

Vitaliy Lomakin

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

52 papers	694 citations	16 h-index	24 g-index
72 ext. papers	810 ext. citations	3.4 avg, IF	3.8 L-index

#	Paper	IF	Citations
52	Thermal stability and magnetization switching of composite free layer with perpendicular magnetic anisotropy. <i>AIP Advances</i> , 2021 , 11, 015132	1.5	
51	Lorenz gauge formulation for time-dependent density functional theory. <i>Physical Review B</i> , 2020 , 101,	3.3	3
50	Thermal stability and magnetization switching in perpendicular magnetic tunnel junctions. <i>Applied Physics Letters</i> , 2020 , 116, 192408	3.4	12
49	A coupled micromagnetic-Maxwell equations solver based on the finite element method. <i>Journal of Magnetism and Magnetic Materials</i> , 2020 , 493, 165672	2.8	1
48	Asymmetric Magnetization Switching in Perpendicular Magnetic Tunnel Junctions: Role of the Synthetic Antiferromagnetic Fringe Field. <i>Physical Review Applied</i> , 2019 , 11,	4.3	8
47	Energy barrier and domain wall thermal reversal in magnetic elliptic cylinders. <i>Journal of Applied Physics</i> , 2018 , 124, 223903	2.5	1
46	A tunable magnetic metamaterial based on the dipolar four-state Potts model. <i>Nature Materials</i> , 2018 , 17, 1076-1080	27	26
45	Streamlined approach to mapping the magnetic induction of skyrmionic materials. <i>Ultramicroscopy</i> , 2017 , 177, 78-83	3.1	12
44	Size dependent electronic properties of silicon quantum dots—An analysis with hybrid, screened hybrid and local density functional theory. <i>Computer Physics Communications</i> , 2017 , 221, 95-101	4.2	6
43	Coupled Finite-Element Micromagnetic-Integral Equation Electromagnetic Simulator for Modeling Magnetization-Eddy Currents Dynamics. <i>IEEE Transactions on Magnetics</i> , 2017 , 53, 1-9	2	4
42	Electromagnetic-micromagnetic simulator for magnetization-eddy current dynamics in magnetic materials and devices 2017 ,		3
41	Gaussian-windowed frame based method of moments formulation of surface-integral-equation for extended apertures. <i>Journal of Computational Physics</i> , 2016 , 308, 289-304	4.1	
40	Modeling Perpendicular Magnetic Multilayered Oxide Media With Discretized Magnetic Layers. <i>IEEE Transactions on Magnetics</i> , 2015 , 51, 1-4	2	2
39	Graphics Processing Unit Implementation of Multilevel Plane-Wave Time-Domain Algorithm. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2014 , 13, 1671-1675	3.8	
38	Fast Green's Function Evaluation for Sources and Observers Near Smooth Convex Bodies. <i>IEEE Transactions on Antennas and Propagation</i> , 2014 , 62, 3374-3378	4.9	7
37	Effect of interlayer exchange coupling parameter on switching time and critical current density in composite free layer. <i>Journal of Applied Physics</i> , 2014 , 115, 17D111	2.5	3
36	Fast Direct Solver for Essentially Convex Scatterers Using Multilevel Non-Uniform Grids. <i>IEEE Transactions on Antennas and Propagation</i> , 2014 , 62, 4314-4324	4.9	27

