Byong-Guk Park

List of Publications by Year
in descending order

65 papers	2,806 citations	331670 21 h-index	175258 52 g-index
72 all docs	72 docs citations	72 times ranked	3305 citing authors

#	Article	IF	Citations
1	Field-free switching of perpendicular magnetization through spinâ€“orbit torque in antiferromagnet/ferromagnet/oxide structures. Nature Nanotechnology, 2016, 11, 878-884.	31.5	438
2	Spin currents and spinâ€“orbit torques in ferromagnetic trilayers. Nature Materials, 2018, 17, 509-513.	27.5	337
3	Spin Hall Effect Transistor. Science, 2010, 330, 1801-1804.	12.6	288
4	Antiferromagnetic Domain Wall Motion Driven by Spin-Orbit Torques. Physical Review Letters, 2016, 117, 087203.	7.8	201
5	Integrated arrays of air-dielectric graphene transistors as transparent active-matrix pressure sensors for wide pressure ranges. Nature Communications, 2017, 8, 14950.	12.8	167
6	Large spin Hall magnetoresistance and its correlation to the spin-orbit torque in W/CoFeB/MgO structures. Scientific Reports, 2015, 5, 14668.	3.3	147
7	Currentâ€Induced Spinâ€“Orbit Torques for Spintronic Applications. Advanced Materials, 2020, 32, e1907148.	21.0	121
8	Complementary logic operation based on electric-field controlled spinâ€“orbit torques. Nature Electronics, 2018, 1, 398-403.	26.0	100
9	Orbital torque in magnetic bilayers. Nature Communications, 2021, 12, 6710.	12.8	69
10	Thermoelectric Signal Enhancement by Reconciling the Spin Seebeck and Anomalous Nernst Effects in Ferromagnet/Non-magnet Multilayers. Scientific Reports, 2015, 5, 10249.	3.3	65
11	Enhanced spin-orbit torque by engineering Pt resistivity in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Pt</mml:mi><mml:mo>/</mml:mo><mml:mi>Co</mml:mi mathvariant="normal">O</mml:mi><mml:mi>x</mml:mi></mml:msub></mml:mrow></mml:math> structures. Physical Review B, 2017, 96, .	3.2	65
12	Efficient conversion of orbital Hall current to spin current for spin-orbit torque switching. Communications Physics, 2021, 4, .	5.3	65
13	Interfacial perpendicular magnetic anisotropy in CoFeB/MgO structure with various underlayers. Journal of Applied Physics, 2014, 115, .	2.5	56
14	Enhanced spinâ€“orbit torque via interface engineering in Pt/CoFeB/MgO heterostructures. APL Materials, 2019, 7, .	5.1	48
15	Spin-Orbit Torque in a Perpendicularly Magnetized Ferrimagnetic <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mi>Tb</mml:mi></mml:math> - <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mi>Co</mml:mi></mml:math> Single Layer. Physical Review Applied, 2020, 13, .	3.8	43
16	Distinct handedness of spin wave across the compensation temperatures of ferrimagnets. Nature Materials, 2020, 19, 980-985.	27.5	42
17	Observation of transverse spin Nernst magnetoresistance induced by thermal spin current in ferromagnet/non-magnet bilayers. Nature Communications, 2017, 8, 1400.	12.8	36
18	Electric-field control of field-free spin-orbit torque switching via laterally modulated Rashba effect in Pt/Co/AlOx structures. Nature Communications, 2021, 12, 7111.	12.8	36

