Satoshi Hirosawa

List of Publications by Year
in descending order

42	2,698	304743 22	302126 39
papers	citations	h-index	g-index

43	43	43	1091
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Magnetization and magnetic anisotropy of R2Fe14B measured on single crystals. Journal of Applied Physics, 1986, 59, 873-879.	2.5	854
2	Ndâ€“Feâ€“B Permanent Magnet Materials. Japanese Journal of Applied Physics, 1987, 26, 785-800.	1.5	395
3	Coercivity enhancement of hydrogenationâ€“disproportionationâ€“desorptionâ€“recombination processed Ndâ€“Feâ€“B powders by the diffusion of Ndâ€“Cu eutectic alloys. Scripta Materialia, 2010, 63, 1124-1127.	5.2	219
4	Intrinsic hard magnetic properties of Sm(Fe 1â^'x Co x) 12 compound with the ThMn 12 structure. Scripta Materialia, 2017, 138, 62-65.	5.2	157
5	NdFe12N hard-magnetic compound with high magnetization and anisotropy field. Scripta Materialia, 2015, 95, 70-72.	5.2	113
6	Perspectives for high-performance permanent magnets: applications, coercivity, and new materials. Advances in Natural Sciences: Nanoscience and Nanotechnology, 2017, 8, 013002.	1.5	102
7	Intrinsic magnetic properties of Sm(Fe1-Co)11Ti and Zr-substituted Sm1-yZr (Fe0.8Co0.2)11.5Ti0.5 compounds with ThMn12 structure toward the development of permanent magnets. Acta Materialia, 2018, 153, 354-363.	7.9	92
8	MÃ¶ssbauer study of the intermetallic compound Nd2Fe14B. II. Temperature dependence and spin reorientation. Journal of Magnetism and Magnetic Materials, 1987, 68, 15-27.	2.3	70
9	Coercivity generation of surface Nd2Fe14B grains and mechanism of fcc-phase formation at the Nd/Nd2Fe14B interface in Nd-sputtered Ndâ€“Feâ€“B sintered magnets. Journal of Applied Physics, 2008, 104, .	2.5	64
10	Achievement of high coercivity in Sm(Fe0.8Co0.2)12 anisotropic magnetic thin film by boron doping. Acta Materialia, 2020, 194, 337-342.	7.9	57
11	Current Status of Research and Development toward Permanent Magnets Free from Critical Elements. Journal of the Magnetics Society of Japan, 2015, 39, 85-95.	0.9	55
12	Thermal decomposition of ThMn12-type phase and its optimum stabilizing elements in SmFe12-based alloys. Journal of Alloys and Compounds, 2020, 813, 152224.	5.5	48
13	Advances in Nd-Fe-B Based Permanent Magnets. Handbook of Magnetic Materials, 2018, 27, 269-372.	0.6	45
14	Emergence of coercivity in Sm(Fe0.8Co0.2)12 thin films via eutectic alloy grain boundary infiltration. Scripta Materialia, 2019, 164, 140-144.	5.2	43
15	The effect of Zr substitution on saturation magnetization in (Sm1-xZrx)(Fe0.8Co0.2)12 compound with the ThMn12 structure. Acta Materialia, 2019, 178, 114-121.	7.9	40
16	Micromagnetic Simulations of Magnetization Reversal in Misaligned Multigrain Magnets With Various Grain Boundary Properties Using Large-Scale Parallel Computing. IEEE Transactions on Magnetics, 2014, 50, 1-4.	2.1	39
17	Realization of a scanning soft X-ray microscope for magnetic imaging under high magnetic fields. Journal of Synchrotron Radiation, 2018, 25, 1444-1449.	2.4	35
18	Atomistic-model study of temperature-dependent domain walls in the neodymium permanent magnet <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>. Physical Review B, 2017, 95, .	3.2	33

