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List of Publications by Year
in descending order

74 papers	1,546 citations	361413 20 h-index	330143 37 g-index
74 all docs	74 docs citations	74 times ranked	1686 citing authors

#	ARTICLE	IF	CITATIONS
1	Nanoporous alumina as templates for multifunctional applications. Applied Physics Reviews, 2014, 1, 031102.	11.3	225
2	Magnetic anisotropy in CoNi nanowire arrays: Analytical calculations and experiments. Physical Review B, 2012, 85, .	3.2	127
3	Linearization strategies for high sensitivity magnetoresistive sensors. EPJ Applied Physics, 2015, 72, 10601.	0.7	83
4	Challenges and trends in magnetic sensor integration with microfluidics for biomedical applications. Journal Physics D: Applied Physics, 2017, 50, 213001.	2.8	81
5	Magnetic tunnel junction sensors with pTesla sensitivity. Microsystem Technologies, 2014, 20, 793-802.	2.0	66
6	Tunning pore filling of anodic alumina templates by accurate control of the bottom barrier layer thickness. Nanotechnology, 2011, 22, 315602.	2.6	65
7	Geometry-dependent magnetization reversal mechanism in ordered Py antidot arrays. Journal Physics D: Applied Physics, 2011, 44, 505001.	2.8	52
8	The role of the Ti surface roughness in the self-ordering of TiO₂ nanotubes: a detailed study of the growth mechanism. Journal of Materials Chemistry A, 2014, 2, 9067-9078.	10.3	52
9	Nanoscale Topography: A Tool to Enhance Pore Order and Pore Size Distribution in Anodic Aluminum Oxide. Journal of Physical Chemistry C, 2011, 115, 8567-8572.	3.1	48
10	Co nanostructures in ordered templates: comparative FORC analysis. Nanotechnology, 2013, 24, 475703.	2.6	46
11	A Magnetoresistive Tactile Sensor for Harsh Environment Applications. Sensors, 2016, 16, 650.	3.8	38
12	Towards picoTesla Magnetic Field Detection Using a GMR-MEMS Hybrid Device. IEEE Transactions on Magnetics, 2012, 48, 4115-4118.	2.1	32
13	Strategies for pTesla Field Detection Using Magnetoresistive Sensors With a Soft Pinned Sensing Layer. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	30
14	Nanopore formation and growth in phosphoric acid Al anodization. Journal of Non-Crystalline Solids, 2008, 354, 5238-5240.	3.1	29
15	Precise control of the filling stages in branched nanopores. Journal of Materials Chemistry, 2012, 22, 3110.	6.7	27
16	Field Detection in Spin Valve Sensors Using CoFeB/Ru Synthetic-Antiferromagnetic Multilayers as Magnetic Flux Concentrators. IEEE Transactions on Magnetics, 2012, 48, 3847-3850.	2.1	26
17	Tailoring the physical properties of thin nanohole arrays grown on flat anodic aluminum oxide templates. Nanotechnology, 2012, 23, 425701.	2.6	23
18	Insights into the role of magnetoelastic anisotropy in the magnetization reorientation of magnetic nanowires. Physical Review B, 2011, 84, .	3.2	21

