

Takashi Kimura

List of Publications by Year in descending order

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140
papers

3,483
citations

236925

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144013

57
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142
all docs

142
docs citations

142
times ranked

3147
citing authors

#	ARTICLE	IF	CITATIONS
1	Room-Temperature Reversible Spin Hall Effect. <i>Physical Review Letters</i> , 2007, 98, 156601.	7.8	908
2	Breaking the 10 μ m barrier in hard-X-ray focusing. <i>Nature Physics</i> , 2010, 6, 122-125.	16.7	484
3	Giant spin-accumulation signal and pure spin-current-induced reversible magnetization switching. <i>Nature Physics</i> , 2008, 4, 851-854.	16.7	236
4	Evolution of the Spin Hall Effect in Pt Nanowires: Size and Temperature Effects. <i>Physical Review Letters</i> , 2007, 99, 226604.	7.8	199
5	Dynamics of Coupled Vortices in a Pair of Ferromagnetic Disks. <i>Physical Review Letters</i> , 2011, 106, 197203.	7.8	108
6	Room-temperature generation of giant pure spin currents using epitaxial Co ₂ FeSi spin injectors. <i>NPG Asia Materials</i> , 2012, 4, e9-e9.	7.9	86
7	Spin-dependent boundary resistance in the lateral spin-valve structure. <i>Applied Physics Letters</i> , 2004, 85, 3501-3503.	3.3	82
8	Spin transport in lateral ferromagnetic/nonmagnetic hybrid structures. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 165216.	1.8	63
9	Vortex motion in chirality-controlled pair of magnetic disks. <i>Applied Physics Letters</i> , 2007, 90, 132501.	3.3	57
10	Current-Excited Magnetization Dynamics in Narrow Ferromagnetic Wires. <i>Japanese Journal of Applied Physics</i> , 2006, 45, L683-L685.	1.5	55
11	Efficient thermal spin injection using CoFeAl nanowire. <i>NPG Asia Materials</i> , 2014, 6, e127-e127.	7.9	52
12	Gyration mode splitting in magnetostatically coupled magnetic vortices in an array. <i>Journal Physics D: Applied Physics</i> , 2010, 43, 422001.	2.8	44
13	Comparison of Nonlocal and Local Magnetoresistance Signals in Laterally Fabricated Fe ₃ Si/Si Spin-Valve Devices. <i>Applied Physics Express</i> , 2010, 3, 093001.	2.4	42
14	Analysis of Current-Voltage Characteristics of Organic Electroluminescent Devices on the Basis of Schottky Emission Mechanism. <i>Japanese Journal of Applied Physics</i> , 1996, 35, 5735-5739.	1.5	41
15	Direct determination of the wave field of an x-ray nanobeam. <i>Physical Review A</i> , 2008, 77, .	2.5	38
16	Suppression of spin accumulation in nonmagnet due to ferromagnetic ohmic contact. <i>Applied Physics Letters</i> , 2004, 85, 3795-3796.	3.3	35
17	Manipulation of spin currents in metallic systems. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2011, 369, 3136-3149.	3.4	34
18	Current-excited magnetization reversal under in-plane magnetic field in a nanoscaled ferromagnetic wire. <i>Applied Physics Letters</i> , 2008, 92, .	3.3	32

