

Masashi Shiraishi

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

142
papers

5,757
citations

38
h-index

74
g-index

153
ext. papers

6,291
ext. citations

4.6
avg, IF

5.42
L-index

#	Paper	IF	Citations
142	Electrical transport properties of atomically thin WSe ₂ using perpendicular magnetic anisotropy metal contacts. <i>Applied Physics Letters</i> , 2022 , 120, 013102	3.4	
141	Modulation of spin-torque ferromagnetic resonance with a nanometer-thick platinum by ionic gating. <i>Scientific Reports</i> , 2021 , 11, 21779	4.9	1
140	Investigation of the thermal tolerance of silicon-based lateral spin valves. <i>Scientific Reports</i> , 2021 , 11, 10583	4.9	1
139	Synthetic Rashba spin-orbit system using a silicon metal-oxide semiconductor. <i>Nature Materials</i> , 2021 , 20, 1228-1232	27	3
138	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	1.5	0
137	Approaching barrier-free contacts to monolayer MoS ₂ employing [Co/Pt] multilayer electrodes. <i>NPG Asia Materials</i> , 2021 , 13,	10.3	2
136	Spin to charge conversion in Si/Cu/ferromagnet systems investigated by ac inductive measurements. <i>Physical Review B</i> , 2021 , 103,	3.3	1
135	Observation of a superconducting state of a topological superconductor candidate, FeTe _{0.6} Se _{0.4} , equipping ferromagnetic electrodes with perpendicular magnetic anisotropy. <i>Applied Physics Express</i> , 2021 , 14, 093002	2.4	
134	Giant spin Hall angle in the Heusler alloy Weyl ferromagnet Co ₂ MnGa. <i>Physical Review B</i> , 2021 , 103,	3.3	11
133	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,	3.3	1
132	Modulation of spin conversion in a 1.5 nm-thick Pd film by ionic gating. <i>Applied Physics Letters</i> , 2020 , 117, 092406	3.4	1
131	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	5
130	Investigation of gating effect in Si spin MOSFET. <i>Applied Physics Letters</i> , 2020 , 116, 022403	3.4	5
129	Gate-Tunable Spin xor Operation in a Silicon-Based Device at Room Temperature. <i>Physical Review Applied</i> , 2020 , 13,	4.3	5
128	Spin transport in a lateral spin valve with a suspended Cu channel. <i>Scientific Reports</i> , 2020 , 10, 10699	4.9	2
127	Sizable spin-transfer torque in the Bi/Ni ₈₀ Fe ₂₀ bilayer film. <i>Applied Physics Letters</i> , 2020 , 117, 042407	3.4	2
126	Enhancement of spin signals by thermal annealing in silicon-based lateral spin valves. <i>AIP Advances</i> , 2020 , 10, 095021	1.5	2

125	Detection of ferromagnetic resonance from 1nm-thick Co. <i>Scientific Reports</i> , 2020 , 10, 15764	4.9	1
124	Spin transport in n-type 3CBiC observed in a lateral spin-pumping device. <i>Solid State Communications</i> , 2020 , 305, 113754	1.6	2
123	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,	3.3	9
122	Spin Transport and Spin Conversion at Room Temperature in Exotic Materials Systems. <i>Journal of the Institute of Electrical Engineers of Japan</i> , 2019 , 139, 668-673	0	
121	IEEE Magnetics Society Distinguished Lecturers for 2020. <i>IEEE Transactions on Magnetics</i> , 2019 , 55, 1-4		2
120	Ferromagnetic resonance imbalance at high microwave power: Effect on the Gilbert damping parameter. <i>Journal of Applied Physics</i> , 2019 , 126, 203904	2.5	
119	Monolayer MoS field effect transistor with low Schottky barrier height with ferromagnetic metal contacts. <i>Scientific Reports</i> , 2019 , 9, 17032	4.9	6
118	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	1.5	2
117	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	1.7	7
116	Thermally Generated Spin Signals in a Nondegenerate Silicon Spin Valve. <i>Physical Review Applied</i> , 2018 , 9,	4.3	4
115	Tunable inverse spin Hall effect in nanometer-thick platinum films by ionic gating. <i>Nature Communications</i> , 2018 , 9, 3118	17.4	28
114	Spin-orbit coupling induced by bismuth doping in silicon thin films. <i>Applied Physics Letters</i> , 2018 , 113, 122408	3.4	4
113	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, 212401	3.4	6
112	Quantitative investigation of the inverse Rashba-Edelstein effect in Bi/Ag and Ag/Bi on YIG. <i>Applied Physics Letters</i> , 2017 , 110, 072404	3.4	22
111	Strong evidence for d-electron spin transport at room temperature at a LaAlO/SrTiO interface. <i>Nature Materials</i> , 2017 , 16, 609-614	27	43
110	Investigation of spin scattering mechanism in silicon channels of Fe/MgO/Si lateral spin valves. <i>Applied Physics Letters</i> , 2017 , 110, 192401	3.4	7
109	Spin injection into silicon detected by broadband ferromagnetic resonance spectroscopy. <i>Applied Physics Letters</i> , 2017 , 110, 182402	3.4	5
108	Spin to Charge Interconversion Phenomena in the Interface and Surface States. <i>Journal of the Physical Society of Japan</i> , 2017 , 86, 011001	1.5	31