#	Article	IF	Citations
19	Ferromagnetic resonance spin pumping in CoFeB with highly resistive non-magnetic electrodes. Current Applied Physics, 2014, 14, 1344-1348.	2.4	28
20	Efficient spinâ€“orbit torque in magnetic trilayers using all three polarizations of a spin current. Nature Electronics, 2022, 5, 217-223.	26.0	28
21	Current-induced manipulation of exchange bias in IrMn/NiFe bilayer structures. Nature Communications, 2021, 12, 6420.	12.8	24
22	Electric field control of magnetic anisotropy in the easy cone state of Ta/Pt/CoFeB/MgO structures. Applied Physics Letters, 2016, 109, .	3.3	23
23	Material and Thickness Investigation in Ferromagnet/Ta/CoFeB Trilayers for Enhancement of Spinâ€“Orbit Torque and Fieldâ€Free Switching. Advanced Electronic Materials, 2019, 5, 1900598.	5.1	23
24	CuO-based sintering aids for low temperature sintering of BaFe₁₂O₁₉ ceramics. Journal of Asian Ceramic Societies, 2013, 1, 170-177.	2.3	21
25	Utilization of the Antiferromagnetic IrMn Electrode in Spin Thermoelectric Devices and Their Beneficial Hybrid for Thermopiles. Advanced Functional Materials, 2016, 26, 5507-5514.	14.9	21
26	Extreme anti-reflection enhanced magneto-optic Kerr effect microscopy. Nature Communications, 2020, 11, 5937.	12.8	21
27	Spin Hall magnetoresistance in heavy-metal/metallic-ferromagnet multilayer structures. Physical Review B, 2017, 96, .	3.2	20
28	Dependence of inverse-spin Hall effect and spin-rectified voltage on tantalum thickness in Ta/CoFeB bilayer structure. Applied Physics Letters, 2015, 106, 032409.	3.3	15
29	Enhanced tunnel magnetoresistance and electric-field effect in CoFeB/MgO/CoFeB perpendicular tunnel junctions with W underlayer. Current Applied Physics, 2017, 17, 962-965.	2.4	14
30	Inertia-driven resonant excitation of a magnetic skyrmion. Scientific Reports, 2017, 7, 13993.	3.3	14
31	Antiferromagnetic Oscillators Driven by Spin Currents with Arbitrary Spin Polarization Directions. Physical Review Applied, 2019, 11, .	3.8	14
32	Voltage-driven gigahertz frequency tuning of spin Hall nano-oscillators. Nature Communications, 2022, 13, .	12.8	14
33	Negative spin Hall magnetoresistance of normal metal/ferromagnet bilayers. Nature Communications, 2020, 11, 3619.	12.8	13
34	Anisotropic Spin-Orbit Torque through Crystal-Orientation Engineering in Epitaxial <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mi>Pt</mml:mi></mml:math>. Physical Review Applied, 2021, 15, .	3.8	13
35	Effects of proton and ion beam radiation on magnetic tunnel junctions. Thin Solid Films, 2019, 686, 137432.	1.8	12
36	Large planar Hall effect in perpendicularly magnetized W/CoFeB/MgO structures. Current Applied Physics, 2015, 15, 902-905.	2.4	11

