

# 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	Transport and relaxation of current-generated nonequilibrium phonons from nonlocal electronic measurements. <i>Physical Review B</i> , 2022, 105, .	3.2	2
2	Memristive functionality based on viscous magnetization dynamics. <i>Journal of Applied Physics</i> , 2022, 131, .	2.5	0
3	Nonclassical Spin Transfer Effects in an Antiferromagnet. <i>Physical Review Letters</i> , 2021, 126, 037203.	7.8	9
4	Nanoscale Transient Magnetization Gratings Created and Probed by Femtosecond Extreme Ultraviolet Pulses. <i>Nano Letters</i> , 2021, 21, 2905-2911.	9.1	16
5	Effects of the dynamical magnetization state on spin transfer. <i>Physical Review B</i> , 2021, 103, .	3.2	0
6	The 2021 Magnonics Roadmap. <i>Journal of Physics Condensed Matter</i> , 2021, 33, 413001.	1.8	287
7	Exchange bias without directional anisotropy in permalloy/CoO bilayers. <i>Physical Review B</i> , 2021, 104, .	3.2	3
8	Effects of Spin-Orbit Torque on the Ferromagnetic and Exchange Spin-Wave Modes in Ferrimagnetic $\text{Co} - \text{Gd}$ Alloy. <i>Physical Review Applied</i> , 2020, 14, .	3.8	8
9	Energy and momentum conservation in spin transfer. <i>Physical Review B</i> , 2020, 102, .	3.2	8
10	Ideal memristor based on viscous magnetization dynamics driven by spin torque. <i>Applied Physics Letters</i> , 2020, 117, .	3.3	6
11	Spin-orbit-torque magnonics. <i>Journal of Applied Physics</i> , 2020, 127, .	2.5	41
12	Magnetic Droplet Mode in a Vertical Nanocontact-Based Spin Hall Nano-Oscillator at Oblique Fields. <i>Physical Review Applied</i> , 2020, 13, .	3.8	16
13	Experimental demonstration and analysis of random field effects in ferromagnet/antiferromagnet bilayers. <i>Physical Review B</i> , 2020, 101, .	3.2	2
14	Observation of Anomalous Non-Ohmic Transport in Current-Driven Nanostructures. <i>Physical Review X</i> , 2020, 10, .	8.9	4
15	Brillouin light scattering of spin waves inaccessible with free-space light. <i>Physical Review Research</i> , 2020, 2, .	3.6	6
16	Dynamical Mode Coupling and Coherence in a Spin Hall Nano-Oscillator with Perpendicular Magnetic Anisotropy. <i>Physical Review Applied</i> , 2019, 11, .	3.8	17
17	Dynamical mode coexistence and chaos in a nanogap spin Hall nano-oscillator. <i>Physical Review B</i> , 2019, 100, .	3.2	13
18	Ultrathin Wetting Layer-Free Plasmonic Gold Films. <i>ACS Photonics</i> , 2019, 6, 2600-2606.	6.6	23

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19	Controllable excitation of quasi-linear and bullet modes in a spin-Hall nano-oscillator. Applied Physics Letters, 2019, 114, .	3.3	5
20	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
21	Controlled nonlinear magnetic damping in spin-Hall nano-devices. Nature Communications, 2019, 10, 5211.	12.8	42
22	Spin glass transition in a thin-film NiO/permalloy bilayer. Physical Review B, 2018, 97, .	3.2	4
23	Evidence for Dyakonov-Perel-like Spin Relaxation in Pt. Physical Review Letters, 2018, 120, 067204.	7.8	31
24	Excitation and Amplification of Spin Waves by Spin-Orbit Torque. Advanced Materials, 2018, 30, e1802837.	21.0	55
25	Measurement of the Hall effect at nanoscale with three probes. Review of Scientific Instruments, 2018, 89, 083904.	1.3	1
26	Relation between unidirectional spin Hall magnetoresistance and spin current-driven magnon generation. Applied Physics Letters, 2018, 113, .	3.3	16
27	Magnetization oscillations and waves driven by pure spin currents. Physics Reports, 2017, 673, 1-31.	25.6	113
28	Nanoconstriction spin-Hall oscillator with perpendicular magnetic anisotropy. Applied Physics Letters, 2017, 111, .	3.3	20
29	Controlling the Spectral Characteristics of a Spin-Current Auto-Oscillator with an Electric Field. Physical Review Applied, 2017, 8, .	3.8	17
30	Magnetic droplet solitons generated by pure spin currents. Physical Review B, 2017, 96, .	3.2	22
31	Chemical potential of quasi-equilibrium magnon gas driven by pure spin current. Nature Communications, 2017, 8, 1579.	12.8	31
32	Spin Transfer due to Quantum Magnetization Fluctuations. Physical Review Letters, 2017, 119, 257201.	7.8	28
33	Route toward high-speed nano-magnonics provided by pure spin currents. Applied Physics Letters, 2016, 109, .	3.3	16
34	Mutual synchronization of nano-oscillators driven by pure spin current. Applied Physics Letters, 2016, 109, .	3.3	11
35	Thickness-dependent cooperative aging in polycrystalline films of antiferromagnet CoO. Physical Review B, 2016, 94, .	3.2	6
36	Excitation of coherent propagating spin waves by pure spin currents. Nature Communications, 2016, 7, 10446.	12.8	81

