

Philipp Pirro

List of Publications by Year in descending order

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89
papers

4,972
citations

109137

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91712

69
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93
all docs

93
docs citations

93
times ranked

3739
citing authors

#	ARTICLE	IF	CITATIONS
1	Advances in Magnetics Roadmap on Spin-Wave Computing. IEEE Transactions on Magnetics, 2022, 58, 1-72.	1.2	179
2	Fast long-wavelength exchange spin waves in partially compensated Ga:YIG. Applied Physics Letters, 2022, 120, .	1.5	11
3	Higgs and Goldstone spin-wave modes in striped magnetic texture. Physical Review B, 2022, 105, .	1.1	7
4	Parametric generation of spin waves in nanoscaled magnonic conduits. Physical Review B, 2022, 105, .	1.1	9
5	Fully resonant magneto-elastic spin-wave excitation by surface acoustic waves under conservation of energy and linear momentum. Applied Physics Letters, 2022, 120, .	1.5	11
6	Long-range spin-wave propagation in transversely magnetized nano-scaled conduits. Applied Physics Letters, 2021, 118, .	1.5	14
7	Controlling the Nonlinear Relaxation of Quantized Propagating Magnons in Nanodevices. Physical Review Letters, 2021, 126, 097202.	2.9	13
8	Stimulated-Raman-adiabatic-passage mechanism in a magnonic environment. Applied Physics Letters, 2021, 118, .	1.5	6
9	Inverse-design magnonic devices. Nature Communications, 2021, 12, 2636.	5.8	53
10	Heisenberg Exchange and Dzyaloshinskiiâ€™Moriya Interaction in Ultrathin Pt(W)/CoFeB Single and Multilayers. IEEE Transactions on Magnetics, 2021, 57, 1-7.	1.2	9
11	Advances in coherent magnonics. Nature Reviews Materials, 2021, 6, 1114-1135.	23.3	170
12	Nonlinear Dynamics of Topological Ferromagnetic Textures for Frequency Multiplication. Physical Review Applied, 2021, 16, .	1.5	7
13	Robust formation of nanoscale magnetic skyrmions in easy-plane anisotropy thin film multilayers with low damping. Physical Review B, 2021, 104, .	1.1	8
14	Stabilization of a nonlinear magnonic bullet coexisting with a Bose-Einstein condensate in a rapidly cooled magnonic system driven by spin-orbit torque. Physical Review B, 2021, 104, .	1.1	6
15	Control of the Bose-Einstein Condensation of Magnons by the Spin Hall Effect. Physical Review Letters, 2021, 127, 237203.	2.9	11
16	A magnonic directional coupler for integrated magnonic half-adders. Nature Electronics, 2020, 3, 765-774.	18.1	139
17	Interference of co-propagating Rayleigh and Sezawa waves observed with micro-focused Brillouin light scattering spectroscopy. Applied Physics Letters, 2020, 117, 213501.	1.5	5
18	Controlling the propagation of dipole-exchange spin waves using local inhomogeneity of the anisotropy. Physical Review B, 2020, 102, .	1.1	5

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19	Slow-Wave-Based Nanomagnonic Diode. <i>Physical Review Applied</i> , 2020, 14, .	1.5	41
20	Opportunities and challenges for spintronics in the microelectronics industry. <i>Nature Electronics</i> , 2020, 3, 446-459.	13.1	471
21	Review on spintronics: Principles and device applications. <i>Journal of Magnetism and Magnetic Materials</i> , 2020, 509, 166711.	1.0	711
22	Optical elements for anisotropic spin-wave propagation. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	18
23	Propagating Magnetic Droplet Solitons as Moveable Nanoscale Spin-Wave Sources with Tunable Direction of Emission. <i>Physical Review Applied</i> , 2020, 13, .	1.5	7
24	Parametric Generation of Propagating Spin Waves in Ultrathin Yttrium Iron Garnet Waveguides. <i>Physica Status Solidi - Rapid Research Letters</i> , 2020, 14, 2000011.	1.2	7
25	Experimental Realization of a Passive Gigahertz Frequencyâ€Division Demultiplexer for Magnonic Logic Networks. <i>Physica Status Solidi - Rapid Research Letters</i> , 2020, 14, 1900695.	1.2	33
26	Chiral excitations of magnetic droplet solitons driven by their own inertia. <i>Physical Review B</i> , 2020, 101, .	1.1	9
27	Parametric Generation of Propagating Spin Waves in Ultrathin Yttrium Iron Garnet Waveguides. <i>Physica Status Solidi - Rapid Research Letters</i> , 2020, 14, 2070022.	1.2	4
28	Propagation of Spin-Wave Packets in Individual Nanosized Yttrium Iron Garnet Magnonic Conduits. <i>Nano Letters</i> , 2020, 20, 4220-4227.	4.5	75
29	Boseâ€Einstein condensation of quasiparticles by rapid cooling. <i>Nature Nanotechnology</i> , 2020, 15, 457-461.	15.6	52
30	A nonlinear magnonic nano-ring resonator. <i>Npj Computational Materials</i> , 2020, 6, .	3.5	29
31	Boseâ€Einstein condensation of nonequilibrium magnons in confined systems. <i>New Journal of Physics</i> , 2020, 22, 083080.	1.2	8
32	Temperature Dependence of Spin Pinning and Spin-Wave Dispersion in Nanoscopic Ferromagnetic Waveguides. <i>Ukrainian Journal of Physics</i> , 2020, 65, 1094.	0.1	1
33	Roadmap on STIRAP applications. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2019, 52, 202001.	0.6	108
34	Nanoscale spin-wave wake-up receiver. <i>Applied Physics Letters</i> , 2019, 115, .	1.5	9
35	Room and Cryogenic Temperature Behaviour of Magnetic Sensors Based on GaN/Si Single Saw Resonators. , 2019, , .		4
36	Spin Pinning and Spin-Wave Dispersion in Nanoscopic Ferromagnetic Waveguides. <i>Physical Review Letters</i> , 2019, 122, 247202.	2.9	93

