

# Masashi Shiraishi

## List of Publications by Year in descending order

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120  
papers

4,710  
citations

117625

34  
h-index

110387

64  
g-index

122  
all docs

122  
docs citations

122  
times ranked

5498  
citing authors

#	ARTICLE	IF	CITATIONS
1	Influence of adjacent metal films on magnon propagation in $\text{Y}_3\text{Fe}_5\text{O}_{12}$ . <i>Physical Review B</i> , 2022, 105, .	3.2	5
2	Current-induced out-of-plane torques in a single permalloy layer with lateral structural asymmetry. <i>Physical Review B</i> , 2022, 105, .	3.2	4
3	Full calculation of inter-conversion between charge, spin, and heat current using a common partial differential equation platform. <i>Journal of Applied Physics</i> , 2022, 131, 243903.	2.5	1
4	Enhancement of low-frequency spin-orbit-torque ferromagnetic resonance signals by frequency tuning observed in Pt/Py, Pt/Co, and Pt/Fe bilayers. <i>AIP Advances</i> , 2021, 11, 025206.	1.3	1
5	Spin to charge conversion in Si/Cu/ferromagnet systems investigated by ac inductive measurements. <i>Physical Review B</i> , 2021, 103, .	3.2	2
6	Synthetic Rashba spin-orbit system using a silicon metal-oxide semiconductor. <i>Nature Materials</i> , 2021, 20, 1228-1232.	27.5	11
7	Influence of Labor Conditions and Interaction Among Individuals on Circadian Activity Rhythms in the Ant <i>Camponotus Japonicus</i> . <i>Journal of Robotics and Mechatronics</i> , 2021, 33, 582-589.	1.0	0
8	Observation of a superconducting state of a topological superconductor candidate, $\text{FeTe}_{0.6}\text{Se}_{0.4}$ , equipping ferromagnetic electrodes with perpendicular magnetic anisotropy. <i>Applied Physics Express</i> , 2021, 14, 093002.	2.4	1
9	Coexistence of low-frequency spin-torque ferromagnetic resonance and unidirectional spin Hall magnetoresistance. <i>Physical Review B</i> , 2021, 104, .	3.2	3
10	Modulation of spin-torque ferromagnetic resonance with a nanometer-thick platinum by ionic gating. <i>Scientific Reports</i> , 2021, 11, 21779.	3.3	3
11	Spin transport in n-type 3C-SiC observed in a lateral spin-pumping device. <i>Solid State Communications</i> , 2020, 305, 113754.	1.9	3
12	Spin transport in a lateral spin valve with a suspended Cu channel. <i>Scientific Reports</i> , 2020, 10, 10699.	3.3	3
13	Sizable spin-transfer torque in the Bi/Ni <sub>80</sub> Fe <sub>20</sub> bilayer film. <i>Applied Physics Letters</i> , 2020, 117, .	3.3	4
14	Detection of ferromagnetic resonance from 1-nm-thick Co. <i>Scientific Reports</i> , 2020, 10, 15764.	3.3	3
15	In-plane spin-orbit torque magnetization switching and its detection using the spin rectification effect at subgigahertz frequencies. <i>Physical Review B</i> , 2020, 102, .	3.2	9
16	Modulation of spin conversion in a 1.5-nm-thick Pd film by ionic gating. <i>Applied Physics Letters</i> , 2020, 117, 092406.	3.3	4
17	Over 1% magnetoresistance ratio at room temperature in non-degenerate silicon-based lateral spin valves. <i>Applied Physics Express</i> , 2020, 13, 083002.	2.4	10
18	Investigation of gating effect in Si spin MOSFET. <i>Applied Physics Letters</i> , 2020, 116, .	3.3	8