107	Spin conversion on the nanoscale. <i>Nature Physics</i> , 2017 , 13, 829-832	16.2	55
106	Transport and spin conversion of multicarriers in semimetal bismuth. <i>Physical Review B</i> , 2016 , 93,	3.3	27
105	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,	3.3	28
104	Gate-Tunable Spin-Charge Conversion and the Role of Spin-Orbit Interaction in Graphene. <i>Physical Review Letters</i> , 2016 , 116, 166102	7.4	53
103	Carbon-based Spintronics 2016 , 155-196		
102	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	12
101	Switching of charge-current-induced spin polarization in the topological insulator BiSbTeSe ₂ . <i>Physical Review B</i> , 2016 , 94,	3.3	43
100	Experimental Demonstration of Room-Temperature Spin Transport in n-Type Germanium Epilayers. <i>Physical Review Letters</i> , 2015 , 114, 196602	7.4	75
99	Room-temperature operation of Si spin MOSFET with high on/off spin signal ratio. <i>Applied Physics Express</i> , 2015 , 8, 113004	2.4	50
98	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	5
97	Spin transport and spin conversion in compound semiconductor with non-negligible spin-orbit interaction. <i>Physical Review B</i> , 2015 , 91,	3.3	15
96	Tunable spin current due to bulk insulating property in the topological insulator Tl _{1-x} Bi _{1+x} Se ₂ . <i>Physical Review B</i> , 2015 , 91,	3.3	12
95	Precise determination of two-carrier transport properties in the topological insulator TlBiSe ₂ . <i>Physical Review B</i> , 2015 , 91,	3.3	7
94	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	9
93	Local magnetoresistance in Fe/MgO/Si lateral spin valve at room temperature. <i>Applied Physics Letters</i> , 2014 , 104, 052404	3.4	41
92	Conversion of pure spin current to charge current in amorphous bismuth. <i>Journal of Applied Physics</i> , 2014 , 115, 17C507	2.5	13
91	Surface Shubnikov-de Haas oscillations and nonzero Berry phases of the topological hole conduction in Tl _{1-x} Bi _{1+x} Se ₂ . <i>Physical Review B</i> , 2014 , 90,	3.3	21
90	Electrical detection of the spin polarization due to charge flow in the surface state of the topological insulator Bi(1.5)Sb(0.5)Te(1.7)Se(1.3). <i>Nano Letters</i> , 2014 , 14, 6226-30	11.5	121

89	Self-induced inverse spin Hall effect in permalloy at room temperature. <i>Physical Review B</i> , 2014 , 89,	3.3	85
88	Carbon Nanotubes: Hydrogen Storage 2014 , 706-714		
87	Observation of spin-charge conversion in chemical-vapor-deposition-grown single-layer graphene. <i>Applied Physics Letters</i> , 2014 , 105, 162410	3.4	21
86	Spin drift in highly doped n-type Si. <i>Applied Physics Letters</i> , 2014 , 104, 092409	3.4	23
85	Graphene spintronics 2014 , 324-340		
84	Spin Transport in Nondegenerate Si with a Spin MOSFET Structure at Room Temperature. <i>Physical Review Applied</i> , 2014 , 2,	4.3	75
83	Graphene spintronics 2014 , 117-132		
82	Giant enhancement of spin pumping efficiency using Fe ₃ Si ferromagnet. <i>Physical Review B</i> , 2013 , 88,	3.3	31
81	Spin-pump-induced spin transport in p-type Si at room temperature. <i>Physical Review Letters</i> , 2013 , 110, 127201	7.4	135
80	Dynamically generated pure spin current in single-layer graphene. <i>Physical Review B</i> , 2013 , 87,	3.3	56
79	Dynamical Spin Injection into p-Type Germanium at Room Temperature. <i>Applied Physics Express</i> , 2013 , 6, 023001	2.4	34
78	Temperature Dependence of Spin Hall Angle of Palladium. <i>Applied Physics Express</i> , 2013 , 6, 083001	2.4	18
77	Vertical spin transport in Al with Pd/Al/Ni ₈₀ Fe ₂₀ trilayer films at room temperature by spin pumping. <i>Scientific Reports</i> , 2013 , 3,	4.9	18
76	Characterization of MgO Thin Films Grown on Carbon Materials by Molecular Beam Epitaxy. <i>Japanese Journal of Applied Physics</i> , 2013 , 52, 070208	1.4	1
75	Correlation of Microstructure and Transport Properties of Multilayered Graphene Spin Valves on SiO ₂ /Si. <i>Journal of Physics: Conference Series</i> , 2013 , 471, 012048	0.3	1
74	Observation of Magnetic-Switching and Multiferroic-Like Behavior of Co Nanoparticles in a C60 Matrix. <i>Advanced Functional Materials</i> , 2012 , 22, 3845-3852	15.6	5
73	Observation of weak temperature dependence of spin diffusion length in highly-doped Si by using a non-local 3-terminal method. <i>Journal of Applied Physics</i> , 2012 , 111, 07C322	2.5	2
72	Effect of spin drift on spin accumulation voltages in highly doped silicon. <i>Applied Physics Letters</i> , 2012 , 101, 122413	3.4	30

