

Philipp Pirro

List of Publications by Year in descending order

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89
papers

4,972
citations

109137

35
h-index

91712

69
g-index

93
all docs

93
docs citations

93
times ranked

3739
citing authors

#	ARTICLE	IF	CITATIONS
1	Review on spintronics: Principles and device applications. Journal of Magnetism and Magnetic Materials, 2020, 509, 166711.	1.0	711
2	Opportunities and challenges for spintronics in the microelectronics industry. Nature Electronics, 2020, 3, 446-459.	13.1	471
3	The 2017 Magnetism Roadmap. Journal Physics D: Applied Physics, 2017, 50, 363001.	1.3	279
4	Advances in Magnetism Roadmap on Spin-Wave Computing. IEEE Transactions on Magnetics, 2022, 58, 1-72.	1.2	179
5	Advances in coherent magnonics. Nature Reviews Materials, 2021, 6, 1114-1135.	23.3	170
6	Spin-wave propagation in a microstructured magnonic crystal. Applied Physics Letters, 2009, 95, .	1.5	168
7	Reconfigurable nanoscale spin-wave directional coupler. Science Advances, 2018, 4, e1701517.	4.7	150
8	Spin-wave excitation and propagation in microstructured waveguides of yttrium iron garnet/Pt bilayers. Applied Physics Letters, 2014, 104, .	1.5	147
9	Design of a spin-wave majority gate employing mode selection. Applied Physics Letters, 2014, 105, .	1.5	143
10	A magnonic directional coupler for integrated magnonic half-adders. Nature Electronics, 2020, 3, 765-774.	13.1	139
11	Two types of all-optical magnetization switching mechanisms using femtosecond laser pulses. Physical Review B, 2016, 94, .	1.1	134
12	Roadmap on STIRAP applications. Journal of Physics B: Atomic, Molecular and Optical Physics, 2019, 52, 202001.	0.6	108
13	Spin-wave logic devices based on isotropic forward volume magnetostatic waves. Applied Physics Letters, 2015, 106, .	1.5	95
14	Spin Pinning and Spin-Wave Dispersion in Nanoscopic Ferromagnetic Waveguides. Physical Review Letters, 2019, 122, 247202.	2.9	93
15	Low-damping spin-wave propagation in a micro-structured $\text{Co}_{2.0}\text{Mn}_{0.6}\text{Fe}_{0.4}\text{Si}$ Heusler waveguide. Applied Physics Letters, 2012, 100, 112402.	1.5	80
16	Parallel pumping for magnon spintronics: Amplification and manipulation of magnon spin currents on the micron-scale. Physics Reports, 2017, 699, 1-34.	10.3	78
17	A micro-structured ion-implanted magnonic crystal. Applied Physics Letters, 2013, 102, .	1.5	75
18	Propagation of Spin-Wave Packets in Individual Nanosized Yttrium Iron Garnet Magnonic Conduits. Nano Letters, 2020, 20, 4220-4227.	4.5	75

#	ARTICLE	IF	CITATIONS
37	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
38	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
39	A switchable spin-wave signal splitter for magnonic networks. <i>Applied Physics Letters</i> , 2017, 111, .	1.5	32
40	Mode selective parametric excitation of spin waves in a Ni ₈₁ Fe ₁₉ microstripe. <i>Applied Physics Letters</i> , 2011, 99, .	1.5	31
41	Frequencyâ€Division Multiplexing in Magnonic Logic Networks Based on Causticâ€Like Spinâ€Wave Beams. <i>Physica Status Solidi - Rapid Research Letters</i> , 2018, 12, 1800409.	1.2	31
42	Phase-to-intensity conversion of magnonic spin currents and application to the design of a majority gate. <i>Scientific Reports</i> , 2016, 6, 38235.	1.6	29
43	A nonlinear magnonic nano-ring resonator. <i>Npj Computational Materials</i> , 2020, 6, .	3.5	29
44	Optical detection of vortex spin-wave eigenmodes in microstructured ferromagnetic disks. <i>Physical Review B</i> , 2011, 84, .	1.1	28
45	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
46	Time- and power-dependent operation of a parametric spin-wave amplifier. <i>Applied Physics Letters</i> , 2014, 105, .	1.5	25
47	Topological Characterization of Classical Waves: The Topological Origin of Magnetostatic Surface Spin Waves. <i>Physical Review Letters</i> , 2019, 122, 217201.	2.9	25
48	Experimental observation of the interaction of propagating spin waves with Néel domain walls in a Landau domain structure. <i>Applied Physics Letters</i> , 2015, 106, .	1.5	22
49	Detection of Short-Waved Spin Waves in Individual Microscopic Spin-Wave Waveguides Using the Inverse Spin Hall Effect. <i>Nano Letters</i> , 2017, 17, 7234-7241.	4.5	21
50	Non-Gilbert-damping Mechanism in a Ferromagnetic Heusler Compound Probed by Nonlinear Spin Dynamics. <i>Physical Review Letters</i> , 2014, 113, 227601.	2.9	19
51	Optical elements for anisotropic spin-wave propagation. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	18
52	Localized parametric generation of spin waves in a longitudinally magnetized Ni ₈₁ Fe ₁₉ waveguide. <i>Applied Physics Letters</i> , 2013, 103, 142415.	1.5	16
53	Microscopic magnetic structuring of a spin-wave waveguide by ion implantation in a Ni ₈₁ Fe ₁₉ layer. <i>Applied Physics Letters</i> , 2013, 102, .	1.5	16
54	Localized parallel parametric generation of spin waves in a Ni ₈₁ Fe ₁₉ waveguide by spatial variation of the pumping field. <i>Applied Physics Letters</i> , 2014, 104, 092418.	1.5	15