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19	Benchtop time-resolved magneto-optical Kerr magnetometer. <i>Review of Scientific Instruments</i> , 2008, 79, 123905.	1.3	31
20	Detection of magnetic state in a nanoscale ferromagnetic ring by using ballistic semiconductor two-dimensional electron gas. <i>Applied Physics Letters</i> , 2006, 88, 082501.	3.3	30
21	Highly accurate differential deposition for X-ray reflective optics. <i>Surface and Interface Analysis</i> , 2008, 40, 1019-1022.	1.8	29
22	Spin transfer switching in current-perpendicular-to-plane spin valve observed by magneto-optical Kerr effect using visible light. <i>Applied Physics Letters</i> , 2007, 91, .	3.3	28
23	Determination of magnetic vortex chirality using lateral spin-valve geometry. <i>Applied Physics Letters</i> , 2005, 87, 172506.	3.3	27
24	Spin-current-assisted domain-wall depinning in a submicron magnetic wire. <i>Journal of Applied Physics</i> , 2003, 94, 7947.	2.5	26
25	Domain Nucleation and Annihilation in Uniformly Magnetized State under Current Pulses in Narrow Ferromagnetic Wires. <i>Japanese Journal of Applied Physics</i> , 2006, 45, L1322-L1324.	1.5	26
26	Magneto-Optical and Spin-Transfer Switching Properties of Current-Perpendicular-to Plane Spin Valves With Perpendicular Magnetic Anisotropy. <i>IEEE Transactions on Magnetics</i> , 2008, 44, 2491-2495.	2.1	26
27	Suppressed pinning field of a trapped domain wall due to direct current injection. <i>Journal of Applied Physics</i> , 2003, 94, 7266-7269.	2.5	25
28	Electrical Control of the Direction of Spin Accumulation. <i>Physical Review Letters</i> , 2007, 99, 166601.	7.8	25
29	Anomalous Nernst-Ettingshausen effect in nonlocal spin valve measurement under high-bias current injection. <i>Physical Review B</i> , 2013, 87, .	3.2	25
30	Spin Wave Excitation and Propagation Properties in a Permalloy Film. <i>Japanese Journal of Applied Physics</i> , 2013, 52, 083001.	1.5	24
31	Construction and development of a time-resolved x-ray magnetic circular dichroism photoelectron emission microscopy system using femtosecond laser pulses at BL25SU SPring-8. <i>Review of Scientific Instruments</i> , 2008, 79, 063903.	1.3	23
32	Wavefield characterization of nearly diffraction-limited focused hard x-ray beam with size less than 10 nm. <i>Review of Scientific Instruments</i> , 2010, 81, 123704.	1.3	19
33	Spin Signal in Metallic Lateral Spin Valves Made by a Multiple Angle Evaporation Technique. <i>Applied Physics Express</i> , 2011, 4, 063007.	2.4	18
34	Effect of Addition of Al to Single-Crystalline CoFe Electrodes on Nonlocal Spin Signals in Lateral Spin-Valve Devices. <i>Applied Physics Express</i> , 2012, 5, 063004.	2.4	18
35	A Variational Sum-Rule Approach to Collective Excitations of a Trapped Bose-Einstein Condensate. <i>Journal of the Physical Society of Japan</i> , 1999, 68, 1477-1480.	1.6	17
36	Significant change of spin transport property in Cu/Nb bilayer due to superconducting transition. <i>Scientific Reports</i> , 2014, 4, 6260.	3.3	17