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19	Gate-Tunable Spin xor Operation in a Silicon-Based Device at Room Temperature. <i>Physical Review Applied</i> , 2020, 13, .	3.8	7
20	Verification of mathematical models of response threshold through statistical characterisation of the foraging activity in ant societies. <i>Scientific Reports</i> , 2019, 9, 8845.	3.3	7
21	Diverse stochasticity leads a colony of ants to optimal foraging. <i>Journal of Theoretical Biology</i> , 2019, 465, 7-16.	1.7	3
22	Quantitative and systematic analysis of bias dependence of spin accumulation voltage in a nondegenerate Si-based spin valve. <i>Physical Review B</i> , 2019, 99, .	3.2	14
23	Ferromagnetic resonance imbalance at high microwave power: Effect on the Gilbert damping parameter. <i>Journal of Applied Physics</i> , 2019, 126, .	2.5	0
24	Stability of spin XOR gate operation in silicon based lateral spin device with large variations in spin transport parameters. <i>AIP Advances</i> , 2019, 9, 125326.	1.3	3
25	Spin-wave-induced lateral temperature gradient in a YIG thin film/GGG system excited in an ESR cavity. <i>Applied Physics Letters</i> , 2018, 112, .	3.3	11
26	Note: Derivative divide, a method for the analysis of broadband ferromagnetic resonance in the frequency domain. <i>Review of Scientific Instruments</i> , 2018, 89, 076101.	1.3	16
27	Thermally Generated Spin Signals in a Nondegenerate Silicon Spin Valve. <i>Physical Review Applied</i> , 2018, 9, .	3.8	6
28	Tunable inverse spin Hall effect in nanometer-thick platinum films by ionic gating. <i>Nature Communications</i> , 2018, 9, 3118.	12.8	52
29	Quantitative investigation of the inverse Rashba-Edelstein effect in Bi/Ag and Ag/Bi on YIG. <i>Applied Physics Letters</i> , 2017, 110, .	3.3	28
30	Strong evidence for d-electron spin transport at room temperature at a LaAlO <sub>3</sub> /SrTiO <sub>3</sub> interface. <i>Nature Materials</i> , 2017, 16, 609-614.	27.5	55
31	Investigation of spin scattering mechanism in silicon channels of Fe/MgO/Si lateral spin valves. <i>Applied Physics Letters</i> , 2017, 110, 192401.	3.3	10
32	Spin injection into silicon detected by broadband ferromagnetic resonance spectroscopy. <i>Applied Physics Letters</i> , 2017, 110, 182402.	3.3	9
33	Spin to Charge Interconversion Phenomena in the Interface and Surface States. <i>Journal of the Physical Society of Japan</i> , 2017, 86, 011001.	1.6	43
34	Spin conversion on the nanoscale. <i>Nature Physics</i> , 2017, 13, 829-832.	16.7	75
35	Significant reduction in spin pumping efficiency in a platinum/yttrium iron garnet bilayer at low temperature. <i>Applied Physics Express</i> , 2016, 9, 053002.	2.4	17
36	Switching of charge-current-induced spin polarization in the topological insulator $\text{BiSbTeSe}$ . <i>Physical Review B</i> , 2016, 94, .	1.2	15

