

Seyed Majid Mohseni

List of Publications by Year in descending order

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120
papers

2,321
citations

257450

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265206

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121
all docs

121
docs citations

121
times ranked

2266
citing authors

#	ARTICLE	IF	CITATIONS
1	Spin Torque-Generated Magnetic Droplet Solitons. <i>Science</i> , 2013, 339, 1295-1298.	12.6	237
2	XRD cation distribution and magnetic properties of mesoporous Zn-substituted CuFe ₂ O ₄ . <i>Ceramics International</i> , 2014, 40, 3619-3625.	4.8	102
3	Mutually synchronized bottom-up multi-nanocontact spin-torque oscillators. <i>Nature Communications</i> , 2013, 4, 2731.	12.8	98
4	Spin-Wave-Mode Coexistence on the Nanoscale: A Consequence of the Oersted-Field-Induced Asymmetric Energy Landscape. <i>Physical Review Letters</i> , 2013, 110, 257202.	7.8	98
5	[Co/Pd]-NiFe exchange springs with tunable magnetization tilt angle. <i>Applied Physics Letters</i> , 2011, 98, 172502.	3.3	82
6	Plasmonic improvement photoresponse of vertical-MoS ₂ nanostructure photodetector by Au nanoparticles. <i>Applied Surface Science</i> , 2019, 490, 165-171.	6.1	79
7	High frequency operation of a spin-torque oscillator at low field. <i>Physica Status Solidi - Rapid Research Letters</i> , 2011, 5, 432-434.	2.4	75
8	Confined Dissipative Droplet Solitons in Spin-Valve Nanowires with Perpendicular Magnetic Anisotropy. <i>Physical Review Letters</i> , 2014, 112, 047201.	7.8	53
9	Spin transfer torque generated magnetic droplet solitons (invited). <i>Journal of Applied Physics</i> , 2014, 115, .	2.5	47
10	Magnetic droplet nucleation boundary in orthogonal spin-torque nano-oscillators. <i>Nature Communications</i> , 2016, 7, 11209.	12.8	46
11	Three-dimensional graphene foam as a conductive scaffold for cardiac tissue engineering. <i>Journal of Biomaterials Applications</i> , 2019, 34, 74-85.	2.4	41
12	Nanostructured MnGa films on Si/SiO ₂ with 20.5 kOe room temperature coercivity. <i>Journal of Applied Physics</i> , 2011, 110, .	2.5	40
13	Role of boron diffusion in CoFeB/MgO magnetic tunnel junctions. <i>Physical Review B</i> , 2015, 91, .	3.2	40
14	Facile, scalable and transfer free vertical-MoS ₂ nanostructures grown on Au/SiO ₂ . <i>Applied Physics Letters</i> , 2011, 98, 172502.	6.1	37
15	Magnetic droplet solitons in orthogonal nano-contact spin torque oscillators. <i>Physica B: Condensed Matter</i> , 2014, 435, 84-87.	2.7	35
16	Parametric autoexcitation of magnetic droplet soliton perimeter modes. <i>Physical Review B</i> , 2017, 95, .	3.2	32
17	Tunable bandgap and spin-orbit coupling by composition control of MoS ₂ and MoO _x (x = 2 and 3) thin film compounds. <i>Materials and Design</i> , 2017, 122, 220-225.	7.0	32
18	Tunable spin configuration in [Co/Ni]-NiFe spring magnets. <i>Journal Physics D: Applied Physics</i> , 2013, 46, 125004.	2.8	31