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37	Effect of probe configuration on spin accumulation in lateral spin-valve structure. Journal of Magnetism and Magnetic Materials, 2005, 286, 88-90.	2.3	16
38	Large pure spin current generation in metallic nanostructures. Applied Physics A: Materials Science and Processing, 2013, 111, 355-360.	2.3	16
39	Wide range tuning of resonant frequency for a vortex core in a regular triangle magnet. Scientific Reports, 2013, 3, 3567.	3.3	16
40	Spin currents injected electrically and thermally from highly spin polarized Co ₂ MnSi. Applied Physics Letters, 2015, 107, .	3.3	16
41	Significant modulation of electrical spin accumulation by efficient thermal spin injection. Physical Review B, 2014, 90, .	3.2	15
42	Heat dissipation due to ferromagnetic resonance in a ferromagnetic metal monitored by electrical resistance measurement. Applied Physics Letters, 2015, 107, .	3.3	14
43	Dynamical Spin Injection Based on Heating Effect due to Ferromagnetic Resonance. Physical Review Applied, 2017, 8, .	3.8	14
44	Stitching interferometric metrology for steeply curved x-ray mirrors. Surface and Interface Analysis, 2008, 40, 1023-1027.	1.8	13
45	Thermo-electric effect in a nano-sized crossed Permalloy/Cu junction under high bias current. Applied Physics Letters, 2013, 103, 132408.	3.3	13
46	Superconductivity in Palladium Hydride Systems. Journal of the Physical Society of Japan, 2020, 89, 051004.	1.6	13
47	Metastable Domain Structures of Ferromagnetic Microstructures Observed by Soft X-Ray Magnetic Circular Dichroism Microscopy. Japanese Journal of Applied Physics, 2000, 39, L585-L587.	1.5	12
48	Nonlocal injection of spin current into a superconducting Nb wire. Applied Physics Letters, 2010, 96, 192509.	3.3	12
49	Dynamics of Magnetostatically Coupled Vortices Observed by Time-Resolved Photoemission Electron Microscopy. Japanese Journal of Applied Physics, 2011, 50, 053001.	1.5	12
50	Control of domain wall pinning by a switchable magnetic gate. Applied Physics Letters, 2006, 89, 192504.	3.3	11
51	Controlled depinning of domain walls in a ferromagnetic ring circuit. Applied Physics Letters, 2007, 90, 242504.	3.3	11
52	A highly efficient nanofocusing system for soft x rays. Applied Physics Letters, 2020, 117, .	3.3	10
53	Magnetization process and resistance jumps in a submicron-scale cross-shaped Co wire. Journal of Magnetism and Magnetic Materials, 2000, 222, 79-85.	2.3	9
54	Improvement of Superconductive Properties of Mesoscopic Nb Wires by Ti Passivation Layers. Applied Physics Express, 0, 1, 021701.	2.4	9

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55	Dynamics of Magnetostatically Coupled Vortices Observed by Time-Resolved Photoemission Electron Microscopy. Japanese Journal of Applied Physics, 2011, 50, 053001.	1.5	9
56	Enhancement of nonlocal spin-valve signal using spin accumulation in local spin-valve configuration. Applied Physics Letters, 2004, 85, 5382-5384.	3.3	8
57	Effects of Shape Anisotropy in CoO/Co/Cu/NiFe/Cu/Co Wires. Japanese Journal of Applied Physics, 2001, 40, 2241-2244.	1.5	7
58	The Reading-Life Log – Technologies to Recognize Texts That We Read. , 2013, , .		7
59	Nonreciprocity of electrically excited thermal spin signals in CoFeAl-Cu-Py lateral spin valves. Physical Review B, 2017, 95, .	3.2	7
60	Bandwidth Narrowing of an All-Solid-State Optical Parametric Oscillator Amplifier System. Japanese Journal of Applied Physics, 1996, 35, 3457-3458.	1.5	6
61	Study of dipole interaction in micron-width NiFe/Cu/NiFe/NiO wire using exchange anisotropy. Applied Physics Letters, 2001, 78, 4007-4009.	3.3	6
62	Spin current related phenomena in metallic nano-structures. Physica E: Low-Dimensional Systems and Nanostructures, 2011, 43, 735-740.	2.7	6
63	Sensitive detection of vortex-core resonance using amplitude-modulated magnetic field. Scientific Reports, 2016, 5, 17922.	3.3	6
64	Geometrical dependence of spin current absorption into a ferromagnetic nanodot. Journal of Applied Physics, 2016, 120, 142121.	2.5	6
65	Efficient thermal spin injection in metallic nanostructures. Journal Physics D: Applied Physics, 2017, 50, 465003.	2.8	6
66	Exchange Interaction from Current and Voltage Probes in Galvanomagnetic Effect in Polycrystal Co Thin Film. Japanese Journal of Applied Physics, 1999, 38, 4737-4740.	1.5	5
67	Magnetization process of a single magnetic ring detected by nonlocal spin valve measurement. Journal of Applied Physics, 2007, 101, 126102.	2.5	5
68	Signature of spin-dependent Seebeck effect in dynamical spin injection of metallic bilayer structures. JPhys Materials, 2020, 3, 014005.	4.2	5
69	Effects of Stray Fields in Flat-End and Pointed-End NiFe/Cu/NiFe/NiO Wires. Japanese Journal of Applied Physics, 2001, 40, 6357-6359.	1.5	4
70	Influence of Au capping Layer on spin accumulation in a lateral spin-valve structure. IEEE Transactions on Magnetics, 2005, 41, 2600-2602.	2.1	4
71	Domain wall nucleation assisted by nonlocal spin injection. Journal Physics D: Applied Physics, 2007, 40, 1285-1288.	2.8	4
72	Ferromagnetic Resonance in Exchange-Coupled NiFe/FeMn Films and Its Control. IEEE Transactions on Magnetics, 2012, 48, 2889-2891.	2.1	4