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37	Transport and spin conversion of multicarriers in semimetal bismuth. <i>Physical Review B</i> , 2016, 93, .	3.2	41
38	Observation of large spin accumulation voltages in nondegenerate Si spin devices due to spin drift effect: Experiments and theory. <i>Physical Review B</i> , 2016, 93, .	3.2	29
39	Spin transport and spin conversion in compound semiconductor with non-negligible spin-orbit interaction. <i>Physical Review B</i> , 2015, 91, .	3.2	20
40	Tunable spin current due to bulk insulating property in the topological insulator $\text{TI} \text{Bi}_{1-x}\text{Sb}_x$ . <i>Physical Review B</i> , 2015, 91, .	3.2	20
41	Collective Patterns of Swarm Dynamics and the Lyapunov Analysis of Individual Behaviors. <i>Journal of the Physical Society of Japan</i> , 2015, 84, 054002.	1.6	8
42	Ferromagnetic resonance and spin pumping efficiency for inverse spin-Hall effect normalization in yttrium-iron-garnet-based systems. <i>Applied Physics Express</i> , 2015, 8, 103002.	2.4	10
43	Room-temperature operation of Si spin MOSFET with high on/off spin signal ratio. <i>Applied Physics Express</i> , 2015, 8, 113004.	2.4	63
44	Temperature evolution of electromotive force from Pt on yttrium-iron-garnet under ferromagnetic resonance. <i>Journal of Applied Physics</i> , 2015, 117, 17D136.	2.5	6
45	Observation of spin-charge conversion in chemical-vapor-deposition-grown single-layer graphene. <i>Applied Physics Letters</i> , 2014, 105, .	3.3	23
46	Spin drift in highly doped n-type Si. <i>Applied Physics Letters</i> , 2014, 104, 092409.	3.3	26
47	Spin Transport in Nondegenerate Si with a Spin MOSFET Structure at Room Temperature. <i>Physical Review Applied</i> , 2014, 2, .	3.8	86
48	Lyapunov analysis of collective behaviors in self-propelled particle systems. , 2014, , .		2
49	Local magnetoresistance in Fe/MgO/Si lateral spin valve at room temperature. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	49
50	Electrical Detection of the Spin Polarization Due to Charge Flow in the Surface State of the Topological Insulator $\text{Bi}_{1.5}\text{Sb}_{0.5}\text{Te}_{1.7}\text{Se}_{1.3}$ . <i>Nano Letters</i> , 2014, 14, 6226-6230.	9.1	144
51	Self-induced inverse spin Hall effect in permalloy at room temperature. <i>Physical Review B</i> , 2014, 89, .	3.2	113
52	Spin-Pump-Induced Spin Transport in $p$ -Type Si at Room Temperature. <i>Physical Review Letters</i> , 2013, 110, 127201.	7.8	162
53	Dynamically generated pure spin current in single-layer graphene. <i>Physical Review B</i> , 2013, 87, .	3.2	62
54	Bipolar-driven large linear magnetoresistance in silicon at low magnetic fields. <i>Physical Review B</i> , 2013, 87, .	3.2	27

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55	Dynamical Spin Injection into p-Type Germanium at Room Temperature. Applied Physics Express, 2013, 6, 023001.	2.4	39
56	Temperature Dependence of Spin Hall Angle of Palladium. Applied Physics Express, 2013, 6, 083001.	2.4	21
57	Vertical spin transport in Al with Pd/Al/Ni <sub>80</sub> Fe <sub>20</sub> trilayer films at room temperature by spin pumping. Scientific Reports, 2013, 3, .	3.3	21
58	Characterization of MgO Thin Films Grown on Carbon Materials by Molecular Beam Epitaxy. Japanese Journal of Applied Physics, 2013, 52, 070208.	1.5	1
59	Effect of spin drift on spin accumulation voltages in highly doped silicon. Applied Physics Letters, 2012, 101, .	3.3	32
60	Realization of ohmic-like contact between ferromagnet and rubrene single crystal. Applied Physics Letters, 2012, 101, 073501.	3.3	5
61	Investigation of the inverted Hanle effect in highly doped Si. Physical Review B, 2012, 86, .	3.2	57
62	Electrically-Generated Pure Spin Current in Graphene. Japanese Journal of Applied Physics, 2012, 51, 08KA01.	1.5	1
63	Observation of Magnetic Switching and Multiferroic-Like Behavior of Co Nanoparticles in a C <sub>60</sub> Matrix. Advanced Functional Materials, 2012, 22, 3845-3852.	14.9	6
64	Room-Temperature Electron Spin Transport in a Highly Doped Si Channel. Applied Physics Express, 2011, 4, 023003.	2.4	177
65	Observation of a tunneling magnetoresistance effect in magnetic tunneling junctions with a high resistance ferromagnetic oxide Fe <sub>2</sub> MnO <sub>4</sub> electrode. Solid State Communications, 2011, 151, 1296-1299.	1.9	0
66	Graphene: Piecing it Together. Advanced Materials, 2011, 23, 4471-4490.	21.0	127
67	Molecular spintronics. Physica E: Low-Dimensional Systems and Nanostructures, 2011, 43, 1295-1317.	2.7	67
68	Spin transport properties in silicon in a nonlocal geometry. Physical Review B, 2011, 83, .	3.2	31
69	Electrical investigation of the interface band structure in rubrene single-crystal/nickel junction. Applied Physics Letters, 2011, 99, 043505.	3.3	5
70	Comparison of spin signals in silicon between nonlocal four-terminal and three-terminal methods. Applied Physics Letters, 2011, 98, .	3.3	61
71	Graphene spintronics. , 2010, , .		0
72	Microwave-Assisted Magnetization Reversal in a Perpendicularly Magnetized Film. Applied Physics Express, 2010, 3, 013002.	2.4	39