#	Article	IF	Citations
37	Morphology-dependent spin Seebeck effect in yttrium iron garnet thin films prepared by metal-organic decomposition. Ceramics International, 2021, 47, 16770-16775.	4.8	11
38	Magnetic Anisotropy and Damping Constant of Ferrimagnetic GdCo Alloy near Compensation Point. Materials, 2021, 14, 2604.	2.9	10
39	Temperature dependence of intrinsic and extrinsic contributions to anisotropic magnetoresistance. Scientific Reports, 2021, 11, 20884.	3.3	10
40	Contributions of Co and Fe orbitals to perpendicular magnetic anisotropy of MgO/CoFeB bilayers with Ta, W, IrMn, and Ti underlayers. Applied Physics Express, 2017, 10, 073006.	2.4	9
41	Hardness of AISI type 410 martensitic steels after high temperature irradiation via nanoindentation. Metals and Materials International, 2017, 23, 1257-1265.	3.4	9
42	SOT-MRAM Digital PIM Architecture With Extended Parallelism in Matrix Multiplication. IEEE Transactions on Computers, 2022, 71, 2816-2828.	3.4	8
43	Plasmonâ€Enhanced Photodetection in Ferromagnet/Nonmagnet Spin Thermoelectric Structures. Advanced Functional Materials, 2018, 28, 1802936.	14.9	7
44	Spectrometer based real-time magnetic Faraday rotation spectroscopy of Bi-YIG thin films. Journal of Magnetism and Magnetic Materials, 2019, 482, 61-65.	2.3	7
45	Observation of Thermal Spinâ€“Orbit Torque in W/CoFeB/MgO Structures. Nano Letters, 2020, 20, 7803-7810.	9.1	7
46	Stochastic SOT device based SNN architecture for On-chip Unsupervised STDP Learning. IEEE Transactions on Computers, 2021, , 1-1.	3.4	7
47	Unidirectional spin Hall magnetoresistance in epitaxial Cr/Fe bilayer from electron-magnon scattering. Communications Physics, 2021, 4, .	5.3	7
48	Dissipative soliton dynamics in a discrete magnetic nano-dot chain. Applied Physics Letters, 2014, 104, 052416.	3.3	6
49	Magnetization switching through symmetry. Nature Nanotechnology, 2021, 16, 227-228.	31.5	6
50	Thickness dependence of spinâ€“orbit torques in Pt/Co structures on epitaxial substrates. APL Materials, 2022, 10, .	5.1	5
51	Magneto-optical kerr spectroscopy and interfacial perpendicular magnetic anisotropy of (Hf,Pt)/CoFeB/MgO thin films. Journal of the Korean Physical Society, 2015, 67, 1235-1239.	0.7	4
52	Fast current-induced motion of a transverse domain wall induced by interfacial Dzyaloshinskiiâ€“Moriya interaction. Current Applied Physics, 2015, 15, 1139-1142.	2.4	4
53	Control of electrical resistance and magnetoresistance by electric-field-driven oxygen ion migration in a single GdOx wire. NPG Asia Materials, 2020, 12, .	7.9	4
54	Amplification of Spin Thermoelectric Signals in Multilayer Spin Thermopiles. ACS Applied Electronic Materials, 2020, 2, 2906-2912.	4.3	4

#	Article	IF	Citations
55	Magnetic resonance absorption in isolated metal/insulator/metal nanodot arrays with transmission geometry. Current Applied Physics, 2015, 15, 844-849.	2.4	3
56	Novel Operation of a Multi-Bit SOT Memory Cell Addressed With a Single Write Line. IEEE Transactions on Magnetics, 2017, 53, 1-5.	2.1	3
57	Effect of Proton Irradiation on the Magnetic Properties of Antiferromagnet/ferromagnet Structures. Journal of Magnetics, 2016, 21, 159-163.	0.4	3
58	Largely enhanced coercivity of cobalt adjacent to straight-stripe mixed-phase bismuth ferrites. Physical Review B, 2018, 97, .	3.2	2
59	Precise Determination of the Temperature Gradients in Laser-irradiated Ultrathin Magnetic Layers for the Analysis of Thermal Spin Current. Scientific Reports, 2018, 8, 11337.	3.3	2
60	Reduced Spinâ€Orbit Torque Switching Current by Voltageâ€Controlled Easyâ€Cone States. Advanced Functional Materials, 2022, 32, 2107944.	14.9	2
61	Enhanced spinâ€“orbit torque in Ni81Fe19/Pt bilayer with NdNiO3 contact. Applied Physics Letters, 2021, 119, .	3.3	2
62	Underlayer dependence of electric field effect on magnetic anisotropy and its volatility in CoFeB/MgO structures. Current Applied Physics, 2019, 19, 50-54.	2.4	1
63	Unconventional Hall effect in metal/semiconductor hybrid spintronic devices. Applied Physics Letters, 2021, 119, 112401.	3.3	1
64	Relativistic Motion of Antiferromagnetic Domain Walls Driven by Spin-Orbit Torques. , 2016, , .		0
65	Anisotropic magnetoresistance of 3d Ferromagnetic metals observed by terahertz time domain spectroscopy. , 2019, , .		0