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73	First- and second-harmonic detection of spin accumulation in a multiterminal lateral spin valve under high-bias ac current. <i>Physical Review B</i> , 2016, 94, .	3.2	4
74	Significant suppression of galvanomagnetic signal under dynamical spin injection in CoFeB/Pt bilayer. <i>Applied Physics Letters</i> , 2021, 118, .	3.3	4
75	Interfacial exchange coupling-modulated magnetism in the insulating heterostructure of CoO /yttrium iron garnet. <i>Journal of Alloys and Compounds</i> , 2021, 875, 159948.	5.5	4
76	Substantial enhancement of thermal spin polarization in Py/Cu interface. <i>Physical Review Materials</i> , 2018, 2, .	2.4	4
77	Pressure Effects on Magnetic and Transport Properties in CoFe-Based Spin Valve. <i>Materials Transactions</i> , 2020, 61, 1483-1486.	1.2	4
78	Magneto-optical spectroscopic scatterometry for analyzing patterned magnetic nanostructures. <i>Journal of the Magnetism Society of Japan</i> , 2006, 30, 630-636.	0.4	4
79	Influence of heat flow control on dynamical spin injection in CoFeB/Pt/CoFeB trilayer. <i>Scientific Reports</i> , 2022, 12, 3467.	3.3	4
80	Galvanomagnetic Effect and Magnetization Process in CoO/Co/NiFe Film with Antidot Array. <i>Japanese Journal of Applied Physics</i> , 2001, 40, 4524-4527.	1.5	3
81	Rotational dynamics of paired nano-domain walls confined in an elliptical ring. <i>Journal of Magnetism and Magnetic Materials</i> , 2007, 310, 2451-2452.	2.3	3
82	Spin Current and Spin Hall Effect in Metallic Nano-Structures. <i>IEEE Transactions on Magnetism</i> , 2008, 44, 1911-1915.	2.1	3
83	Coherent Suppression of Magnetization Precession in Presence of Spin Waves in a $\text{Ni}_{81}\text{Fe}_{19}$ Microwire. <i>IEEE Transactions on Magnetism</i> , 2009, 45, 4104-4107.	2.1	3
84	Nonlinear motion of magnetic vortex cores during fast magnetic pulses. <i>Physical Review B</i> , 2012, 85, .	3.2	3
85	Detection of edge magnetic state by a ballistic bend resistance measurement. <i>Applied Physics Letters</i> , 2013, 102, 252405.	3.3	3
86	Size Dependence of Ferromagnetic Resonance Frequency in Submicron Patterned Magnet. <i>Japanese Journal of Applied Physics</i> , 2013, 52, 053001.	1.5	3
87	Detection of Vortex Core Oscillation Using Second-Harmonic Voltage Detection Technique. <i>IEEE Transactions on Magnetism</i> , 2015, 51, 1-3.	2.1	3
88	Directional dependence of vortex core resonance in a square-shaped ferromagnetic dot. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2016, 75, 28-32.	2.7	3
89	Effective suppression of thermoelectric voltage in nonlocal spin-valve measurement. <i>Applied Physics Express</i> , 2017, 10, 063004.	2.4	3
90	Tunable Near-Infrared and Visible All-Solid-State Optical Parametric Oscillator Amplifier System Based on Potassium Titanyl Phosphate Crystal. <i>Japanese Journal of Applied Physics</i> , 1996, 35, 4639-4644.	1.5	2