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19	Temperature dependence of the crystal structures and phase fractions of secondary phases in a Nd-Fe-B sintered magnet. Acta Materialia, 2018, 154, 25-32.	7.9	33
20	Perspectives of stochastic micromagnetism of Nd2Fe14B and computation of thermally activated reversal process. Scripta Materialia, 2018, 154, 259-265.	5.2	27
21	Micromagnetic simulation of the orientation dependence of grain boundary properties on the coercivity of Nd-Fe-B sintered magnets. AIP Advances, 2016, 6, 056028.	1.3	25
22	Unmasking the interior magnetic domain structure and evolution in Nd-Fe-B sintered magnets through high-field magnetic imaging of the fractured surface. Physical Review Materials, 2018, 2, .	2.4	23
23	Permanent Magnets Beyond Nd-Dy-Fe-B. IEEE Transactions on Magnetics, 2019, 55, 1-6.	2.1	21
24	Intrinsic hard magnetic properties of Sm(Fe,Co)12â^'xTix compound with ThMn12 structure. Journal of Alloys and Compounds, 2021, 861, 158477.	5.5	18
25	Quantitative identification of constituent phases in a Nd-Fe-B-Cu sintered magnet and temperature dependent change of electron density of Nd2Fe14B studied by synchrotron X-ray diffraction. Acta Materialia, 2019, 181, 530-536.	7.9	13
26	Atomistic theory of thermally activated magnetization processes in Nd₂Fe₁₄B permanent magnet. Science and Technology of Advanced Materials, 2021, 22, 658-682.	6.1	11
27	Time domain magnetization dynamics study to estimate interlayer exchange coupling constant in Nd-Fe-B/Ni80Fe20 films. Journal of Magnetism and Magnetic Materials, 2018, 468, 273-278.	2.3	10
28	Peculiar behavior of V on the Curie temperature and anisotropy field of SmFe12-xVx compounds. Acta Materialia, 2022, 232, 117928.	7.9	10
29	Development of a prototype thermodynamic database for Nd-Fe-B permanent magnets. Science and Technology of Advanced Materials, 2021, 22, 557-570.	6.1	9
30	Magnetic Microscopy Using a Circularly Polarized Hard-X-ray Nanoprobe at SPring-8. Synchrotron Radiation News, 2020, 33, 4-11.	0.8	8
31	Permanent Magnets Beyond Nd-Dy-Fe-B. Jom, 2015, 67, 1304-1305.	1.9	6
32	Influence of magnetostriction on the lattice constants of the secondary phases in Nd-Fe-B sintered magnets studied by synchrotron X-ray diffraction. AIP Advances, 2019, 9, .	1.3	4
33	Foreword to the Focus Issue: science and technology of element-strategic permanent magnets. Science and Technology of Advanced Materials, 2022, 23, 64-65.	6.1	4
34	Temperature dependence of site-resolved Fe magnetic moments in ThMn12-type Sm(Fe1â^'Co)12 compounds studied via synchrotron MÃ¶ssbauer spectroscopy. Journal of Magnetism and Magnetic Materials, 2022, 552, 169188.	2.3	3
35	Approach of Elements Strategy Initiative Center for Magnetic Materials toward Development of Critical-Element-Free High-Performance Permanent Magnets. Funtai Oyobi Fummatsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy, 2015, 62, 61-66.	0.2	2
36	Diagram of constituent crystalline phases in a Ndâ€“Feâ€“Bâ€“Cu sintered magnet by in-situ high-temperature synchrotron X-ray diffraction and its thermodynamic interpretation. Journal of Alloys and Compounds, 2021, 892, 162188.	5.5	2

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37	Effects of texture on lattice constants of Nd2Fe14B and their relationship with internal stress in Nd-Fe-B permanent magnets. Physical Review Materials, 2020, 4, .	2.4	2
38	Atomistic Theory of Thermally Activated Magnetization Processes in Nd₂Fe₁₄B Permanent Magnet. Funtai Oyobi Fummatsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy, 2022, 69, S126-S146.	0.2	1
39	ThMn₁₂-type Interstitially Nitrogenated Hard Magnetic Compounds and Recent Progresses Toward their Utilization as Permanent Magnets. IEEJ Transactions on Fundamentals and Materials, 2016, 136, 466-471.	0.2	0
40	Development of a Prototype Thermodynamic Database for Nd-Fe-B Permanent Magnets. Funtai Oyobi Fummatsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy, 2022, 69, S52-S62.	0.2	0
41	Foreword to the Japanese Translation of Science and Technology of Element-Strategic Permanent Magnets. Funtai Oyobi Fummatsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy, 2022, 69, S1-S2.	0.2	0
42	Laying out Fundamentals for Production of Nd¼Fe¼B Permanent Magnet Materials. Funtai Oyobi Fummatsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy, 2022, 69, 139-148.	0.2	0