Alexander Gabay

List of Publications by Year
in descending order

52 papers	1,500 citations	304743 22 h-index	315739 38 g-index
52 all docs	52 docs citations	52 times ranked	1006 citing authors

#	Article	IF	Citations
1	Current progress and future challenges in rare-earth-free permanent magnets. Acta Materialia, 2018, 158, 118-137.	7.9	351
2	Anisotropic fully dense MnBi permanent magnet with high energy product and high coercivity at elevated temperatures. Journal Physics D: Applied Physics, 2013, 46, 062001.	2.8	88
3	Anisotropic SmCo5 nanoflakes by surfactant-assisted high energy ball milling. Journal of Applied Physics, 2010, 107, .	2.5	74
4	Recent developments in RFe12-type compounds for permanent magnets. Scripta Materialia, 2018, 154, 284-288.	5.2	71
5	Rare earthâ€"cobalt hard magnetic nanoparticles and nanoflakes by high-energy milling. Journal of Physics Condensed Matter, 2010, 22, 164213.	1.8	61
6	Crystal structure of Zr2Co11 hard magnetic compound. Journal of Alloys and Compounds, 2007, 432, 135-141.	5.5	55
7	ThMn12-Type Alloys for Permanent Magnets. Engineering, 2020, 6, 141-147.	6.7	49
8	Anomalous temperature dependence of coercivity and reversal mechanism in bulk-hardened rare earth-cobalt magnets. Applied Physics Letters, 2001, 78, 1595-1597.	3.3	48
9	Dysprosium-saving improvement of coercivity in Nd-Fe-B sintered magnets by Dy2S3 additions. Journal of Applied Physics, 2011, 109, .	2.5	46
10	Preparation of YCo5, PrCo5 and SmCo5 anisotropic high-coercivity powders via mechanochemistry. Journal of Magnetism and Magnetic Materials, 2014, 368, 75-81.	2.3	40
11	Fabrication of anisotropic MnBi nanoparticles by mechanochemical process. Journal of Alloys and Compounds, 2014, 586, 349-352.	5.5	39
12	Mechanochemical synthesis of magnetically hard anisotropic RFe10Si2 powders with R representing combinations of Sm, Ce and Zr. Journal of Magnetism and Magnetic Materials, 2017, 422, 43-48.	2.3	37
13	ThMn12-type structure and uniaxial magnetic anisotropy in ZrFe10Si2 and Zr1â^'Ce Fe10Si2 alloys. Journal of Alloys and Compounds, 2016, 657, 133-137.	5.5	36
14	Low-cost Ce1-<i>x</i>Sm<i>x</i>(Fe, Co, Ti)12 alloys for permanent magnets. AIP Advances, 2016, 6, .	1.3	35
15	New anisotropic MnBi permanent magnets by field-annealing of compacted melt-spun alloys modified with Mg and Sb. Journal of Magnetism and Magnetic Materials, 2020, 495, 165860.	2.3	35
16	Fluoride-added Prâ€"Feâ€"B die-upset magnets with increased electrical resistivity. Journal of Applied Physics, 2009, 105, 07A711.	2.5	30
17	Influence of the type of surfactant and hot compaction on the magnetic properties of SmCo5 nanoflakes. Journal of Applied Physics, 2011, 109, .	2.5	30
18	Structure and permanent magnet properties of Zr1-R Fe10Si2 alloys with RÂ=ÂY, La, Ce, Pr and Sm. Journal of Alloys and Compounds, 2016, 683, 271-275.	5.5	30

