

Serban Lepadatu

List of Publications by Year in descending order

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papers

845
citations

567281

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57
docs citations

57
times ranked

1019
citing authors

#	ARTICLE	IF	CITATIONS
1	Spin-Transfer-Torque-Assisted Domain-Wall Creep in a Co/Pt Multilayer Wire. <i>Physical Review Letters</i> , 2010, 104, 137205.	7.8	75
2	Direct Observation of Domain Wall Scattering in Patterned $\text{Ni}_{80}\text{Fe}_{20}$ and Ni Nanowires by Current-Voltage Measurements. <i>Physical Review Letters</i> , 2004, 92, 127201.	7.8	74
3	Dependence of Domain-Wall Depinning Threshold Current on Pinning Profile. <i>Physical Review Letters</i> , 2009, 102, 127203.	7.8	60
4	Piezoelectric properties of template-free electrochemically grown ZnO nanorod arrays. <i>Applied Surface Science</i> , 2015, 356, 1214-1220.	6.1	54
5	Ferroelectricity in Dionâ€“Jacobson ABiNb_2O_7 (A = Rb, Cs) compounds. <i>Journal of Materials Chemistry C</i> , 2015, 3, 19-22.	5.5	50
6	Experimental determination of spin-transfer torque nonadiabaticity parameter and spin polarization in permalloy. <i>Physical Review B</i> , 2009, 79, .	3.2	38
7	Domain-wall pinning, nonadiabatic spin-transfer torque, and spin-current polarization in permalloy wires doped with vanadium. <i>Physical Review B</i> , 2010, 81, .	3.2	36
8	Unified treatment of spin torques using a coupled magnetisation dynamics and three-dimensional spin current solver. <i>Scientific Reports</i> , 2017, 7, 12937.	3.3	34
9	Engineered spatial inversion symmetry breaking in an oxide heterostructure built from isosymmetric room-temperature magnetically ordered components. <i>Chemical Science</i> , 2014, 5, 1599-1610.	7.4	30
10	Synthetic ferrimagnet nanowires with very low critical current density for coupled domain wall motion. <i>Scientific Reports</i> , 2017, 7, 1640.	3.3	28
11	Domain-wall spin-torque resonators for frequency-selective operation. <i>Physical Review B</i> , 2010, 81, .	3.2	27
12	Boris computational spintronicsâ€”High performance multi-mesh magnetic and spin transport modeling software. <i>Journal of Applied Physics</i> , 2020, 128, .	2.5	25
13	Evidence of substrate roughness surface induced magnetic anisotropy in $\text{Ni}_{80}\text{Fe}_{20}$ flexible thin films. <i>Journal of Magnetism and Magnetic Materials</i> , 2019, 478, 77-83.	2.3	19
14	Effect of inter-layer spin diffusion on skyrmion motion in magnetic multilayers. <i>Scientific Reports</i> , 2019, 9, 9592.	3.3	17
15	Emergence of transient domain wall skyrmions after ultrafast demagnetization. <i>Physical Review B</i> , 2020, 102, .	3.2	17
16	Optimization of Co/Pt multilayers for applications of current-driven domain wall propagation. <i>Journal of Applied Physics</i> , 2011, 110, 083913.	2.5	16
17	Effective field model of roughness in magnetic nano-structures. <i>Journal of Applied Physics</i> , 2015, 118, .	2.5	16
18	Spin-transfer torque efficiency measured using a Permalloy nanobridge. <i>Applied Physics Letters</i> , 2010, 97, 202505.	3.3	15