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37	Topological Characterization of Classical Waves: The Topological Origin of Magnetostatic Surface Spin Waves. <i>Physical Review Letters</i> , 2019, 122, 217201.	2.9	25
38	Backscattering Immunity of Dipole-Exchange Magnetostatic Surface Spin Waves. <i>Physical Review Letters</i> , 2019, 122, 197201.	2.9	43
39	Determination of the spin Hall angle in single-crystalline Pt films from spin pumping experiments. <i>New Journal of Physics</i> , 2018, 20, 053002.	1.2	33
40	Realization of a Spin-Wave Switch Based on the Spin-Transfer-Torque Effect. <i>IEEE Magnetics Letters</i> , 2018, 9, 1-5.	0.6	3
41	Reconfigurable nanoscale spin-wave directional coupler. <i>Science Advances</i> , 2018, 4, e1701517.	4.7	150
42	Characterization of spin-transfer-torque effect induced magnetization dynamics driven by short current pulses. <i>Applied Physics Letters</i> , 2018, 112, .	1.5	3
43	Temporal evolution of the spin-wave intensity and phase in a local parametric amplifier. <i>Journal of Magnetism and Magnetic Materials</i> , 2018, 450, 60-64.	1.0	3
44	An analog magnon adder for all-magnonic neurons. <i>Journal of Applied Physics</i> , 2018, 124, .	1.1	49
45	Frequency-Division Multiplexing in Magnonic Logic Networks Based on Caustic-Like Spin-Wave Beams. <i>Physica Status Solidi - Rapid Research Letters</i> , 2018, 12, 1800409.	1.2	31
46	Optical determination of the exchange stiffness constant in an iron garnet. <i>Japanese Journal of Applied Physics</i> , 2018, 57, 070308.	0.8	5
47	Control of Spin-Wave Propagation using Magnetisation Gradients. <i>Scientific Reports</i> , 2018, 8, 11099.	1.6	51
48	Magnetization switching diagram of a perpendicular synthetic ferrimagnet CoFeB/Ta/CoFeB bilayer. <i>Journal of Magnetism and Magnetic Materials</i> , 2017, 433, 91-97.	1.0	28
49	Creation of unidirectional spin-wave emitters by utilizing interfacial Dzyaloshinskii-Moriya interaction. <i>Physical Review B</i> , 2017, 95, .	1.1	59
50	Perpendicularly magnetized CoFeB multilayers with tunable interlayer exchange for synthetic ferrimagnets. <i>Journal of Magnetism and Magnetic Materials</i> , 2017, 432, 260-265.	1.0	9
51	Temporal Evolution of Auto-Oscillations in an Yttrium-Iron-Garnet/Platinum Microdisk Driven by Pulsed Spin Hall Effect-Induced Spin-Transfer Torque. <i>IEEE Magnetics Letters</i> , 2017, 8, 1-4.	0.6	10
52	The 2017 Magnetism Roadmap. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 363001.	1.3	279
53	A switchable spin-wave signal splitter for magnonic networks. <i>Applied Physics Letters</i> , 2017, 111, .	1.5	32
54	Parallel pumping for magnon spintronics: Amplification and manipulation of magnon spin currents on the micron-scale. <i>Physics Reports</i> , 2017, 699, 1-34.	10.3	78