71	Realization of ohmic-like contact between ferromagnet and rubrene single crystal. <i>Applied Physics Letters</i> , 2012 , 101, 073501	3-4	5
70	Investigation of the inverted Hanle effect in highly doped Si. <i>Physical Review B</i> , 2012 , 86,	3-3	53
69	Electrically-Generated Pure Spin Current in Graphene. <i>Japanese Journal of Applied Physics</i> , 2012 , 51, 08KA01	3	3
68	Room-Temperature Electron Spin Transport in a Highly Doped Si Channel. <i>Applied Physics Express</i> , 2011 , 4, 023003	2-4	164
67	Observation of a tunneling magnetoresistance effect in magnetic tunneling junctions with a high resistance ferromagnetic oxide Fe ₂ MnO ₅ electrode. <i>Solid State Communications</i> , 2011 , 151, 1296-1299	1-6	169
66	Graphene: Piecing it together. <i>Advanced Materials</i> , 2011 , 23, 4471-90	2-4	115
65	Molecular spintronics. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2011 , 43, 1295-1317	3	56
64	Spin transport properties in silicon in a nonlocal geometry. <i>Physical Review B</i> , 2011 , 83,	3-3	31
63	Electrical investigation of the interface band structure in rubrene single-crystal/nickel junction. <i>Applied Physics Letters</i> , 2011 , 99, 043505	3-4	5
62	Comparison of spin signals in silicon between nonlocal four-terminal and three-terminal methods. <i>Applied Physics Letters</i> , 2011 , 98, 012508	3-4	60
61	Local and non-local magnetoresistance with spin precession in highly doped Si. <i>Applied Physics Letters</i> , 2011 , 98, 262503	3-4	26
60	Graphene Spintronics. <i>Hyomen Kagaku</i> , 2010 , 31, 162-168		1
59	Coupled-Mode Excitations Induced in an Antiferromagnetically Coupled Multilayer by Spin-Transfer Torque. <i>Applied Physics Express</i> , 2010 , 3, 033001	2-4	14
58	Voltage-induced perpendicular magnetic anisotropy change in magnetic tunnel junctions. <i>Applied Physics Letters</i> , 2010 , 96, 022506	3-4	191
57	Investigation of Spin-Dependent Transport Properties and Spin-Spin Interactions in a Copper-Phthalocyanine/Cobalt Nanocomposite System. <i>Japanese Journal of Applied Physics</i> , 2010 , 49, 033002	1-4	5
56	Temperature dependence of spin diffusion length in silicon by Hanle-type spin precession. <i>Applied Physics Letters</i> , 2010 , 96, 122101	3-4	73
55	Evidence of Electrical Spin Injection Into Silicon Using MgO Tunnel Barrier. <i>IEEE Transactions on Magnetics</i> , 2010 , 46, 1436-1439	2	43
54	Electrical Detection of Changes in Voltage-induced Magnetic Anisotropy in Magnetic Tunnel Junctions. <i>Journal of the Magnetics Society of Japan</i> , 2010 , 34, 289-292	0-7	

