

Gregory Malinowski

List of Publications by Year in descending order

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93
papers

4,450
citations

172207

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106150

65
g-index

94
all docs

94
docs citations

94
times ranked

3521
citing authors

#	ARTICLE	IF	CITATIONS
1	Explaining the paradoxical diversity of ultrafast laser-induced demagnetization. Nature Materials, 2010, 9, 259-265.	13.3	729
2	All-optical control of ferromagnetic thin films and nanostructures. Science, 2014, 345, 1337-1340.	6.0	524
3	Engineered materials for all-optical helicity-dependent magnetic switching. Nature Materials, 2014, 13, 286-292.	13.3	507
4	Control of speed and efficiency of ultrafast demagnetization by direct transfer of spin angular momentum. Nature Physics, 2008, 4, 855-858.	6.5	282
5	Current-induced domain wall motion in nanoscale ferromagnetic elements. Materials Science and Engineering Reports, 2011, 72, 159-187.	14.8	164
6	Two types of all-optical magnetization switching mechanisms using femtosecond laser pulses. Physical Review B, 2016, 94, .	1.1	134
7	Nonadiabatic Spin Transfer Torque in High Anisotropy Magnetic Nanowires with Narrow Domain Walls. Physical Review Letters, 2008, 101, 216601.	2.9	128
8	Creation of Magnetic Skyrmion Bubble Lattices by Ultrafast Laser in Ultrathin Films. Nano Letters, 2018, 18, 7362-7371.	4.5	103
9	Hot-Electron-Induced Ultrafast Demagnetization in CoPt Multilayers. Physical Review Letters, 2016, 117, 147203.	2.9	101
10	Magnetization dynamics and Gilbert damping in ultrathin $\text{Co}_{48}\text{Fe}_{32}\text{B}_{20}$ films with out-of-plane anisotropy. Applied Physics Letters, 2009, 94, .	1.5	99
11	Ultrafast Magnetization Manipulation Using Single Femtosecond Light and Hot-Electron Pulses. Advanced Materials, 2017, 29, 1703474.	11.1	75
12	Spin-orbit torque-induced switching in ferrimagnetic alloys: Experiments and modeling. Applied Physics Letters, 2018, 112, .	1.5	69
13	Single-Shot Multi-Level All-Optical Magnetization Switching Mediated by Spin Transport. Advanced Materials, 2018, 30, e1804004.	11.1	69
14	Domain size criterion for the observation of all-optical helicity-dependent switching in magnetic thin films. Physical Review B, 2016, 94, .	1.1	66
15	Spin-orbit torque switching of a ferromagnet with picosecond electrical pulses. Nature Electronics, 2020, 3, 680-686.	13.1	63
16	Indirect excitation of ultrafast demagnetization. Scientific Reports, 2016, 6, 18970.	1.6	61
17	Unidirectional Thermal Effects in Current-Induced Domain Wall Motion. Physical Review Letters, 2012, 109, 106601.	2.9	60
18	Helicity-dependent all-optical domain wall motion in ferromagnetic thin films. Physical Review B, 2018, 97, .	1.1	53