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91	Effect of stray field induced by cross shape in a 200-nm-wide Co wire. Journal of Magnetism and Magnetic Materials, 2001, 236, 262-266.	2.3	2
92	Fabrication of spin-current-induced domain-wall-nucleation device in planar configuration. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2002, 20, 2814.	1.6	2
93	Fabrication of Planar-Type Ferromagnet/Nonmagnet/Ferromagnet Structures Using Multiangle Deposition. Japanese Journal of Applied Physics, 2002, 41, 4385-4389.	1.5	2
94	Control of domain structures in magnetic multilayer using submicron-patterned antiferromagnetic structure. Microelectronic Engineering, 2002, 61-62, 585-591.	2.4	2
95	Control of magnetization rotation using submicron-wide cross geometry. Journal of Magnetism and Magnetic Materials, 2002, 248, 286-291.	2.3	2
96	Influence of top electrode on the current-induced magnetic switching in magnetic nanopillars. Applied Physics Letters, 2005, 87, 162502.	3.3	2
97	Roles of spin-polarized current and spin accumulation in the current-induced magnetization switching. Journal of Magnetism and Magnetic Materials, 2006, 301, 389-397.	2.3	2
98	Temperature dependence of intrinsic switching current of a Co nanomagnet. Applied Physics Letters, 2006, 89, 252505.	3.3	2
99	Spin-current induced vortex displacement and annihilation in micro-scale Permalloy disk. Journal of Magnetism and Magnetic Materials, 2007, 310, 2431-2432.	2.3	2
100	Detection of paired domain walls in a ferromagnetic ring by a bend resistance measurement. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 1108-1110.	2.7	2
101	Large spin current injection in nano-pillar-based lateral spin valve. AIP Conference Proceedings, 2016, , .	0.4	2
102	Modification of the magnetization dynamics of a NiFe nanodot due to thermal spin injection. Journal Physics D: Applied Physics, 2018, 51, 224004.	2.8	2
103	Quantitative Evaluation of Heating Effect on Dynamical Spin Injection Using CoFeB/Pt/CoFeB Trilayered Film. IEEE Transactions on Magnetics, 2022, 58, 1-4.	2.1	2
104	Design of ultrashort Kirkpatrick-Baez mirror for soft x-ray nanofocusing. , 2020, , .		2
105	Pressure-induced enhancement of spin-charge conversion efficiency in CoFeB/Pt bilayer. Applied Physics Express, 2022, 15, 033003.	2.4	2
106	Optical metrology of patterned magnetic structures: deep versus shallow gratings. , 2005, , .		1
107	Observation of coupled magnetic vortex structure dynamics by time-resolved magneto-optical Kerr effect microscopy. , 2007, , .		1
108	Lorentz microscopy and electron holography studies of current-excited magnetization dynamics in Permalloy nanowires. , 2008, , .		1