53	Enhanced magnetoresistance due to charging effects in a molecular nanocomposite spin device. <i>Physical Review B</i> , 2009 , 79,	3.3	17
52	Voltage control of in-plane magnetic anisotropy in ultrathin Fe β -GaAs(001) Schottky junctions. <i>Applied Physics Letters</i> , 2009 , 94, 032501	3.4	20
51	Electrical Spin Injection into Silicon Using MgO Tunnel Barrier. <i>Applied Physics Express</i> , 2009 , 2, 053003	2.4	71
50	Analysis of Degradation in Graphene-Based Spin Valves. <i>Applied Physics Express</i> , 2009 , 2, 123004	2.4	8
49	Voltage-Assisted Magnetization Switching in Ultrathin Fe ₈₀ Co ₂₀ Alloy Layers. <i>Applied Physics Express</i> , 2009 , 2, 063001	2.4	173
48	Inelastic tunneling spectra of MgO barrier magnetic tunneling junctions showing large magnon contribution. <i>Journal of Applied Physics</i> , 2009 , 105, 07C924	2.5	16
47	rf amplification in a three-terminal magnetic tunnel junction with a magnetic vortex structure. <i>Applied Physics Letters</i> , 2009 , 95, 022513	3.4	8
46	Robustness of Spin Polarization in Graphene-Based Spin Valves. <i>Advanced Functional Materials</i> , 2009 , 19, 3711-3716	15.6	66
45	Large voltage-induced magnetic anisotropy change in a few atomic layers of iron. <i>Nature Nanotechnology</i> , 2009 , 4, 158-61	28.7	961
44	Spin-transfer-torque-induced ferromagnetic resonance for Fe/Cr/Fe layers with an antiferromagnetic coupling field. <i>Applied Physics Letters</i> , 2009 , 94, 212505	3.4	12
43	Ink-Jet Printing of Carbon Nanotube Thin-Film Transistors on Flexible Plastic Substrates. <i>Applied Physics Express</i> , 2009 , 2, 025005	2.4	69
42	Spin transport in single- and multi-layer graphene 2009 ,		4
41	Logic circuits using solution-processed single-walled carbon nanotube transistors. <i>Applied Physics Letters</i> , 2008 , 92, 253507	3.4	20
40	Transfer characteristics in graphene field-effect transistors with Co contacts. <i>Applied Physics Letters</i> , 2008 , 93, 152104	3.4	44
39	Spin Injection into Graphene at Room Temperature. <i>Hyomen Kagaku</i> , 2008 , 29, 310-314		2
38	A nuclear magnetic resonance study on rubrene-cobalt nanocomposites. <i>Applied Physics Letters</i> , 2008 , 93, 053103	3.4	6
37	Spin Injection into a Graphene Thin Film at Room Temperature. <i>Japanese Journal of Applied Physics</i> , 2007 , 46, L605-L607	1.4	176
36	Spin-dependent transport in nanocomposites of Alq ₃ molecules and cobalt nanoparticles. <i>Applied Physics Letters</i> , 2007 , 91, 063123	3.4	25

35	Dependence on annealing temperatures of tunneling spectra in high-resistance CoFeB/MgO/CoFeB magnetic tunnel junctions. <i>Solid State Communications</i> , 2007 , 143, 574-578	1.6	23
34	Large magnetoresistance in rubrene-Co nano-composites. <i>Chemical Physics Letters</i> , 2007 , 448, 106-110	2.5	23
33	Differential conductance measurements of low-resistance CoFeB/MgO/CoFeB magnetic tunnel junctions. <i>Journal of Magnetism and Magnetic Materials</i> , 2007 , 310, e649-e651	2.8	7
32	Detection of current-driven magnetic domain wall deformation using anisotropic magnetoresistance effect. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2007 , 204, 3987-3996	1.6	16
31	Surface potential analyses of single-walled carbon nanotube/metal interfaces. <i>Journal of Applied Physics</i> , 2007 , 101, 014311	2.5	5
30	Structural study of single-walled carbon nanotube films doped by a solution method. <i>Journal of Nanoscience and Nanotechnology</i> , 2007 , 7, 3533-6	1.3	7
29	Tunnel magnetoresistance of C60/Co nanocomposites and spin-dependent transport in organic semiconductors. <i>Physical Review B</i> , 2007 , 76,	3.3	43
28	Strong Anisotropy in the Far-Infrared Absorption Spectra of Stretch-Aligned Single-Walled Carbon Nanotubes. <i>Advanced Materials</i> , 2006 , 18, 1166-1169	24	116
27	Optical Observation of Carrier Accumulation in Single-Walled Carbon Nanotube Transistors. <i>Japanese Journal of Applied Physics</i> , 2006 , 45, L1190-L1192	1.4	8
26	Gigantic Optical Stark Effect and Ultrafast Relaxation of Excitons in Single-Walled Carbon Nanotubes. <i>Journal of the Physical Society of Japan</i> , 2006 , 75, 043709	1.5	14
25	Solution-Processed Single-Walled Carbon Nanotube Transistors with High Mobility and Large On/Off Ratio. <i>Japanese Journal of Applied Physics</i> , 2006 , 45, 6524-6527	1.4	27
24	Band structure modulation by carrier doping in random-network carbon nanotube transistors. <i>Applied Physics Letters</i> , 2006 , 89, 013112	3.4	10
23	Improvements in the device characteristics of random-network single-walled carbon nanotube transistors by using high- κ gate insulators. <i>Applied Physics Letters</i> , 2006 , 89, 203505	3.4	12
22	Spin-Dependent Transport in C60-Co Nano-Composites. <i>Japanese Journal of Applied Physics</i> , 2006 , 45, L717-L719	1.4	30
21	Tunneling spectroscopy of magnetic tunnel junctions: Comparison between CoFeB/MgO/CoFeB and CoFeB/AlO _x /CoFeB. <i>Journal of Applied Physics</i> , 2006 , 99, 08T309	2.5	8
20	Ambipolar single electron transistors using side-contacted single-walled carbon nanotubes. <i>Chemical Physics Letters</i> , 2006 , 417, 540-544	2.5	12
19	Tunneling spectra of sputter-deposited CoFeB/MgO/CoFeB magnetic tunnel junctions showing giant tunneling magnetoresistance effect. <i>Solid State Communications</i> , 2005 , 136, 611-615	1.6	36
18	Control of Carrier Density by a Solution Method in Carbon-Nanotube Devices. <i>Advanced Materials</i> , 2005 , 17, 2430-2434	24	82