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73	Evidence of Electrical Spin Injection Into Silicon Using MgO Tunnel Barrier. IEEE Transactions on Magnetism, 2010, 46, 1436-1439.	2.1	47
74	Coupled-Mode Excitations Induced in an Antiferromagnetically Coupled Multilayer by Spin-Transfer Torque. Applied Physics Express, 2010, 3, 033001.	2.4	17
75	Investigation of Spin-Dependent Transport Properties and Spin-Spin Interactions in a Copper-Phthalocyanine-Cobalt Nanocomposite System. Japanese Journal of Applied Physics, 2010, 49, 033002.	1.5	7
76	Enhanced magnetoresistance due to charging effects in a molecular nanocomposite spin device. Physical Review B, 2009, 79, .	3.2	17
77	Analysis of Degradation in Graphene-Based Spin Valves. Applied Physics Express, 2009, 2, 123004.	2.4	9
78	Robustness of Spin Polarization in Graphene-Based Spin Valves. Advanced Functional Materials, 2009, 19, 3711-3716.	14.9	70
79	Spin-transfer-torque-induced ferromagnetic resonance for Fe/Cr/Fe layers with an antiferromagnetic coupling field. Applied Physics Letters, 2009, 94, .	3.3	15
80	Spin transport in single- and multi-layer graphene. , 2009, , .		6
81	Characteristic gait animation synthesis from single view silhouette. , 2009, , .		0
82	Accurate skin deformation model of forearm using MRI. , 2009, , .		0
83	Interaction patches for multi-character animation. , 2008, , .		11
84	Interaction patches for multi-character animation. ACM Transactions on Graphics, 2008, 27, 1-8.	7.2	49
85	Logic circuits using solution-processed single-walled carbon nanotube transistors. Applied Physics Letters, 2008, 92, 253507.	3.3	25
86	Transfer characteristics in graphene field-effect transistors with Co contacts. Applied Physics Letters, 2008, 93, 152104.	3.3	47
87	A nuclear magnetic resonance study on rubrene-cobalt nanocomposites. Applied Physics Letters, 2008, 93, 053103.	3.3	6
88	Surface potential analyses of single-walled carbon nanotube/metal interfaces. Journal of Applied Physics, 2007, 101, 014311.	2.5	6
89	Structural Study of Single-Walled Carbon Nanotube Films Doped by a Solution Method. Journal of Nanoscience and Nanotechnology, 2007, 7, 3533-3536.	0.9	8
90	Tunnel magnetoresistance of C <sub>60</sub> nanocomposites and spin-dependent transport in organic semiconductors. Physical Review B, 2007, 76, .	3.2	49