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19	Dependence of the colored frequency noise in spin torque oscillators on current and magnetic field. Applied Physics Letters, 2014, 104, 092405.	3.3	28
20	Magnetic properties of crystalline mesoporous Zn-substituted copper ferrite synthesized under nanoconfinement in silica matrix. Microporous and Mesoporous Materials, 2014, 190, 346-355.	4.4	27
21	High saturation magnetization, low coercivity and fine YIG nanoparticles prepared by modifying co-precipitation method. Journal of Magnetism and Magnetic Materials, 2019, 476, 355-360.	2.3	26
22	Temperature dependence of magnetoimpedance in annealed Co-based ribbons. Journal of Non-Crystalline Solids, 2005, 351, 2983-2986.	3.1	25
23	Au/NiFe magnetoplasmonics: Large enhancement of magneto-optical kerr effect for magnetic field sensors and memories. Electronic Materials Letters, 2015, 11, 440-446.	2.2	25
24	Structural characterization and magnetoimpedance effect in amorphous and nanocrystalline AlGe-substituted FeSiBnBCu ribbons. Journal of Magnetism and Magnetic Materials, 2007, 312, 35-42.	2.3	24
25	Magnetic structure and anisotropy of $\text{Fe}_{1-x}\text{Co}_x$. Physical Review B, 2015, 91, .	3.2	24
26	Merging droplets in double nanocontact spin torque oscillators. Physical Review B, 2016, 93, .	3.2	24
27	[Co/Pd] CoPdNiFe spring magnets with highly tunable and uniform magnetization tilt angles. Journal of Magnetism and Magnetic Materials, 2012, 324, 3929-3932.	2.3	23
28	Current induced vortices in multi-nanocontact spin-torque devices. Journal of Applied Physics, 2011, 109, .	2.5	22
29	Depth-Dependent Magnetization Profiles of Hybrid Exchange Springs. Physical Review Applied, 2014, 2, .	3.8	22
30	Asymmetric magnetoimpedance effect in CoFeSiB amorphous ribbons by combination of field and current annealing for sensor applications. Superlattices and Microstructures, 2016, 96, 191-197.	3.1	22
31	High-performance porphyrin-like graphene quantum dots for immuno-sensing of Salmonella typhi. Biosensors and Bioelectronics, 2021, 188, 113334.	10.1	22
32	Reversal mode instability and magnetoresistance in perpendicular (Co/Pd)/Cu/(Co/Ni) pseudo-spin-valves. Applied Physics Letters, 2013, 103, .	3.3	21
33	Recent Advances in Nanocontact Spin-Torque Oscillators. IEEE Transactions on Magnetics, 2014, 50, 1-7.	2.1	21
34	Magnetic droplet solitons in orthogonal spin valves. Low Temperature Physics, 2015, 41, 833-837.	0.6	21
35	Temperature-dependent interlayer coupling in Ni/Co perpendicular pseudo-spin-valve structures. Physical Review B, 2011, 84, .	3.2	20
36	Magnetoimpedance exchange coupling in different magnetic strength thin layers electrodeposited on Co-based magnetic ribbons. Journal Physics D: Applied Physics, 2017, 50, 155001.	2.8	20

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37	ZnO thin layer/Fe-based ribbon/ZnO thin layer sandwich structure: Introduction of a new GMI optimization method. <i>Journal of Magnetism and Magnetic Materials</i> , 2020, 493, 165697.	2.3	20
38	Magnetoimpedance effect in current annealed Co-based amorphous wires. <i>Journal of Magnetism and Magnetic Materials</i> , 2006, 304, e706-e708.	2.3	19
39	Effect of magnetic field current annealing on the magnetoimpedance of Co-based ribbons. <i>Journal of Non-Crystalline Solids</i> , 2007, 353, 899-901.	3.1	19
40	Effect of nanoconfinement on the formation, structural transition and magnetic behavior of mesoporous copper ferrite. <i>Journal of Alloys and Compounds</i> , 2014, 598, 191-197.	5.5	18
41	Direct observation of magnetization dynamics generated by nanocontact spin-torque vortex oscillators. <i>Physical Review B</i> , 2016, 94, .	3.2	18
42	Extraordinary magneto-optical Kerr effect via MoS ₂ monolayer in Au/Py/MoS ₂ plasmonic cavity. <i>RSC Advances</i> , 2016, 6, 106591-106599.	3.6	17
43	Order of magnitude improvement of nano-contact spin torque nano-oscillator performance. <i>Nanoscale</i> , 2017, 9, 1896-1900.	5.6	17
44	Magnetic droplet soliton nucleation in oblique fields. <i>Physical Review B</i> , 2018, 97, .	3.2	17
45	Study of magnetoimpedance effect of Co-based amorphous ribbons after current annealing at various kinds of ambient pressure. <i>Journal of Non-Crystalline Solids</i> , 2009, 355, 2653-2656.	3.1	16
46	Microwave Signal Generation in Single-Layer Nano-Contact Spin Torque Oscillators. <i>IEEE Transactions on Magnetics</i> , 2013, 49, 4331-4334.	2.1	15
47	Magnetic graphene/Ni-nano-crystal hybrid for small field magnetoresistive effect synthesized via electrochemical exfoliation/deposition technique. <i>Journal of Materials Science: Materials in Electronics</i> , 2018, 29, 4171-4178.	2.2	15
48	Sulfurization of planar MoO ₃ optical crystals: Enhanced Raman response and surface porosity. <i>Materials Research Bulletin</i> , 2019, 118, 110527.	5.2	15
49	Pseudo Spin Valves Using a (111)-Textured D ₀₂ Mn ₂₋₃ Ga Fixed Layer. <i>IEEE Magnetics Letters</i> , 2010, 1, 2500104-2500104.	1.1	14
50	Promising memristive behavior in MoS ₂ /MoO ₂ /MoO ₃ scalable composite thin films. <i>Journal of Alloys and Compounds</i> , 2020, 835, 155291.	5.5	14
51	Structural Characterization and Magnetoimpedance Effect of Current Annealed Co-Based Amorphous Ribbons at Different Ambient. <i>Journal of Superconductivity and Novel Magnetism</i> , 2015, 28, 265-269.	1.8	13
52	Electrophoretic deposition of graphene oxide on magnetic ribbon: Toward high sensitive and selectable magnetoimpedance response. <i>Applied Surface Science</i> , 2018, 447, 423-429.	6.1	13
53	Simple One-Step Fabrication of Semiconductive Lateral Heterostructures Using Bipolar Electrodeposition. <i>Physica Status Solidi - Rapid Research Letters</i> , 2018, 12, 1800418.	2.4	13
54	Au/NiFe/M(Au, MoS ₂ , graphene) trilayer magnetoplasmonics DNA-hybridized sensors with high record of sensitivity. <i>Journal of Biomedical Optics</i> , 2017, 22, 1.	2.6	13