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19	Electrical characterization of all-optical helicity-dependent switching in ferromagnetic Hall crosses. Applied Physics Letters, 2016, 108, .	1.5	52
20	Thermal Contribution to the Spin-Orbit Torque in Metallic-Ferrimagnetic Systems. Physical Review Applied, 2018, 9, .	1.5	52
21	Current-induced domain wall motion in Co/Pt nanowires: Separating spin torque and Oersted-field effects. Applied Physics Letters, 2010, 96, .	1.5	47
22	Materials and devices for all-optical helicity-dependent switching. Journal Physics D: Applied Physics, 2017, 50, 133002.	1.3	43
23	Investigating the role of superdiffusive currents in laser induced demagnetization of ferromagnets with nanoscale magnetic domains. Scientific Reports, 2014, 4, 4658.	1.6	38
24	Layer specific observation of slow thermal equilibration in ultrathin metallic nanostructures by femtosecond X-ray diffraction. Nature Communications, 2018, 9, 3335.	5.8	38
25	Engineering Single-Shot All-Optical Switching of Ferromagnetic Materials. Nano Letters, 2020, 20, 8654-8660.	4.5	37
26	Magnetic origin of enhanced top exchange biasing in Py/IrMn/Py multilayers. Physical Review B, 2003, 68, .	1.1	34
27	Picosecond acoustic-excitation-driven ultrafast magnetization dynamics in dielectric Bi-substituted yttrium iron garnet. Physical Review B, 2018, 98, .	1.1	34
28	From Multiple- to Single-Pulse All-Optical Helicity-Dependent Switching in Ferromagnetic Co/Pt Multilayers. Physical Review Applied, 2019, 12, .	1.5	34
29	Size-dependent scaling of perpendicular exchange bias in magnetic nanostructures. Physical Review B, 2007, 75, .	1.1	33
30	Energy Efficient Control of Ultrafast Spin Current to Induce Single Femtosecond Pulse Switching of a Ferromagnet. Advanced Science, 2020, 7, 2001996.	5.6	30
31	Current-induced domain wall motion in nanoscale ferromagnetic elements. Journal Physics D: Applied Physics, 2011, 44, 384005.	1.3	29
32	Engineering Co_2MnAlSi Heusler Compounds as a Model System to Correlate Spin Polarization, Intrinsic Gilbert Damping, and Ultrafast Demagnetization. Advanced Materials, 2020, 32, e1908357.	11.1	29
33	Femtosecond Laser-Excitation-Driven High Frequency Standing Spin Waves in Nanoscale Dielectric Thin Films of Iron Garnets. Physical Review Letters, 2019, 123, 027202.	2.9	24
34	From single to multiple pulse all-optical switching in GdFeCo thin films. Physical Review B, 2019, 100, .	1.1	23
35	All-optical Helicity-Independent Switching State Diagram in Gd/Fe Multilayers. Physical Review Applied, 2019, 11, 044002.	1.5	23
36	Multiphoton k -resolved photoemission from gold surface states with 800-nm femtosecond laser pulses. Physical Review B, 2014, 90, .	1.1	22

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37	Reduced domain wall pinning in ultrathin Pt/Co100xPt with perpendicular magnetic anisotropy. Applied Physics Letters, 2010, 96, .	1.5	21
38	Laser-induced ultrafast demagnetization and perpendicular magnetic anisotropy reduction in a Co88Tb12 thin film with stripe domains. Physical Review B, 2020, 102, .	1.1	21
39	Manipulating exchange bias using all-optical helicity-dependent switching. Physical Review B, 2017, 96, .	1.1	19
40	Hot-electron transport and ultrafast magnetization dynamics in magnetic multilayers and nanostructures following femtosecond laser pulse excitation. European Physical Journal B, 2018, 91, 1.	0.6	19
41	Reversible switching between bidomain states by injection of current pulses in a magnetic wire with out-of-plane magnetization. Journal of Applied Physics, 2009, 105, 07C106.	1.1	18
42	Pump-probe experiments at the TEMPO beamline using the low- λ operation mode of Synchrotron SOLEIL. Journal of Synchrotron Radiation, 2017, 24, 886-897.	1.0	18
43	Resolving the role of magnetic circular dichroism in multishot helicity-dependent all-optical switching. Physical Review B, 2019, 100, .	1.1	17
44	Time-Resolved XUV Absorption Spectroscopy and Magnetic Circular Dichroism at the Ni M _{2,3} -Edges. Applied Sciences (Switzerland), 2021, 11, 325.	1.3	17
45	Using antiferromagnetic/ferromagnetic bilayers as detection layers in magnetic tunnel junctions. Applied Physics Letters, 2003, 83, 4372-4374.	1.5	16
46	Angular magnetic field sensor for automotive applications based on magnetic tunnel junctions using a current loop layout configuration. Sensors and Actuators A: Physical, 2008, 144, 263-266.	2.0	16
47	Damping of Standing Spin Waves in Bismuth-Substituted Yttrium Iron Garnet as Seen via the Time-Resolved Magneto-Optical Kerr Effect. Physical Review Applied, 2019, 12, .	1.5	16
48	Low-resistance magnetic tunnel junctions with an MgO/Al ₂ O ₃ composite tunnel barrier: Asymmetric transport characteristics and free electron modeling of a self-limited oxidation bilayer. Physical Review B, 2006, 73, .	1.1	15
49	Controlling All-Optical Helicity-Dependent Switching in Engineered Rare-Earth Free Synthetic Ferrimagnets. Advanced Science, 2019, 6, 1901876.	5.6	15
50	Heat Transport without Heating? An Ultrafast X-Ray Perspective into a Metal Heterostructure. Advanced Functional Materials, 2020, 30, 2004555.	7.8	15
51	Nonlocal ultrafast magnetization dynamics in the high fluence limit. Journal of Applied Physics, 2011, 109, .	1.1	14
52	Role of spin-lattice coupling in ultrafast demagnetization and all optical helicity-independent single-shot switching in $Gd_{1-x}Mn_x$ alloys. Physical Review B, 2022, 105, .	1.1	14
53	Correlation between exchange bias dynamics and magnetization reversal asymmetry in [Pt ₃ Co] _n /Pt/IrMn multilayers. Applied Physics Letters, 2007, 90, 082501.	1.5	13
54	Energy-Efficient Domain-Wall Motion Governed by the Interplay of Helicity-Dependent Optical Effect and Spin-Orbit Torque. Physical Review Applied, 2019, 11, .	1.5	13