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109	Crystalline analysis of permalloy narrow wires subject to current pulses. Journal of Applied Physics, 2010, 107, 09A326.	2.5	1
110	Control of magnetic domain wall displacement using spin current in small in-plane magnetic field in Permalloy nanowires. Journal Physics D: Applied Physics, 2011, 44, 064015.	2.8	1
111	Geometrical optimization of a local ballistic magnetic sensor. Applied Physics Letters, 2014, 104, 142408.	3.3	1
112	Detection of a vortex nucleation position in a circular ferromagnet using asymmetrically configured electrodes. Applied Physics Letters, 2014, 105, .	3.3	1
113	Laterally configured resistive switching device based on transition-metal nano-gap electrode on Gd oxide. Applied Physics Letters, 2016, 108, 023101.	3.3	1
114	Temperature evolution of the charge and spin transport in Cu/Nb interface. Japanese Journal of Applied Physics, 2018, 57, 060310.	1.5	1
115	Thermal Spin-Valve Effect in Magnetic Multi-layered Nanowires. Journal of Superconductivity and Novel Magnetism, 2019, 32, 3109-3113.	1.8	1
116	Crystal orientation effect on spin injection/detection efficiency in Si lateral spin-valve devices. Journal Physics D: Applied Physics, 2019, 52, 085102.	2.8	1
117	Development of two-stage soft x-ray nanofocusing system at BL25SU of SPring-8. , 2020, , .		1
118	Optimization of Magnetic-Field Response of Bend Resistance in Ballistic Two-Dimensional Electron Gas. Applied Physics Express, 2012, 5, 073001.	2.4	1
119	The positive exchange bias property with hopping switching behavior in van der Waals magnet FeGeTe. 2D Materials, 2022, 9, 015037.	4.4	1
120	Feasibility experiments on the laser-diode pumped solid-state laser for ICF Driver. AIP Conference Proceedings, 1996, , .	0.4	0
121	Galvanomagnetic Effect of Submicron Exchange-Coupled Co/Ni Wire. Japanese Journal of Applied Physics, 2000, 39, 6526-6529.	1.5	0
122	Magnetization Processes in Narrow and Wide Cross-shaped Co/Cu/NiFe Wires. Japanese Journal of Applied Physics, 2001, 40, 1246-1249.	1.5	0
123	Domain formation induced by perpendicular spin injection. Journal of Magnetism and Magnetic Materials, 2007, 310, e690-e692.	2.3	0
124	Spin-dependent transport in a nanopillar non-local spin valve. Journal of Magnetism and Magnetic Materials, 2009, 321, 3829-3832.	2.3	0
125	Stochastic nature of current-excited magnetic domain and domain wall dynamics microscopically investigated by Lorentz microscopy. , 2010, , .		0
126	Measurement of the ferromagnetic resonance of a single micron dot by using a vector network analyzer. Journal of the Korean Physical Society, 2013, 63, 800-803.	0.7	0

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127	Lateral Spin Transport (Diffusive Spin Current). , 2014, , 1-17.		0
128	Nanoelectronics with Low Power Consumption. , 2016, , 507-518.		0
129	Asymmetric nonlocal signal induced by thermoelectric effects in a lateral spin valve. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 117, 113738.	2.7	0
130	Relaxation Process of Spin-Polarized Quasiparticles in a Superconducting Nb Wire. IEEE Transactions on Magnetics, 2022, 58, 1-4.	2.1	0
131	Temperature profile of nanospintronic device analyzed by spin-dependent Seebeck effect. Applied Physics Express, 2021, 14, 073004.	2.4	0
132	Nonlinear power dependence of ferromagnetic resonance in NiFe/Pt/CoFeB trilayer. Journal of Physics Condensed Matter, 2021, 34, .	1.8	0
133	Study of Magnetostatic Interaction in Magnetic Multilayer Wires Using Exchange Anisotropy. Transactions of the Magnetics Society of Japan, 2002, 2, 49-52.	0.5	0
134	Observation of Current-Excited Magnetization Dynamics using Field-Emission Transmission Electron Microscope. Nihon Kessho Gakkaishi, 2007, 49, 307-312.	0.0	0
135	Lateral Spin Transport (Diffusive Spin Current). , 2016, , 1577-1596.		0
136	Effective modulation of spin accumulation using a ferromagnetic/nonmagnetic bilayer spin channel. Journal Physics D: Applied Physics, 2022, 55, 095302.	2.8	0
137	An arrayed-window microfluidic device for observation of mixed nanoparticles with an X-ray free-electron laser. Optical Review, 2022, 29, 7.	2.0	0
138	Enhanced spin accumulation in nano-pillar-based lateral spin valve using spin reservoir effect. Journal Physics D: Applied Physics, 2022, 55, 165004.	2.8	0
139	Experimental evaluation of three-dimensional heat flow using magneto-thermo electric effects in a ferromagnetic nanowire. Physica Status Solidi - Rapid Research Letters, 0, , .	2.4	0
140	Significant Modulation of Vortex Resonance Spectra in a Square-Shape Ferromagnetic Dot. Nanomaterials, 2022, 12, 2295.	4.1	0