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55	Magnetoelastic coupling enabled tunability of magnon spin current generation in two-dimensional antiferromagnets. <i>Physical Review B</i> , 2021, 104, .	3.2	13
56	Magnetoimpedance effect in laser annealed amorphous ribbons. <i>Journal of Magnetism and Magnetic Materials</i> , 2006, 304, e633-e635.	2.3	12
57	A Nonvolatile Spintronic Memory Element with a Continuum of Resistance States. <i>Advanced Functional Materials</i> , 2013, 23, 1919-1922.	14.9	12
58	Superharmonic injection locking of nanocontact spin-torque vortex oscillators. <i>Physical Review B</i> , 2016, 94, .	3.2	12
59	Symmetry enhanced spin-Nernst effect in honeycomb antiferromagnetic transition metal trichalcogenide monolayers. <i>Physical Review B</i> , 2021, 103, .	3.2	12
60	Magnetoimpedance effect in surface pinned nanostructured Fe-based alloys. <i>Journal of Non-Crystalline Solids</i> , 2007, 353, 896-898.	3.1	11
61	Thick Double-Biased IrMn/NiFe/IrMn Planar Hall Effect Bridge Sensors. <i>IEEE Transactions on Magnetics</i> , 2014, 50, 1-4.	2.1	11
62	Magneto-optical response of Cu/NiFe/Cu nanostructure under surface plasmon resonance. <i>Journal of Magnetism and Magnetic Materials</i> , 2016, 420, 258-262.	2.3	11
63	Optimization of Magneto-Optical Kerr Effect in Cu/Fe/Cu Nano-structure. <i>Journal of Superconductivity and Novel Magnetism</i> , 2016, 29, 1517-1523.	1.8	11
64	Imaging magnetisation dynamics in nano-contact spin-torque vortex oscillators exhibiting gyrotropic mode splitting. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 164003.	2.8	11
65	High-Voltage, High-Current Electrical Switching Discharge Synthesis of ZnO Nanorods: A New Method toward Rapid and Highly Tunable Synthesis of Oxide Semiconductors in Open Air and Water for Optoelectronic Applications. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 46951-46966.	8.0	11
66	Spin-orbit-torque driven magnetoimpedance in Pt-layer/magnetic-ribbon heterostructures. <i>Applied Physics Letters</i> , 2017, 111, .	3.3	10
67	Miniaturized Optoelectronic SPR Sensor Based on Integrated Planar Waveguide and MIM Hot-Electron Photodetector. <i>IEEE Transactions on Electron Devices</i> , 2019, 66, 5215-5220.	3.0	10
68	Spin-Torque Oscillator in an Electromagnet Package. <i>IEEE Transactions on Magnetics</i> , 2012, 48, 4378-4381.	2.1	9
69	The effect of mechanical polishing on current annealed $\text{Co}_{67}\text{Fe}_{5}\text{Si}_{15}\text{B}_{13}$ amorphous ribbons: magnetoimpedance response. <i>EPJ Applied Physics</i> , 2014, 65, 10601.	0.7	9
70	Magnetoimpedance and Field Sensitivity of CoFeSiB Amorphous Ribbons under Applied Tensile Stress. <i>Journal of Superconductivity and Novel Magnetism</i> , 2015, 28, 2059-2062.	1.8	9
71	Facile synthesis of water-stable iron intercalated multi layered graphene nanocomposite with large magnetic moments as superior water pollutant remediators. <i>Synthetic Metals</i> , 2019, 255, 116105.	3.9	9
72	Effect of YIG nanoparticle size and clustering in proximity-induced magnetism in graphene/YIG composite probed with magnetoimpedance sensors: Towards improved functionality, sensitivity and proximity detection. <i>Composites Part B: Engineering</i> , 2019, 173, 106992.	12.0	9