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19	Fabrication and Microstructure Evolution of Single Crystalline Sm₂Co₁₇ Nanoparticles Prepared by Mechanochemical Method. Journal of Physical Chemistry C, 2013, 117, 10291-10295.	3.1	28
20	The Sm-Fe-V based 1:12 bulk magnets. Journal of Alloys and Compounds, 2019, 791, 1122-1127.	5.5	28
21	Mechanochemical synthesis of fine R2Fe14BHx and R2Fe14B powders with R=Nd or Ndâ€“Dy. Journal of Alloys and Compounds, 2013, 574, 472-476.	5.5	25
22	Temperature dependence of coercivity and magnetization reversal mechanism in Sm(Co/sub bal/Fe/sub) Tj ETQq0 0 0 rgBT /Overlock 10	2.1	22
23	Application of Mechanochemical Synthesis to Manufacturing of Permanent Magnets. Jom, 2015, 67, 1329-1335.	1.9	22
24	High-coercivity ThMn12-type monocrystalline Smâ€“Zrâ€“Feâ€“Coâ€“Ti particles by high-temperature reduction diffusion. Scripta Materialia, 2021, 196, 113760.	5.2	21
25	Preparation of highly pure Î±-MnBi phase via melt-spinning. AIP Advances, 2018, 8, .	1.3	19
26	Effect of Sb substitution on crystal structure, texture and hard magnetic properties of melt-spun MnBi alloys. Journal of Alloys and Compounds, 2019, 792, 77-86.	5.5	18
27	Enhanced Mr and (BH)max in anisotropic R2Fe14Bâˆ•Î±â€Fe composite magnets via intergranular magnetostatic coupling. Journal of Applied Physics, 2006, 99, 08B506.	2.5	17
28	Development of rare-earth-free bulk magnets with energy product up to 12 MGOe in field annealed Mnâ€“Biâ€“Mgâ€“Inâ€“Sb alloys. Journal of Alloys and Compounds, 2020, 822, 153663.	5.5	14
29	Mechanochemical Synthesis of (Sm,Pr)$_{2}$(Co,Fe)$_{17}$ Anisotropic Hard Magnetic Powders. IEEE Transactions on Magnetics, 2013, 49, 3225-3228.	2.1	13
30	Mechanochemical synthesis of LaCo₅ magnetically hard anisotropic powder. Journal Physics D: Applied Physics, 2014, 47, 182001.	2.8	12
31	Isotropic nanocrystalline Sm(Fe,Co)11.3Ti0.7 magnets modified with B and Zr. Journal of Magnetism and Magnetic Materials, 2021, 529, 167867.	2.3	12
32	Prâ€“Zrâ€“Co precipitation-hardened magnet. Applied Physics Letters, 2000, 76, 3786-3788.	3.3	11
33	Effect of alloying with Sc, Nb and Zr on reduction-diffusion synthesis of magnetically hard Sm(Fe,Co,Ti)12-based monocrystalline powders. Journal of Magnetism and Magnetic Materials, 2022, 541, 168550.	2.3	9
34	Observation of the lamellar phase in a Zr-free Sm(Co0.45Fe0.15Cu0.4)5 alloy. Applied Physics Letters, 2005, 87, 141910.	3.3	8
35	Synthesis and processing effects on magnetic properties in the Fe5SiB2 system. Journal of Alloys and Compounds, 2018, 731, 995-1000.	5.5	8
36	Fully Dense Sm-Co-Fe-Cu and Sm-Co-Fe-Ga Nanocomposite Magnets by Hot Compaction. IEEE Transactions on Magnetics, 2004, 40, 2916-2918.	2.1	7

#	Article	IF	Citations
37	High performance isotropic Smâ€“(Co,Fe)â€“C and Smâ€“(Co,Fe,Mn)â€“C magnets by melt spinning. Journal of Applied Physics, 2008, 103, 07E125.	2.5	7
38	Internally Segmented Nd-Fe-B/CaF₂Sintered Magnets. IEEE Transactions on Magnetics, 2013, 49, 558-561.	2.1	7
39	Bulk-hardened magnets based on Y2Co17. Journal of Applied Physics, 2001, 90, 882-890.	2.5	6
40	Manufacturing of Die-Upset Rare Earthâ€“Ironâ€“Boron Magnets With (Ce,La)-Mischmetal. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	6
41	Semi-hard magnetic nanocomposites based on out-of-equilibrium Fe2+Î´Nb and Fe2+Î´Ta Laves phases. AIP Advances, 2019, 9, 035143.	1.3	5
42	MnBi-based magnets prepared from melt-spun alloys: Effect of Î±Ââ†’ÂÎ² phase transformation during field annealing. Journal of Magnetism and Magnetic Materials, 2020, 516, 167340.	2.3	5
43	Microstructure of nanocomposite R-Fe-B die-upset magnets (R=Pr,Nd) produced from mechanically milled powders. IEEE Transactions on Magnetics, 2005, 41, 3883-3885.	2.1	3
44	Assessment of off-stoichiometric Zr33-xFe52+xSi15 C14 Laves phase compounds as permanent magnet materials. AIP Advances, 2018, 8, 056204.	1.3	3
45	Effect of Mg Content in Melt-Spun Mnâ€“Biâ€“Mgâ€“Sbâ€“In Alloys on the Structure and Properties of Field-Annealed Magnets. IEEE Magnetics Letters, 2020, 11, 1-4.	1.1	3
46	Microstructure and Hard Magnetic Properties of Sm_{1-<i> x </i>}Zr_{<i> x </i>}(Fe,Co)_{11.3-<i> y </i>}Ti_{0.7}B_{<i> y </i>} Ingots and Thick Melt-Spun Ribbons. IEEE Transactions on Magnetics, 2022, 58, 1-5.	2.1	3
47	CaO-matrix processing of MnBi alloys for permanent magnets. AIP Advances, 2017, 7, .	1.3	2
48	Indium substituted PrCo5 sintered magnet: A microstructure view. Journal of Applied Physics, 2010, 107, .	2.5	1
49	Crystallization behavior in two-phase PrFeB mechanically milled powder. , 2005, , .		0
50	Microstructure of nanocomposite R-Fe-B die-upset magnets (R=Pr, Nd) produced from mechanically milled powders. , 2005, , .		0
51	Bulk magnetic hardening in Cu-added (SmCo/sub 5/)/sub 1-x/(Sm/sub 2/Co/sub 17/)/sub x/ cast alloys. , 2005, , .		0
52	Infiltration of Die-Upset Nd-Fe-B Magnets With Mischmetal Eutectic Alloys. IEEE Magnetics Letters, 2018, 9, 1-5.	1.1	0