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19	pH sensitive silica nanotubes as rationally designed vehicles for NSAIDs delivery. Colloids and Surfaces B: Biointerfaces, 2012, 94, 288-295.	5.0	21
20	Magnetoresistive nanosensors: controlling magnetism at the nanoscale. Nanotechnology, 2016, 27, 045501.	2.6	20
21	Improved Efficiency of Tapered Magnetic Flux Concentrators With Double-Layer Architecture. IEEE Transactions on Magnetics, 2017, 53, 1-5.	2.1	19
22	Characterization of electrodeposited Ni and Ni80Fe20 nanowires. Journal of Non-Crystalline Solids, 2008, 354, 5241-5243.	3.1	17
23	Delocalized versus localized magnetization reversal in template-grown Ni and nanowires. Journal of Magnetism and Magnetic Materials, 2010, 322, 1319-1322.	2.3	17
24	Influence of surface pre-treatment in the room temperature fabrication of nanoporous alumina. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 3488-3491.	0.8	16
25	Linear nanometric tunnel junction sensors with exchange pinned sensing layer. Journal of Applied Physics, 2014, 115, .	2.5	16
26	Structural, magnetic and transport properties of ion beam deposited Co thin films. Journal of Non-Crystalline Solids, 2008, 354, 5279-5281.	3.1	15
27	Exchange biased CoFeB-MgO tunnel junctions at the onset of perpendicular anisotropy with in-plane/out-of-plane sensing capabilities. Journal of Applied Physics, 2012, 111, .	2.5	15
28	Nanoscale Magnetic Tunnel Junction Sensing Devices With Soft Pinned Sensing Layer and Low Aspect Ratio. IEEE Transactions on Magnetics, 2014, 50, 1-8.	2.1	15
29	Improved in vitro electrophysiology using 3D-structured microelectrode arrays with a micro-mushrooms islets architecture capable of promoting topotaxis. Journal of Neural Engineering, 2019, 16, 036012.	3.5	15
30	A versatile synthesis method of dendrites-free segmented nanowires with a precise size control. Nanoscale Research Letters, 2012, 7, 168.	5.7	14
31	Spin Valve Devices With Synthetic-Ferrimagnet Free-Layer Displaying Enhanced Sensitivity for Nanometric Sensors. IEEE Transactions on Magnetics, 2014, 50, 1-4.	2.1	14
32	Probing the Quality of Ni Filled Nanoporous Alumina Templates by Magnetic Techniques. Journal of Nanoscience and Nanotechnology, 2012, 12, 7486-7490.	0.9	13
33	Switching Field Variation in MgO Magnetic Tunnel Junction Nanopillars: Experimental Results and Micromagnetic Simulations. IEEE Transactions on Magnetics, 2013, 49, 4405-4408.	2.1	13
34	Rapid Synthesis of Ordered Manganite Nanotubes by Microwave Irradiation in Alumina Templates. Journal of Nanoscience and Nanotechnology, 2009, 9, 6084-6088.	0.9	12
35	Study of Nanostructured Array of Antidots Using Pulsed Magnetic Fields. Journal of Low Temperature Physics, 2010, 159, 245-248.	1.4	12
36	Ultra-Compact 100 Ã— 100 Î¼m2 Footprint Hybrid Device with Spin-Valve Nanosensors. Sensors, 2015, 15, 30311-30318.	3.8	12

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37	Barrier breakdown mechanism in nano-scale perpendicular magnetic tunnel junctions with ultrathin MgO barrier. AIP Advances, 2018, 8, .	1.3	12
38	Annealing free magnetic tunnel junction sensors. Journal Physics D: Applied Physics, 2017, 50, 165001.	2.8	11
39	Assessment of conduction mechanisms through MgO ultrathin barriers in CoFeB/MgO/CoFeB perpendicular magnetic tunnel junctions. Applied Physics Letters, 2019, 114, .	3.3	11
40	Control of hysteretic behavior in flux concentrators. Applied Physics Letters, 2009, 94, .	3.3	10
41	AlOx barrier growth in magnetic tunnel junctions for sensor applications. Journal of Magnetism and Magnetic Materials, 2016, 412, 181-184.	2.3	10
42	Micromagnetic and magneto-transport simulations of nanodevices based on MgO tunnel junctions for memory and sensing applications. Physica B: Condensed Matter, 2014, 435, 163-167.	2.7	8
43	Ordered arrays of tilted silicon nanobelts with enhanced solar hydrogen evolution performance. Nanoscale, 2014, 6, 2097.	5.6	8
44	Organic Single Crystal Patterning Method for Micrometric Photosensors. Advanced Functional Materials, 2021, 31, 2105638.	14.9	8
45	Correlations among magnetic, electrical and magneto-transport properties of NiFe nanohole arrays. Journal of Physics Condensed Matter, 2013, 25, 066007.	1.8	7
46	Magnetic tunnel junction sensors with pTesla sensitivity for biomedical imaging. Proceedings of SPIE, 2013, , .	0.8	7
47	All-spinel oxide Josephson junctions for high-efficiency spin filtering. Journal of Physics Condensed Matter, 2018, 30, 015804.	1.8	7
48	Optimization of exposure parameters for lift-off process of sub-100 features using a negative tone electron beam resist. , 2012, , .		6
49	Bending Effect on Magnetoresistive Silicon Probes. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	6
50	Tailoring the capâ€™s morphology of electrodeposited gold micro-mushrooms. Applied Surface Science, 2018, 445, 512-518.	6.1	6
51	The annealing effect on memory state stability and interlayer coupling in perpendicular magnetic tunnel junctions with ultrathin MgO barrier. Journal of Magnetism and Magnetic Materials, 2019, 477, 142-146.	2.3	6
52	Multiâ€Level Switching and Reversible Current Driven Domainâ€Wall Motion in Single CoFeB/MgO/CoFeBâ€Based Perpendicular Magnetic Tunnel Junctions. Advanced Electronic Materials, 2021, 7, 2000976.	5.1	6
53	Influence of Grain Size Dispersion on the Magnetic Properties of Nanogranular BaTiO₃-CoFe₂O₄ Thin Films. Journal of Nanoscience and Nanotechnology, 2009, 9, 3742-3746.	0.9	5
54	Magnetoresistive Sensors for Surface Scanning. Smart Sensors, Measurement and Instrumentation, 2013, , 275-299.	0.6	5