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73	Controlling Magnetization of Gr/Ni Composite for Application in High-Performance Magnetic Sensors. ACS Applied Electronic Materials, 2019, 1, 2502-2513.	4.3	9
74	High-sensitive optoelectronic SPR biosensor based on Fano resonance in the integrated MIM junction and optical layers. Optics Communications, 2020, 477, 126323.	2.1	9
75	Chiral excitations of magnetic droplet solitons driven by their own inertia. Physical Review B, 2020, 101, .	3.2	9
76	Low defect and high electrical conductivity of graphene through plasma graphene healing treatment monitored with in situ optical emission spectroscopy. Scientific Reports, 2021, 11, 20334.	3.3	9
77	The influence of laser annealing in the presence of longitudinal weak magnetic field on asymmetrical magnetoimpedance response of CoFeSiB amorphous ribbons. Journal of Non-Crystalline Solids, 2008, 354, 5150-5152.	3.1	8
78	Thermoanalytical study of siloxane-polyurethane thermosets: Kinetic deconvolution of overlapping heterogeneous curing reactions. Progress in Organic Coatings, 2017, 112, 234-243.	3.9	8
79	Voltage-driven magneto-optical Kerr effect in a glass/Au/NiFe/dielectric/WS ₂ magneto-plasmonic structure. Journal of the Optical Society of America B: Optical Physics, 2017, 34, 2436.	2.1	8
80	Designing magnetic droplet soliton nucleation employing spin polarizer. Nanotechnology, 2018, 29, 155402.	2.6	8
81	Electrical and magneto-optical characterization of Py/MoS ₂ bilayer: A facile growth of magnetic-metal/semiconductor heterostructure. Materials Letters, 2020, 265, 127454.	2.6	8
82	Magnetic behaviors of amorphous Fe ₇₈ Si ₉ B ₁₃ thin films prepared by pulsed laser deposition. Journal of Non-Crystalline Solids, 2008, 354, 5178-5180.	3.1	7
83	Design of a double core linear magnetometer based on asymmetric magnetoimpedance effect in nanostructured Finemet ribbons. Journal of Non-Crystalline Solids, 2008, 354, 5175-5177.	3.1	7
84	Fine-tunable plasma nano-machining for fabrication of 3D hollow nanostructures: SERS application. Nanotechnology, 2017, 28, 315301.	2.6	7
85	Metal/metal-oxide thin layer heterostructure by laser treatment for memristor application. Materials Letters, 2020, 261, 127094.	2.6	7
86	Propagating Magnetic Droplet Solitons as Moveable Nanoscale Spin-Wave Sources with Tunable Direction of Emission. Physical Review Applied, 2020, 13, .	3.8	7
87	Nonlinear Optical Properties of Vertically-Aligned MoS ₂ Nanosheets. Journal of Electronic Materials, 2021, 50, 3645-3651.	2.2	7
88	Structural and magnetic study of metallo-organic YIG powder using 2-ethylhexanoate carboxylate-based precursors. Modern Physics Letters B, 2019, 33, 1950100.	1.9	6
89	Growth behavior of Cu, Ni and Cu/Ni electrodeposited microwires within porous Si. Surface and Coatings Technology, 2019, 364, 16-21.	4.8	6
90	Freezing and thawing magnetic droplet solitons. Nature Communications, 2022, 13, 2462.	12.8	6