17	Electronic mean free path in as-produced and purified single-wall carbon nanotubes. <i>Applied Physics Letters</i> , 2005 , 86, 122106	3.4	8
16	Spectroscopic characterization of single-walled carbon nanotubes carrier-doped by encapsulation of TCNQ. <i>Physical Review B</i> , 2005 , 71,	3.3	32
15	Control of injected carriers in tetracyano-p-quinodimethane encapsulated carbon nanotube transistors. <i>Applied Physics Letters</i> , 2005 , 87, 093107	3.4	18
14	Solution-Processed Fabrication of Single-Walled Carbon Nanotube Field Effect Transistors. <i>Fullerenes Nanotubes and Carbon Nanostructures</i> , 2005 , 13, 485-489	1.8	2
13	Hydrogen adsorption and desorption in carbon nanotube systems and its mechanisms. <i>Applied Physics A: Materials Science and Processing</i> , 2004 , 78, 947-953	2.6	61
12	Single-walled carbon nanotube aggregates for solution-processed field effect transistors. <i>Chemical Physics Letters</i> , 2004 , 394, 110-113	2.5	67
11	Gas-solid interactions in the hydrogen/single-walled carbon nanotube system. <i>Chemical Physics Letters</i> , 2003 , 367, 633-636	2.5	96
10	Tomonaga-Luttinger-liquid behavior in single-walled carbon nanotube networks. <i>Solid State Communications</i> , 2003 , 127, 215-218	1.6	19
9	Stable and controlled amphoteric doping by encapsulation of organic molecules inside carbon nanotubes. <i>Nature Materials</i> , 2003 , 2, 683-8	27	472
8	Dense hydrogen adsorption on carbon subnanopores at 77 K. <i>Applied Physics Letters</i> , 2003 , 83, 3392-3394	3.4	44
7	Electronic structures of fullerenes and metallofullerenes studied by surface potential analysis. <i>Physical Review B</i> , 2003 , 68,	3.3	27
6	The characterization of plasma-polymerized C60 thin films. <i>Applied Physics A: Materials Science and Processing</i> , 2002 , 74, 613-616	2.6	9
5	Hydrogen storage in single-walled carbon nanotube bundles and peapods. <i>Chemical Physics Letters</i> , 2002 , 358, 213-218	2.5	90
4	Nuclear Magnetic Resonance of Molecular Hydrogen Trapped in Single-Walled Carbon Nanotube Bundles. <i>Journal of Nanoscience and Nanotechnology</i> , 2002 , 2, 463-465	1.3	11
3	Conduction mechanisms in single-walled carbon nanotubes. <i>Synthetic Metals</i> , 2002 , 128, 235-239	3.6	45
2	Electrolysis of Water Vapor Using a Fullerene-Based Electrolyte. <i>Electrochemical and Solid-State Letters</i> , 2002 , 5, A74		4
1	Work function of carbon nanotubes. <i>Carbon</i> , 2001 , 39, 1913-1917	10.4	402