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55	Ultrafast hot-electron induced quenching of Tb magnetic order. Physical Review B, 2017, 96, .		
56	Single-shot time-resolved magnetic x-ray absorption at a free-electron laser. Physical Review B, 2019, 99, .	1.1	12
57	Spin-transport Mediated Single-shot All-optical Magnetization Switching of Metallic Films. Journal of the Physical Society of Japan, 2021, 90, 081009.	0.7	12
58	Light induced ultrafast magnetization dynamics in metallic compounds. Journal of Magnetism and Magnetic Materials, 2022, 560, 169596.	1.0	12
59	Element-resolved ultrafast demagnetization rates in ferrimagnetic CoDy. Physical Review B, 2017, 96, .	1.1	11
60	Magnetization reversal in exchange biased nanocap arrays. Journal Physics D: Applied Physics, 2007, 40, 3005-3010.	1.3	10
61	Determination of the spin torque non-adiabaticity in perpendicularly magnetized nanowires. Journal of Physics Condensed Matter, 2012, 24, 024220.	0.7	10
62	Study of Helicity-Dependent Light-Induced Demagnetization: From the Optical Regime to the Extreme Ultraviolet Regime. Nano Letters, 2021, 21, 1943-1947.	4.5	10
63	A high magnetic field sensor based on magnetic tunnel junctions. EPJ Applied Physics, 2004, 28, 79-81.	0.3	9
64	Current-induced domain wall motion in Ni80Fe20nanowires with low depinning fields. Journal Physics D: Applied Physics, 2010, 43, 045003.	1.3	9
65	Ultrafast Dynamics of Magnetic Domain Structures Probed by Coherent Free-Electron Laser Light. Synchrotron Radiation News, 2013, 26, 27-32.	0.2	9
66	Stochastic Current-Induced Magnetization Switching in a Single Semiconducting Ferromagnetic Layer. Physical Review Letters, 2014, 112, 026601.	2.9	9
67	Resonant Faraday effect using high-order harmonics for the investigation of ultrafast demagnetization. Physical Review B, 2019, 100, .	1.1	9
68	Generation of spin waves via spin-phonon interaction in a buried dielectric thin film. Physical Review B, 2021, 103, .	1.1	8
69	Ultrafast magnetic scattering on ferrimagnets enabled by a bright Yb-based soft x-ray source. Optica, 2022, 9, 399.	4.8	8
70	Low-height sputter-deposited magnesium oxide tunnel barriers: experimental report and free electron modeling. European Physical Journal B, 2004, 40, 19-23.	0.6	7
71	Extraction of the spin torque non-adiabaticity from thermally activated domain wall hopping. Applied Physics Letters, 2011, 99, .	1.5	7
72	Domain-wall motion induced by spin transfer torque delivered by helicity-dependent femtosecond laser. Physical Review B, 2019, 99, .	1.1	7