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91	Effect of Microwave Annealing on the Structure and Magnetic Properties of Co-based Amorphous Ribbons. Journal of Superconductivity and Novel Magnetism, 2011, 24, 1263-1265.	1.8	5
92	Theory of the spin Hall effect in metal oxide structures. Physical Review B, 2019, 99, .	3.2	5
93	Two-dimensional graphene-plasmonic crystals for all-optical switch applications. Optical and Quantum Electronics, 2020, 52, 1.	3.3	5
94	Investigation of the Tunability of the Spin Configuration Inside Exchange Coupled Springs of Hard/Soft Magnets. IEEE Transactions on Magnetics, 2014, 50, 1-6.	2.1	4
95	Current induced multi-mode propagating spin waves in a spin transfer torque nano-contact with strong perpendicular magnetic anisotropy. Journal of Magnetism and Magnetic Materials, 2018, 450, 40-45.	2.3	4
96	Exchange bias training effect in IrMn-layer/ferromagnetic-ribbon heterostructures probed with magnetoimpedance. Superlattices and Microstructures, 2020, 147, 106710.	3.1	4
97	Morphological magnetostatic coupling in spin valves due to anisotropic self-affine interface roughness. Journal of Applied Physics, 2020, 127, 095301.	2.5	4
98	Optimization of Pt composition with magnetic thin films for magnetic field sensor application. Materials Letters, 2020, 276, 128184.	2.6	4
99	Triple mode-jumping in a spin torque oscillator. , 2013, , .		3
100	Low-current, narrow-linewidth microwave signal generation in NiMnSb based single-layer nanocontact spin-torque oscillators. Applied Physics Letters, 2016, 109, .	3.3	3
101	Magnetostatically driven domain replication in Ni/Co based perpendicular pseudo-spin-valves. Journal Physics D: Applied Physics, 2016, 49, 415004.	2.8	3
102	Fabrication and thermo-physical properties characterization of ethylene glycol-MoS ₂ heat exchange fluids. International Communications in Heat and Mass Transfer, 2017, 89, 185-189.	5.6	3
103	Reduction and control of permalloy thin film damping factor under microwave irradiation. Journal of Alloys and Compounds, 2017, 723, 960-966.	5.5	3
104	Facilitate Measurement of Electrochemical Reactions in Redox-Based Memristors by Simply Thickening the Electrolyte Layer. Physica Status Solidi - Rapid Research Letters, 2018, 12, 1800046.	2.4	3
105	Spin Hall effect originated from fractal surface. Journal of Physics Condensed Matter, 2018, 30, 195804.	1.8	3
106	Investigation of magnetic droplet solitons using x-ray holography with extended references. Scientific Reports, 2018, 8, 11533.	3.3	3
107	Tuning exchange-dominated spin-waves using lateral current spread in nanocontact spin-torque nano-oscillators. Journal of Magnetism and Magnetic Materials, 2019, 492, 165503.	2.3	3
108	A Domain Dynamic Model Study of Magneto-impedance Sensor in the Presence of Inhomogeneous Magnetic Fields. Journal of Superconductivity and Novel Magnetism, 2021, 34, 571-580.	1.8	3

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109	Tuning the dynamics of magnetic droplet solitons using dipolar interactions. <i>Physical Review B</i> , 2021, 103, .	3.2	3
110	Observation of the Dzyaloshinskiiâ€Moriya interaction via asymmetry in magnetization reversal. <i>Journal Physics D: Applied Physics</i> , 2020, 53, 465001.	2.8	3
111	Holographonics. <i>Materials Today</i> , 2016, 19, 368-369.	14.2	2
112	Current-driven second-harmonic domain wall resonance in ferromagnetic metal/nonmagnetic metal bilayers: A field-free method for spin Hall angle measurements. <i>Physical Review B</i> , 2017, 96, .	3.2	2
113	Demonstration of tunable complex refractive index of graphene covered one dimensional photonic crystals. <i>Optical and Quantum Electronics</i> , 2018, 50, 1.	3.3	2
114	Interface-induced negative differential resistance and memristive behavior in Gr/MoSe ₂ heterostructure. <i>Journal of Materials Science: Materials in Electronics</i> , 2022, 33, 6403-6410.	2.2	2
115	Magnetoimpedance of a ferromagnetic thin film in the presence of isotropic self-affine surface roughness cross correlations. <i>Applied Physics A: Materials Science and Processing</i> , 2022, 128, .	2.3	2
116	Dynamics of magnetic nano-flake vortices in Newtonian fluids. <i>Journal of Magnetism and Magnetic Materials</i> , 2016, 419, 547-552.	2.3	1
117	Temperature-induced coupledâ€decoupled transition in perpendicular pseudo spin valves. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 115003.	2.8	1
118	Oscillation in the electrical conductivity of a thick graphene oxide membrane. <i>Journal of Applied Physics</i> , 2021, 129, 235105.	2.5	1
119	Ferromagnetic properties of iron-porphyrin-like structurally deformed graphene. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2022, 139, 115165.	2.7	1
120	Sulfur reduction in MoSO composite towards fabrication of porous structures: physical and nonlinear optical effects. <i>Journal of Materials Science: Materials in Electronics</i> , 2021, 32, 23624-23630.	2.2	0