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37	Cooperative multiscale aging in a ferromagnet/antiferromagnet bilayer. <i>Physical Review B</i> , 2015, 92, .	3.2	7
38	Spectral linewidth of spin-current nano-oscillators driven by nonlocal spin injection. <i>Applied Physics Letters</i> , 2015, 107, .	3.3	8
39	Direct observation and imaging of a spin-wave soliton with p-like symmetry. <i>Nature Communications</i> , 2015, 6, 8889.	12.8	52
40	Spin-current nano-oscillator based on nonlocal spin injection. <i>Scientific Reports</i> , 2015, 5, 8578.	3.3	82
41	Dynamical Skyrmion State in a Spin Current Nano-Oscillator with Perpendicular Magnetic Anisotropy. <i>Physical Review Letters</i> , 2015, 114, 137201.	7.8	88
42	Fast chirality reversal of the magnetic vortex by electric current. <i>Applied Physics Letters</i> , 2014, 105, 222405.	3.3	5
43	Spin Hall controlled magnonic microwaveguides. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	38
44	Nanoconstriction-based spin-Hall nano-oscillator. <i>Applied Physics Letters</i> , 2014, 105, .	3.3	165
45	Microwave generation by spin Hall nanooscillators with nanopatterned spin injector. <i>Applied Physics Letters</i> , 2014, 105, 112404.	3.3	15
46	Nanomagnonic devices based on the spin-transfer torque. <i>Nature Nanotechnology</i> , 2014, 9, 509-513.	31.5	130
47	Synchronization of spin Hall nano-oscillators to external microwave signals. <i>Nature Communications</i> , 2014, 5, 3179.	12.8	116
48	Control of current-induced spin-orbit effects in a ferromagnetic heterostructure by electric field. <i>Physical Review B</i> , 2014, 89, .	3.2	59
49	Spectral Characteristics of the Microwave Emission by the Spin Hall Nano-Oscillator. <i>Physical Review Letters</i> , 2013, 110, 147601.	7.8	183
50	Optimization of Pt-based spin-Hall-effect spintronic devices. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	38
51	Temperature-dependent proximity magnetism in Pt. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	42
52	Parametric excitation of magnetization oscillations controlled by pure spin current. <i>Physical Review B</i> , 2012, 86, .	3.2	31
53	Field-effect diode based on electron-induced Mott transition in NdNiO <sub>3</sub> . <i>Applied Physics Letters</i> , 2012, 101, 143111.	3.3	18
54	Magnetic nano-oscillator driven by pure spin current. <i>Nature Materials</i> , 2012, 11, 1028-1031.	27.5	608

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55	Spin-torque nano-emitters for magnonic applications. Applied Physics Letters, 2012, 100, 162406.	3.3	33
56	Control of Magnetic Fluctuations by Spin Current. Physical Review Letters, 2011, 107, 107204.	7.8	145
57	Resonant frequency multiplication in microscopic magnetic dots. Applied Physics Letters, 2011, 99, .	3.3	21
58	Molecular beam epitaxy and characterization of thin Bi <sub>2</sub> Se <sub>3</sub> films on Al <sub>2</sub> O <sub>3</sub> (110). Applied Physics Letters, 2011, 99, .	3.3	48
59	Control of spin-wave emission from spin-torque nano-oscillators by microwave pumping. Physical Review B, 2011, 83, .	3.2	24
60	Wide-range control of ferromagnetic resonance by spin Hall effect. Applied Physics Letters, 2011, 99, .	3.3	51
61	Nonlinear scattering in nanoscale magnetic elements: Overpopulation of the lowest-frequency magnon state. Physical Review B, 2011, 83, .	3.2	22
62	Direct observation and mapping of spin waves emitted by spin-torque nano-oscillators. Nature Materials, 2010, 9, 984-988.	27.5	225
63	Parametric Excitation of a Magnetic Nanocontact by a Microwave Field. Physical Review Letters, 2010, 105, 237204.	7.8	57
64	Fractional Synchronization of Spin-Torque Nano-Oscillators. Physical Review Letters, 2010, 105, 104101.	7.8	124
65	Hysteretic synchronization of nonlinear spin-torque oscillators. Physical Review B, 2010, 82, .	3.2	38
66	Control of spin-wave phase and wavelength by electric current on the microscopic scale. Applied Physics Letters, 2009, 95, .	3.3	59
67	Measurements of out-of-plane dynamics induced in magnetic nanopillars by spin transfer. Physical Review B, 2009, 80, .	3.2	4
68	Relationship between granularity of an antiferromagnet and exchange bias: Measurements of CoO doped with Pt. Physical Review B, 2008, 78, .	3.2	11
69	Geometric control over the motion of magnetic domain walls. Physical Review B, 2008, 77, .	3.2	5
70	Effect of Polarized Current on the Magnetic State of an Antiferromagnet. Physical Review Letters, 2007, 99, 046602.	7.8	108
71	Controlled Normal and Inverse Current-Induced Magnetization Switching and Magnetoresistance in Magnetic Nanopillars. Physical Review Letters, 2004, 93, 157203.	7.8	72
72	Current-driven magnetization dynamics in magnetic multilayers. Physical Review B, 2004, 69, .	3.2	25

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73	Switching current versus magnetoresistance in magnetic multilayer nanopillars. Applied Physics Letters, 2004, 84, 1516-1518.	3.3	62
74	Current-Driven Magnetic Excitations in Permalloy-Based Multilayer Nanopillars. Physical Review Letters, 2003, 91, 146803.	7.8	279