1
18	Hidden first-order phase transitions and large magnetocaloric effects in GdNi <sub>1-x</sub> Cox. <i>Journal of Alloys and Compounds</i> , <b>2022</b> , 897, 163186	5.7	1
17	Synthesis, Structure, and Hydrogen-Sorption Properties of (Ti,Zr) <sub>4</sub> Ni <sub>2</sub> N <sub>x</sub> Subnitrides. <i>Materials Science</i> , <b>2017</b> , 53, 306-315	0.7	1
16	From Tb <sub>3</sub> Ni <sub>2</sub> to Tb <sub>3</sub> CoNi: The interplay between chemistry, structure, and magnetism. <i>Physical Review Materials</i> , <b>2019</b> , 3,	3.2	1
15	Protein-assisted scalable mechanochemical exfoliation of few-layer biocompatible graphene nanosheets. <i>Royal Society Open Science</i> , <b>2021</b> , 8, 200911	3.3	1
14	Anomalous effects of Sc substitution and processing on magnetism and structure of (Gd <sub>1-x</sub> Sc <sub>x</sub> ) <sub>5</sub> Ge <sub>4</sub> . <i>Journal of Magnetism and Magnetic Materials</i> , <b>2019</b> , 474, 482-492	2.8	1
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10	Correlating Crystallography, Magnetism, and Electronic Structure Across An hysteretic First-Order Phase Transition in Pr <sub>2</sub> In. <i>ECS Journal of Solid State Science and Technology</i> ,	2	1
9	Stability of magnetocaloric La(FexCoySi <sub>1-x-y</sub> ) <sub>13</sub> in water and air. <i>AIP Advances</i> , <b>2019</b> , 9, 035239	1.5	0
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