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55	All-optical characterisation of the spintronic Heusler compound $\text{Co}_{2.0}\text{Mn}_{0.6}\text{Fe}_{0.4}\text{Si}$. <i>Journal Physics D: Applied Physics</i> , 2015, 48, 164015.	1.3	15
56	Long-range spin-wave propagation in transversely magnetized nano-scaled conduits. <i>Applied Physics Letters</i> , 2021, 118, .	1.5	14
57	Parallel parametric amplification of coherently excited propagating spin waves in a microscopic $\text{Ni}_{81}\text{Fe}_{19}$ waveguide. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	13
58	Controlling the Nonlinear Relaxation of Quantized Propagating Magnons in Nanodevices. <i>Physical Review Letters</i> , 2021, 126, 097202.	2.9	13
59	Spin-electromagnetic waves in planar multiferroic multilayers. <i>Journal of Applied Physics</i> , 2017, 122, .	1.1	12
60	Fast long-wavelength exchange spin waves in partially compensated Ga:YIG. <i>Applied Physics Letters</i> , 2022, 120, .	1.5	11
61	Control of the Bose-Einstein Condensation of Magnons by the Spin Hall Effect. <i>Physical Review Letters</i> , 2021, 127, 237203.	2.9	11
62	Fully resonant magneto-elastic spin-wave excitation by surface acoustic waves under conservation of energy and linear momentum. <i>Applied Physics Letters</i> , 2022, 120, .	1.5	11
63	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
64	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
65	Inversion of the domain wall propagation in synthetic ferrimagnets. <i>Applied Physics Letters</i> , 2017, 111, .	1.5	9
66	Nanoscale spin-wave wake-up receiver. <i>Applied Physics Letters</i> , 2019, 115, .	1.5	9
67	Chiral excitations of magnetic droplet solitons driven by their own inertia. <i>Physical Review B</i> , 2020, 101, .	1.1	9
68	Heisenberg Exchange and Dzyaloshinskiiâ€“Moriya Interaction in Ultrathin Pt(W)/CoFeB Single and Multilayers. <i>IEEE Transactions on Magnetics</i> , 2021, 57, 1-7.	1.2	9
69	Parametric generation of spin waves in nanoscaled magnonic conduits. <i>Physical Review B</i> , 2022, 105, .	1.1	9
70	Robust formation of nanoscale magnetic skyrmions in easy-plane anisotropy thin film multilayers with low damping. <i>Physical Review B</i> , 2021, 104, .	1.1	8
71	Boseâ€“Einstein condensation of nonequilibrium magnons in confined systems. <i>New Journal of Physics</i> , 2020, 22, 083080.	1.2	8
72	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

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73	Parametric Generation of Propagating Spin Waves in Ultrathin Yttrium Iron Garnet Waveguides. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2000011.	1.2	7
74	Nonlinear Dynamics of Topological Ferromagnetic Textures for Frequency Multiplication. Physical Review Applied, 2021, 16, .	1.5	7
75	Higgs and Goldstone spin-wave modes in striped magnetic texture. Physical Review B, 2022, 105, .	1.1	7
76	Stimulated-Raman-adiabatic-passage mechanism in a magnonic environment. Applied Physics Letters, 2021, 118, .	1.5	6
77	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
78	Optical determination of the exchange stiffness constant in an iron garnet. Japanese Journal of Applied Physics, 2018, 57, 070308.	0.8	5
79	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
80	Controlling the propagation of dipole-exchange spin waves using local inhomogeneity of the anisotropy. Physical Review B, 2020, 102, .	1.1	5
81	Fabricating high-density magnetic storage elements by low-dose ion beam irradiation. Applied Physics Letters, 2012, 101, .	1.5	4
82	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
83	Room and Cryogenic Temperature Behaviour of Magnetic Sensors Based on GaN/Si Single Saw Resonators. , 2019, , .		4
84	Parametric Generation of Propagating Spin Waves in Ultrathin Yttrium Iron Garnet Waveguides. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2070022.	1.2	4
85	Realization of a Spin-Wave Switch Based on the Spin-Transfer-Torque Effect. IEEE Magnetics Letters, 2018, 9, 1-5.	0.6	3
86	Characterization of spin-transfer-torque effect induced magnetization dynamics driven by short current pulses. Applied Physics Letters, 2018, 112, .	1.5	3
87	Temporal evolution of the spin-wave intensity and phase in a local parametric amplifier. Journal of Magnetism and Magnetic Materials, 2018, 450, 60-64.	1.0	3
88	Spin waves for interconnect applications. , 2017, , .		2
89	Temperature Dependence of Spin Pinning and Spin-Wave Dispersion in Nanoscopic Ferromagnetic Waveguides. Ukrainian Journal of Physics, 2020, 65, 1094.	0.1	1