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73	Is terahertz emission a good probe of the spin current attenuation length?. Applied Physics Letters, 2022, 121, .	1.5	7
74	Intrinsic thermally compensated field sensor based on single magnetic tunnel junctions. Applied Physics Letters, 2004, 84, 1204-1206.	1.5	6
75	Correlation between structural quality and magnetic properties of IrMn-based multilayers. Journal of Applied Physics, 2005, 98, 113903.	1.1	6
76	Suppression of all-optical switching in He+â€%-irradiated Co/Pt multilayers: influence of the domain-wall energy. Journal Physics D: Applied Physics, 2018, 51, 215004.	1.3	6
77	<i>Ab initio</i> theory of magnetization induced by light absorption in ferromagnets. Physical Review B, 2019, 100, .	1.1	6
78	Investigating Coherent Magnetization Control with Ultrashort THz Pulses. Applied Sciences (Switzerland), 2022, 12, 1323.	1.3	6
79	On/Off Ultraâ€Short Spin Current for Single Pulse Magnetization Reversal in a Magnetic Memory Using VO₂ Phase Transition. Advanced Electronic Materials, 2022, 8, .	2.6	6
80	Optoelectronic domain-wall motion for logic computing. Applied Physics Letters, 2020, 116, 252403.	1.5	5
81	Impact of the interface magnetic disorder on the exchange bias between ferromagnetic and antiferromagnetic layers. Journal of Physics Condensed Matter, 2006, 18, 3385-3391.	0.7	4
82	Probing ultrafast dynamics in electronic structure of epitaxial Gd(0001) on W(110). Journal of Electron Spectroscopy and Related Phenomena, 2013, 189, 40-45.	0.8	4
83	<i>Ab initio</i> study of electronic temperature effects on magnetic materials properties. Physical Review B, 2019, 99, .	1.1	4
84	Tailoring femtosecond hot-electron pulses for ultrafast spin manipulation. Applied Physics Letters, 2020, 117, .	1.5	4
85	Flux-gate like 2D magnetometer based on a single magnetic tunnel junction. EPJ Applied Physics, 2005, 30, 113-116.	0.3	3
86	Ultrafast demagnetization in buried Co80Dy20 as fingerprint of hot-electron transport. Journal of Magnetism and Magnetic Materials, 2019, 485, 320-324.	1.0	3
87	Laser induced ultrafast 3d and 4f spin dynamics in CoDy ferrimagnetic alloys as a function of temperature. Journal of Magnetism and Magnetic Materials, 2021, 530, 167883.	1.0	1
88	Top exchange biasing enhancement in X/IrMn/Py and X/IrMn/Co multilayers. , 0, , .		0
89	Field Dynamic Effects in Perpendicular Exchange-Biased [Pt/Co]/IrMn Multilayers. , 2006, , .		0
90	Reply to â€Comment on â€Size-dependent scaling of perpendicular exchange bias in magnetic nanostructuresâ€™. Physical Review B, 2008, 77, .	1.1	0

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91	All-optical control of ferromagnetic thin films and nanostructures: Competition between polarized light and applied magnetic field. , 2015, , .		0
92	All-optical switching behaviours in synthetic ferrimagnetic heterostructures with different ferromagnetic-layer Curie temperatures. , 2017, , .		0
93	Space charge effects occurring during fast demagnetization processes. Springer Proceedings in Physics, 2015, , 313-316.	0.1	0