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91	Spin Injection into a Graphene Thin Film at Room Temperature. Japanese Journal of Applied Physics, 2007, 46, L605-L607.	1.5	182
92	Spin-dependent transport in nanocomposites of Alq3 molecules and cobalt nanoparticles. Applied Physics Letters, 2007, 91, 063123.	3.3	26
93	Dependence on annealing temperatures of tunneling spectra in high-resistance CoFeB/MgO/CoFeB magnetic tunnel junctions. Solid State Communications, 2007, 143, 574-578.	1.9	23
94	Large magnetoresistance in rubrene-Co nano-composites. Chemical Physics Letters, 2007, 448, 106-110.	2.6	24
95	Spin-Dependent Transport in C60-Co Nano-Composites. Japanese Journal of Applied Physics, 2006, 45, L717-L719.	1.5	33
96	Ambipolar single electron transistors using side-contacted single-walled carbon nanotubes. Chemical Physics Letters, 2006, 417, 540-544.	2.6	13
97	Optical Observation of Carrier Accumulation in Single-Walled Carbon Nanotube Transistors. Japanese Journal of Applied Physics, 2006, 45, L1190-L1192.	1.5	8
98	Gigantic Optical Stark Effect and Ultrafast Relaxation of Excitons in Single-Walled Carbon Nanotubes. Journal of the Physical Society of Japan, 2006, 75, 043709.	1.6	15
99	Solution-Processed Single-Walled Carbon Nanotube Transistors with High Mobility and Large On/Off Ratio. Japanese Journal of Applied Physics, 2006, 45, 6524-6527.	1.5	28
100	Band structure modulation by carrier doping in random-network carbon nanotube transistors. Applied Physics Letters, 2006, 89, 013112.	3.3	11
101	Improvements in the device characteristics of random-network single-walled carbon nanotube transistors by using high- $\kappa$ gate insulators. Applied Physics Letters, 2006, 89, 203505.	3.3	13
102	Tunneling spectra of sputter-deposited CoFeB/MgO/CoFeB magnetic tunnel junctions showing giant tunneling magnetoresistance effect. Solid State Communications, 2005, 136, 611-615.	1.9	36
103	Characterization of SWNT-Thin-Film Transistors. AIP Conference Proceedings, 2005, , .	0.4	0
104	Spectroscopic characterization of single-walled carbon nanotubes carrier-doped by encapsulation of TCNQ. Physical Review B, 2005, 71, .	3.2	34
105	Control of injected carriers in tetracyano-p-quinodimethane encapsulated carbon nanotube transistors. Applied Physics Letters, 2005, 87, 093107.	3.3	19
106	Single-walled carbon nanotube aggregates for solution-processed field effect transistors. Chemical Physics Letters, 2004, 394, 110-113.	2.6	75
107	Gas-solid interactions in the hydrogen/single-walled carbon nanotube system. Chemical Physics Letters, 2003, 367, 633-636.	2.6	102
108	Tomonaga-Luttinger-liquid behavior in single-walled carbon nanotube networks. Solid State Communications, 2003, 127, 215-218.	1.9	23

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109	Stable and controlled amphoteric doping by encapsulation of organic molecules inside carbon nanotubes. <i>Nature Materials</i> , 2003, 2, 683-688.	27.5	520
110	Electronic structures of fullerenes and metallofullerenes studied by surface potential analysis. <i>Physical Review B</i> , 2003, 68, .	3.2	28
111	Nuclear Magnetic Resonance of Molecular Hydrogen Trapped in Single-Walled Carbon Nanotube Bundles. <i>Journal of Nanoscience and Nanotechnology</i> , 2002, 2, 463-465.	0.9	12
112	Conduction mechanisms in single-walled carbon nanotubes. <i>Synthetic Metals</i> , 2002, 128, 235-239.	3.9	52
113	Hydrogen storage in single-walled carbon nanotube bundles and peapods. <i>Chemical Physics Letters</i> , 2002, 358, 213-218.	2.6	97
114	Work function of carbon nanotubes. <i>Carbon</i> , 2001, 39, 1913-1917.	10.3	467
115	Spontaneous R-parity breaking in a supersymmetric majoron model. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1993, 313, 89-95.	4.1	37
116	Single-Shot Measurements of Spin-Transfer Switching in CoFeB/MgO/CoFeB Magnetic Tunnel Junctions. <i>Applied Physics Express</i> , 0, 1, 061303.	2.4	29
117	Electrical Spin Injection into Silicon Using MgO Tunnel Barrier. <i>Applied Physics Express</i> , 0, 2, 053003.	2.4	74
118	Current-Field Driven "Spin Transistor". <i>Applied Physics Express</i> , 0, 2, 063004.	2.4	10
119	Voltage-Assisted Magnetization Switching in Ultrathin Fe <sub>80</sub> Co <sub>20</sub> Alloy Layers. <i>Applied Physics Express</i> , 0, 2, 063001.	2.4	190
120	Ink-Jet Printing of Carbon Nanotube Thin-Film Transistors on Flexible Plastic Substrates. <i>Applied Physics Express</i> , 0, 2, 025005.	2.4	75