#	ARTICLE	IF	CITATIONS
19	Electrode size and boundary condition independent measurement of the effective piezoelectric coefficient of thin films. <i>APL Materials</i> , 2015, 3, .	5.1	15
20	Role of an additional interfacial spin-transfer torque for current-driven skyrmion dynamics in chiral magnetic layers. <i>Physical Review B</i> , 2020, 102, .	3.2	15
21	Quantification of electromechanical coupling measured with piezoresponse force microscopy. <i>Journal of Applied Physics</i> , 2014, 116, 066806.	2.5	14
22	Reduction of Threshold Current for Domain Wall Depinning Using Gd Doping of Permalloy. <i>Applied Physics Express</i> , 2010, 3, 083002.	2.4	13
23	Current induced magnetic switching in Ni ₈₀ Fe ₂₀ , Ni, Fe, and Co wires. <i>Journal of Applied Physics</i> , 2005, 97, 10C711.	2.5	12
24	Interaction of magnetization and heat dynamics for pulsed domain wall movement with Joule heating. <i>Journal of Applied Physics</i> , 2016, 120, .	2.5	11
25	Magnetic Domain Wall Formation in Ferromagnetic Wires With a Nanoconstriction. <i>IEEE Transactions on Magnetics</i> , 2007, 43, 2830-2832.	2.1	10
26	Tuning of current-induced domain wall resonance frequency using Gd doping. <i>Applied Physics Letters</i> , 2010, 97, 072507.	3.3	10
27	Efficient computation of demagnetizing fields for magnetic multilayers using multilayered convolution. <i>Journal of Applied Physics</i> , 2019, 126, .	2.5	10
28	Second law of information dynamics. <i>AIP Advances</i> , 2022, 12, .	1.3	9
29	Ultrafast optically induced spin dynamics in patterned single crystal Fe dot arrays. <i>Journal of Applied Physics</i> , 2007, 101, 09C111.	2.5	8
30	Collective skyrmion motion under the influence of an additional interfacial spin-transfer torque. <i>Scientific Reports</i> , 2022, 12, .	3.3	8
31	Simultaneous dynamic electrical and structural measurements of functional materials. <i>Review of Scientific Instruments</i> , 2015, 86, 103901.	1.3	7
32	Dielectric constants of bulk ferroelectric PZT measured by terahertz time-domain spectroscopy. <i>Advances in Applied Ceramics</i> , 2016, 115, 260-263.	1.1	7
33	Development of flexible Ni ₈₀ Fe ₂₀ magnetic nano-thin films. <i>Physica B: Condensed Matter</i> , 2017, 525, 12-15.	2.7	7
34	Discontinuous Resistance Change and Domain Wall Scattering in Patterned NiFe Wires With a Nanoconstriction. <i>IEEE Transactions on Magnetics</i> , 2004, 40, 2688-2690.	2.1	6
35	Solving the electrical control of magnetic coercive field paradox. <i>Applied Physics Letters</i> , 2014, 105, 122901.	3.3	6
36	Study of roughness effect in Fe and Co thin films prepared by plasma magnetron sputtering. <i>Physica B: Condensed Matter</i> , 2019, 574, 411666.	2.7	6

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37	Determination of Domain Wall Depinning and Driving Currents in Doped Permalloy Structures. IEEE Transactions on Magnetics, 2010, 46, 1759-1761.	2.1	5
38	Micromagnetic Monte Carlo method with variable magnetization length based on the Landau-Lifshitz-Bloch equation for computation of large-scale thermodynamic equilibrium states. Journal of Applied Physics, 2021, 130, .	2.5	5
39	Current-induced magnetization switching in asymmetric necked wires. Applied Physics Letters, 2007, 91, 062512.	3.3	4
40	Heat-Assisted Multiferroic Solid-State Memory. Materials, 2017, 10, 991.	2.9	4
41	Speeding Up Explicit Numerical Evaluation Methods for Micromagnetic Simulations Using Demagnetizing Field Polynomial Extrapolation. IEEE Transactions on Magnetics, 2022, 58, 1-6.	2.1	4
42	Computation of magnetization, exchange stiffness, anisotropy, and susceptibilities in large-scale systems using GPU-accelerated atomistic parallel Monte Carlo algorithms. Journal of Magnetism and Magnetic Materials, 2021, 540, 168460.	2.3	3
43	Magneto-resistance of Domain Walls in Superconductor/Ferromagnet Hybrid Systems. Journal of Superconductivity and Novel Magnetism, 2011, 24, 911-914.	1.8	2
44	The increase of the spin-transfer torque threshold current density in coupled vortex domain walls. Journal of Physics Condensed Matter, 2012, 24, 024210.	1.8	2
45	Low field depoling phenomena in soft lead zirconate titanate ferroelectrics. Journal of Electroceramics, 2016, 37, 163-169.	2.0	2
46	Diamagnetic coupling for magnetic tuning in nano-thin films. Applied Physics Letters, 2020, 116, .	3.3	2
47	Modulation of magneto-resistance with measurement current in patterned Ni80Fe20 wires. Journal of Applied Physics, 2005, 97, 10J708.	2.5	1
48	Piezoresponse Force Microscopy. Springer Series in Measurement Science and Technology, 2014, , 191-219.	0.8	1
49	Current induced magnetisation switching in asymmetric necked wires. , 2005, , .		0
50	Current-driven domain wall motion in artificial magnetic domain structures. Journal of the Korean Physical Society, 2013, 62, 1534-1538.	0.7	0
51	Dielectric constants of ferroelectric PZT at THz frequencies. , 2015, , .		0