Sergei Urazhdin

List of Publications by Year
in descending order

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74 papers	4,062 citations	147801 31 h-index	114465 63 g-index
75 all docs	75 docs citations	75 times ranked	2885 citing authors

#	Article	IF	Citations
1	Magnetic nano-oscillator driven by pure spinÂcurrent. Nature Materials, 2012, 11, 1028-1031.	27.5	608
2	The 2021 Magnonics Roadmap. Journal of Physics Condensed Matter, 2021, 33, 413001.	1.8	287
3	Current-Driven Magnetic Excitations in Permalloy-Based Multilayer Nanopillars. Physical Review Letters, 2003, 91, 146803.	7.8	279
4	Direct observation and mapping of spin waves emitted by spin-torque nano-oscillators. Nature Materials, 2010, 9, 984-988.	27.5	225
5	Spectral Characteristics of the Microwave Emission by the Spin Hall Nano-Oscillator. Physical Review Letters, 2013, 110, 147601.	7.8	183
6	Nanoconstriction-based spin-Hall nano-oscillator. Applied Physics Letters, 2014, 105, .	3.3	165
7	Control of Magnetic Fluctuations by Spin Current. Physical Review Letters, 2011, 107, 107204.	7.8	145
8	Nanomagnonic devices based on the spin-transfer torque. Nature Nanotechnology, 2014, 9, 509-513.	31.5	130
9	Fractional Synchronization of Spin-Torque Nano-Oscillators. Physical Review Letters, 2010, 105, 104101.	7.8	124
10	Synchronization of spin Hall nano-oscillators to external microwave signals. Nature Communications, 2014, 5, 3179.	12.8	116
11	Magnetization oscillations and waves driven by pure spin currents. Physics Reports, 2017, 673, 1-31.	25.6	113
12	Effect of Polarized Current on the Magnetic State of an Antiferromagnet. Physical Review Letters, 2007, 99, 046602.	7.8	108
13	Dynamical Skyrmion State in a Spin Current Nano-Oscillator with Perpendicular Magnetic Anisotropy. Physical Review Letters, 2015, 114, 137201.	7.8	88
14	Spin-current nano-oscillator based on nonlocal spin injection. Scientific Reports, 2015, 5, 8578.	3.3	82
15	Excitation of coherent propagating spin waves by pure spin currents. Nature Communications, 2016, 7, 10446.	12.8	81
16	Controlled Normal and Inverse Current-Induced Magnetization Switching and Magnetoresistance in Magnetic Nanopillars. Physical Review Letters, 2004, 93, 157203.	7.8	72
17	Switching current versus magnetoresistance in magnetic multilayer nanopillars. Applied Physics Letters, 2004, 84, 1516-1518.	3.3	62
18	Control of spin-wave phase and wavelength by electric current on the microscopic scale. Applied Physics Letters, 2009, 95, .	3.3	59

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19	Control of current-induced spin-orbit effects in a ferromagnetic heterostructure by electric field. Physical Review B, 2014, 89, .	3.2	59
20	Parametric Excitation of a Magnetic Nanocontact by a Microwave Field. Physical Review Letters, 2010, 105, 237204.	7.8	57
21	Excitation and Amplification of Spin Waves by Spinâ€“Orbit Torque. Advanced Materials, 2018, 30, e1802837.	21.0	55
22	Direct observation and imaging of a spin-wave soliton with p-like symmetry. Nature Communications, 2015, 6, 8889.	12.8	52
23	Wide-range control of ferromagnetic resonance by spin Hall effect. Applied Physics Letters, 2011, 99, .	3.3	51
24	Molecular beam epitaxy and characterization of thin Bi2Se3 films on Al2O3 (110). Applied Physics Letters, 2011, 99, .	3.3	48
25	Temperature-dependent proximity magnetism in Pt. Applied Physics Letters, 2013, 102, .	3.3	42
26	Controlled nonlinear magnetic damping in spin-Hall nano-devices. Nature Communications, 2019, 10, 5211.	12.8	42
27	Spinâ€“orbit-torque magnonics. Journal of Applied Physics, 2020, 127, .	2.5	41
28	Hysteretic synchronization of nonlinear spin-torque oscillators. Physical Review B, 2010, 82, .	3.2	38
29	Optimization of Pt-based spin-Hall-effect spintronic devices. Applied Physics Letters, 2013, 102, .	3.3	38
30	Spin Hall controlled magnonic microwaveguides. Applied Physics Letters, 2014, 104, .	3.3	38
31	Spin-torque nano-emitters for magnonic applications. Applied Physics Letters, 2012, 100, 162406.	3.3	33
32	Parametric excitation of magnetization oscillations controlled by pure spin current. Physical Review B, 2012, 86, .	3.2	31
33	Chemical potential of quasi-equilibrium magnon gas driven by pure spin current. Nature Communications, 2017, 8, 1579.	12.8	31
34	Evidence for Dyakonov-Perel-like Spin Relaxation in Pt. Physical Review Letters, 2018, 120, 067204.	7.8	31
35	Spin Transfer due to Quantum Magnetization Fluctuations. Physical Review Letters, 2017, 119, 257201.	7.8	28
36	Current-driven magnetization dynamics in magnetic multilayers. Physical Review B, 2004, 69, .	3.2	25