35	Effect of Thermal Fluctuations on the Performance of Particulate Media. <i>IEEE Transactions on Magnetics</i> , 2013 , 49, 3137-3140	2	1
34	Quadrilateral Barycentric Basis Functions for Surface Integral Equations. <i>IEEE Transactions on Antennas and Propagation</i> , 2013 , 61, 6039-6050	4.9	5
33	Compression of matrices representing directive source integral equation 2013 ,		1
32	Accurate evaluation of exchange fields in finite element micromagnetic solvers. <i>Journal of Applied Physics</i> , 2012 , 111, 07D129	2.5	1
31	Advanced Micromagnetic Analysis of Write Head Dynamics Using Fastmag. <i>IEEE Transactions on Magnetics</i> , 2012 , 48, 1731-1737	2	11
30	Fast Electromagnetic Integral-Equation Solvers on Graphics Processing Units. <i>IEEE Antennas and Propagation Magazine</i> , 2012 , 54, 71-87	1.7	19
29	Rapidly Convergent Representations for Periodic Green's Functions of a Linear Array in Layered Media. <i>IEEE Transactions on Antennas and Propagation</i> , 2012 , 60, 870-879	4.9	4
28	Generalized Equivalence Integral Equations. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2012 , 11, 1568-1571	3.8	10
27	Spin-transfer-torque reversal in perpendicular anisotropy spin valves with composite free layers. <i>Applied Physics Letters</i> , 2011 , 99, 132502	3.4	24
26	Reversal in Bit Patterned Media With Vertical and Lateral Exchange. <i>IEEE Transactions on Magnetics</i> , 2011 , 47, 18-25	2	13
25	FastMag: Fast micromagnetic simulator for complex magnetic structures (invited). <i>Journal of Applied Physics</i> , 2011 , 109, 07D358	2.5	73
24	High-Performance Computing on Graphics Processing Units for Field and Device Modelling. <i>International Journal of Numerical Modelling: Electronic Networks, Devices and Fields</i> , 2011 , 24, 311-311	1	
23	Fundamental Electromagnetic Properties of Twisted Periodic Arrays. <i>IEEE Transactions on Antennas and Propagation</i> , 2011 , 59, 2824-2833	4.9	6
22	Antiferromagnetically coupled capped bit patterned media for high-density magnetic recording. <i>Applied Physics Letters</i> , 2011 , 98, 012513	3.4	15
21	Potential-based volume integral equations 2011 ,		2
20	Form birefringence metal and its plasmonic anisotropy. <i>Applied Physics Letters</i> , 2010 , 96, 041112	3.4	21
19	Fast Periodic Interpolation Method for Periodic Unit Cell Problems. <i>IEEE Transactions on Antennas and Propagation</i> , 2010 , 58, 4005-4014	4.9	13
18	Graphics Processing Unit Accelerated $\mathcal{O}(N)$ Micromagnetic Solver. <i>IEEE Transactions on Magnetics</i> , 2010 , 46, 2373-2375	2	29

17	Microwave assisted magnetization reversal in composite media. <i>Applied Physics Letters</i> , 2009 , 94, 202509	3.4	35
16	Analysis of recording in bit patterned media with parameter distributions. <i>Journal of Applied Physics</i> , 2009 , 105, 07C111	2.5	7
15	Capped bit patterned media for high density magnetic recording. <i>Journal of Applied Physics</i> , 2009 , 105, 07C121	2.5	8
14	Microwave-assisted magnetization reversal and multilevel recording in composite media. <i>Journal of Applied Physics</i> , 2009 , 105, 07B909	2.5	38
13	Nonuniform grid algorithm for fast calculation of magnetostatic interactions in micromagnetics. <i>Journal of Applied Physics</i> , 2009 , 105, 07D541	2.5	19
12	Plasmonic photonic crystal with a complete band gap for surface plasmon polariton waves. <i>Applied Physics Letters</i> , 2008 , 93, 231105	3.4	28
11	Precessional Magnetization Reversal in Composite Patterned Media: Dependence on Applied Field Parameters. <i>IEEE Transactions on Magnetics</i> , 2008 , 44, 3075-3078	2	
10	Fast precessional reversal in perpendicular composite patterned media. <i>Journal of Applied Physics</i> , 2008 , 103, 07C516	2.5	10
9	Dual-layer patterned media edge design for ultrahigh density magnetic recording. <i>Applied Physics Letters</i> , 2008 , 92, 022502	3.4	25
8	Transmission through and wave guidance on metal plates perforated by periodic arrays of through-holes of subwavelength coaxial cross-section. <i>Microwave and Optical Technology Letters</i> , 2007 , 49, 1554-1558	1.2	6
7	Magnetization Reversal in Patterned Media. <i>IEEE Transactions on Magnetics</i> , 2007 , 43, 2154-2156	2	9
6	Precessional reversal in exchange-coupled composite magnetic elements. <i>Applied Physics Letters</i> , 2007 , 91, 182502	3.4	27
5	Fourier plasmonics: Diffractive focusing of in-plane surface plasmon polariton waves. <i>Applied Physics Letters</i> , 2007 , 91, 081101	3.4	63
4	Negative Index Metamaterials with Deeply Subwavelength Structural Dimensions from Near Infrared to Visible Based on Thin Films. <i>Materials Research Society Symposia Proceedings</i> , 2006 , 964, 1		
3	Nonuniform grid time domain (NGTD) algorithm for fast evaluation of transient wave fields. <i>IEEE Transactions on Antennas and Propagation</i> , 2006 , 54, 1943-1951	4.9	20
2	Transmission of transient plane waves through perfect electrically conducting plates perforated by periodic arrays of subwavelength holes. <i>IEEE Transactions on Antennas and Propagation</i> , 2006 , 54, 970-984	4.9	29
1	Manipulation of stop-band gaps of periodically perforated conducting plates. <i>IEEE Microwave and Wireless Components Letters</i> , 2005 , 15, 919-921	2.6	1