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55	Multilevel process on large area wafers for nanoscale devices. Journal of Manufacturing Processes, 2018, 32, 222-229.	5.9	5
56	Impact of blocking temperature distribution on the thermal behavior of MnIr and MnPt magnetoresistive stacks. Journal of Magnetism and Magnetic Materials, 2019, 477, 68-73.	2.3	5
57	Resistive switching of silicon-silver thin film devices in flexible substrates. Nanotechnology, 2020, 31, 135702.	2.6	5
58	Derivation of analytical expressions for the stress/strain distributions, bending plane and curvature radius in multilayer thin-film composites. Journal of Micromechanics and Microengineering, 2021, 31, 113003.	2.6	5
59	Preparation of compounds using RF-induction. Journal of Non-Crystalline Solids, 2008, 354, 5292-5294.	3.1	4
60	Microfabrication Techniques. Smart Sensors, Measurement and Instrumentation, 2013, , 31-45.	0.6	4
61	Two-dimensional arrays of vertically packed spin-valves with picoTesla sensitivity at room temperature. Scientific Reports, 2021, 11, 215.	3.3	4
62	What Is Driving the Growth of Inorganic Glass in Smart Materials and Opto-Electronic Devices?. Materials, 2021, 14, 2926.	2.9	4
63	A method to investigate the electron scattering characteristics of ultrathin metallic films by in situ electrical resistance measurements. Review of Scientific Instruments, 2009, 80, 073909.	1.3	3
64	MnNi-based spin valve sensors combining high thermal stability, small footprint and pTesla detectivities. AIP Advances, 2018, 8, .	1.3	3
65	3D Magnetic Field Reconstruction Methodology Based on a Scanning Magnetoresistive Probe. Sensors, 2018, 18, 2049.	3.8	3
66	Optimization of the Gap Size of Flux Concentrators: Pushing Further on Low Noise Levels and High Sensitivities in Spin-Valve Sensors. IEEE Transactions on Magnetics, 2019, 55, 1-5.	2.1	3
67	A four-state magnetic tunnel junction switchable with spinâ€“orbit torques. Applied Physics Letters, 2020, 117, .	3.3	3
68	Bringing flexibility to giant magnetoresistive sensors directly grown onto commercial polymeric foils. Journal of Magnetism and Magnetic Materials, 2021, 538, 168153.	2.3	3
69	Electron scattering characteristics of polycrystalline metal transition films by in-situ electrical resistance measurements. Journal of Magnetism and Magnetic Materials, 2009, 321, 2494-2498.	2.3	2
70	Magneto-transport behavior of double exchange magnetic tunnel junction sensors. , 2014, , .		1
71	Highly Ordered Hexagonal Arrays of TiO2 Nanotubes. Microscopy and Microanalysis, 2015, 21, 5-6.	0.4	1
72	Thermal FMR Spectral Characterization of Very Low RA In-Plane MgO Magnetic Tunnel Junctions. IEEE Transactions on Magnetics, 2017, 53, 1-5.	2.1	1

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73	Using integrated current lines to control the operation point of highly sensitive magnetoresistive sensors. Journal of Magnetism and Magnetic Materials, 2021, 537, 168152.	2.3	1
74	Toward pTesla Detectivities Maintaining Minimum Sensor Footprint With Vertical Packaging of Spin Valves. IEEE Transactions on Magnetics, 2017, 53, 1-5.	2.1	0