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37	Control of spin-wave emission from spin-torque nano-oscillators by microwave pumping. Physical Review B, 2011, 83, .	3.2	24
38	Ultrathin Wetting Layer-Free Plasmonic Gold Films. ACS Photonics, 2019, 6, 2600-2606.	6.6	23
39	Nonlinear scattering in nanoscale magnetic elements: Overpopulation of the lowest-frequency magnon state. Physical Review B, 2011, 83, .	3.2	22
40	Magnetic droplet solitons generated by pure spin currents. Physical Review B, 2017, 96, .	3.2	22
41	Resonant frequency multiplication in microscopic magnetic dots. Applied Physics Letters, 2011, 99, .	3.3	21
42	Nanoconstriction spin-Hall oscillator with perpendicular magnetic anisotropy. Applied Physics Letters, 2017, 111, .	3.3	20
43	Field-effect diode based on electron-induced Mott transition in NdNiO₃. Applied Physics Letters, 2012, 101, 143111.	3.3	18
44	Controlling the Spectral Characteristics of a Spin-Current Auto-Oscillator with an Electric Field. Physical Review Applied, 2017, 8, .	3.8	17
45	Dynamical Mode Coupling and Coherence in a Spin Hall Nano-Oscillator with Perpendicular Magnetic Anisotropy. Physical Review Applied, 2019, 11, .	3.8	17
46	Route toward high-speed nano-magnonics provided by pure spin currents. Applied Physics Letters, 2016, 109, .	3.3	16
47	Relation between unidirectional spin Hall magnetoresistance and spin current-driven magnon generation. Applied Physics Letters, 2018, 113, .	3.3	16
48	Magnetic Droplet Mode in a Vertical Nanocontact-Based Spin Hall Nano-Oscillator at Oblique Fields. Physical Review Applied, 2020, 13, .	3.8	16
49	Nanoscale Transient Magnetization Gratings Created and Probed by Femtosecond Extreme Ultraviolet Pulses. Nano Letters, 2021, 21, 2905-2911.	9.1	16
50	Microwave generation by spin Hall nanooscillators with nanopatterned spin injector. Applied Physics Letters, 2014, 105, 112404.	3.3	15
51	Dynamical mode coexistence and chaos in a nanogap spin Hall nano-oscillator. Physical Review B, 2019, 100, .	3.2	13
52	Relationship between granularity of an antiferromagnet and exchange bias: Measurements of CoO doped with Pt. Physical Review B, 2008, 78, .	3.2	11
53	Mutual synchronization of nano-oscillators driven by pure spin current. Applied Physics Letters, 2016, 109, .	3.3	11
54	Nonclassical Spin Transfer Effects in an Antiferromagnet. Physical Review Letters, 2021, 126, 037203.	7.8	9

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55	Spectral linewidth of spin-current nano-oscillators driven by nonlocal spin injection. Applied Physics Letters, 2015, 107, .	3.3	8
56	Effects of Spin-Orbit Torque on the Ferromagnetic and Exchange Spin-Wave Modes in Ferrimagnetic <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mi>Co</mml:mi></mml:math> - <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mi>Gd</mml:mi></mml:math> Alloy. Physical Review Applied, 2020, 14, .	3.8	8
57	Energy and momentum conservation in spin transfer. Physical Review B, 2020, 102, .	3.2	8
58	Cooperative multiscale aging in a ferromagnet/antiferromagnet bilayer. Physical Review B, 2015, 92, .	3.2	7
59	Thickness-dependent cooperative aging in polycrystalline films of antiferromagnet CoO. Physical Review B, 2016, 94, .	3.2	6
60	Ideal memristor based on viscous magnetization dynamics driven by spin torque. Applied Physics Letters, 2020, 117, .	3.3	6
61	Brillouin light scattering of spin waves inaccessible with free-space light. Physical Review Research, 2020, 2, .	3.6	6
62	Geometric control over the motion of magnetic domain walls. Physical Review B, 2008, 77, .	3.2	5
63	Fast chirality reversal of the magnetic vortex by electric current. Applied Physics Letters, 2014, 105, 222405.	3.3	5
64	Controllable excitation of quasi-linear and bullet modes in a spin-Hall nano-oscillator. Applied Physics Letters, 2019, 114, .	3.3	5
65	Measurements of out-of-plane dynamics induced in magnetic nanopillars by spin transfer. Physical Review B, 2009, 80, .	3.2	4
66	Spin glass transition in a thin-film NiO/permalloy bilayer. Physical Review B, 2018, 97, .	3.2	4
67	Magnetic freezing transition in a CoO/Permalloy bilayer revealed by transverse ac susceptibility. Journal of Magnetism and Magnetic Materials, 2019, 476, 75-85.	2.3	4
68	Observation of Anomalous Non-Ohmic Transport in Current-Driven Nanostructures. Physical Review X, 2020, 10, .	8.9	4
69	Exchange bias without directional anisotropy in permalloy/CoO bilayers. Physical Review B, 2021, 104, .	3.2	3
70	Experimental demonstration and analysis of random field effects in ferromagnet/antiferromagnet bilayers. Physical Review B, 2020, 101, .	3.2	2
71	Transport and relaxation of current-generated nonequilibrium phonons from nonlocal electronic measurements. Physical Review B, 2022, 105, .	3.2	2
72	Measurement of the Hall effect at nanoscale with three probes. Review of Scientific Instruments, 2018, 89, 083904.	1.3	1

#	Article	IF	Citations
73	Effects of the dynamical magnetization state on spin transfer. Physical Review B, 2021, 103, .	3.2	0
74	Memristive functionality based on viscous magnetization dynamics. Journal of Applied Physics, 2022, 131, .	2.5	0