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55	Detection of Short-Waved Spin Waves in Individual Microscopic Spin-Wave Waveguides Using the Inverse Spin Hall Effect. Nano Letters, 2017, 17, 7234-7241.	4.5	21
56	Spin-electromagnetic waves in planar multiferroic multilayers. Journal of Applied Physics, 2017, 122, .	1.1	12
57	Inversion of the domain wall propagation in synthetic ferrimagnets. Applied Physics Letters, 2017, 111, .	1.5	9
58	Spin waves for interconnect applications. , 2017, , .		2
59	Experimental Investigation of the Temperature-Dependent Magnon Density and Its Influence on Studies of Spin-Transfer-Torque-Driven Systems. IEEE Magnetics Letters, 2017, 8, 1-5.	0.6	4
60	Phase-to-intensity conversion of magnonic spin currents and application to the design of a majority gate. Scientific Reports, 2016, 6, 38235.	1.6	29
61	Electrical characterization of all-optical helicity-dependent switching in ferromagnetic Hall crosses. Applied Physics Letters, 2016, 108, .	1.5	52
62	Spin-transfer torque based damping control of parametrically excited spin waves in a magnetic insulator. Applied Physics Letters, 2016, 108, .	1.5	36
63	Two types of all-optical magnetization switching mechanisms using femtosecond laser pulses. Physical Review B, 2016, 94, .	1.1	134
64	Domain size criterion for the observation of all-optical helicity-dependent switching in magnetic thin films. Physical Review B, 2016, 94, .	1.1	66
65	Spin-wave logic devices based on isotropic forward volume magnetostatic waves. Applied Physics Letters, 2015, 106, .	1.5	95
66	All-optical characterisation of the spintronic Heusler compound $\text{Co}_{2.0}\text{Mn}_{0.6}\text{Fe}_{0.4}\text{Si}$. Journal Physics D: Applied Physics, 2015, 48, 164015.	1.3	15
67	The role of the non-magnetic material in spin pumping and magnetization dynamics in NiFe and CoFeB multilayer systems. Journal of Applied Physics, 2015, 117, 163901.	1.1	65
68	Experimental observation of the interaction of propagating spin waves with Néel domain walls in a Landau domain structure. Applied Physics Letters, 2015, 106, .	1.5	22
69	Time- and power-dependent operation of a parametric spin-wave amplifier. Applied Physics Letters, 2014, 105, .	1.5	25
70	Localized parallel parametric generation of spin waves in a $\text{Ni}_{81}\text{Fe}_{19}$ waveguide by spatial variation of the pumping field. Applied Physics Letters, 2014, 104, 092418.	1.5	15
71	Non-Gilbert-damping Mechanism in a Ferromagnetic Heusler Compound Probed by Nonlinear Spin Dynamics. Physical Review Letters, 2014, 113, 227601.	2.9	19
72	Spin-wave excitation and propagation in microstructured waveguides of yttrium iron garnet/Pt bilayers. Applied Physics Letters, 2014, 104, .	1.5	147

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73	Design of a spin-wave majority gate employing mode selection. Applied Physics Letters, 2014, 105, .	1.5	143
74	Parallel parametric amplification of coherently excited propagating spin waves in a microscopic Ni ₈₁ Fe ₁₉ waveguide. Applied Physics Letters, 2014, 104, .	1.5	13
75	Role of bulk-magnon transport in the temporal evolution of the longitudinal spin-Seebeck effect. Physical Review B, 2014, 89, .	1.1	62
76	Localized parametric generation of spin waves in a longitudinally magnetized Ni ₈₁ Fe ₁₉ waveguide. Applied Physics Letters, 2013, 103, 142415.	1.5	16
77	Optimizing the spin-pumping induced inverse spin Hall voltage by crystal growth in Fe/Pt bilayers. Applied Physics Letters, 2013, 103, 162401.	1.5	33
78	Nonlinear Emission of Spin-Wave Caustics from an Edge Mode of a Microstructured $\text{Co}_2\text{Mn}_2\text{Mn}$ Physical Review Letters, 2013, 110, 067201.	2.9	68
79	Generation of propagating backward volume spin waves by phase-sensitive mode conversion in two-dimensional microstructures. Applied Physics Letters, 2013, 102, .	1.5	40
80	A micro-structured ion-implanted magnonic crystal. Applied Physics Letters, 2013, 102, .	1.5	75
81	Microscopic magnetic structuring of a spin-wave waveguide by ion implantation in a Ni ₈₁ Fe ₁₉ layer. Applied Physics Letters, 2013, 102, .	1.5	16
82	Low-damping spin-wave propagation in a micro-structured Co ₂ Mn _{0.6} Fe _{0.4} Si Heusler waveguide. Applied Physics Letters, 2012, 100, 112402.	1.5	80
83	Fabricating high-density magnetic storage elements by low-dose ion beam irradiation. Applied Physics Letters, 2012, 101, .	1.5	4
84	Mode conversion by symmetry breaking of propagating spin waves. Applied Physics Letters, 2011, 99, .	1.5	59
85	Interference of coherent spin waves in micron-sized ferromagnetic waveguides. Physica Status Solidi (B): Basic Research, 2011, 248, 2404-2408.	0.7	55
86	Mode selective parametric excitation of spin waves in a Ni ₈₁ Fe ₁₉ microstripe. Applied Physics Letters, 2011, 99, .	1.5	31
87	Optical detection of vortex spin-wave eigenmodes in microstructured ferromagnetic disks. Physical Review B, 2011, 84, .	1.1	28
88	All-optical detection of phase fronts of propagating spin waves in a Ni ₈₁ Fe ₁₉ microstripe. Applied Physics Letters, 2009, 95, 182508.	1.5	57
89	Spin-wave propagation in a microstructured magnonic crystal. Applied Physics Letters, 2009, 95, .	1.5	168