

# Seyed Majid Mohseni

## List of Publications by Year in descending order

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120  
papers

2,321  
citations

257101

24  
h-index

264894

42  
g-index

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.	6.0	237
2	XRD cation distribution and magnetic properties of mesoporous Zn-substituted CuFe <sub>2</sub> O <sub>4</sub> . <i>Ceramics International</i> , 2014, 40, 3619-3625.	2.3	102
3	Mutually synchronized bottom-up multi-nanocontact spin-torque oscillators. <i>Nature Communications</i> , 2013, 4, 2731.	5.8	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.	2.9	98
5	[Co/Pd]/NiFe exchange springs with tunable magnetization tilt angle. <i>Applied Physics Letters</i> , 2011, 98, 172502.	1.5	82
6	Plasmonic improvement photoresponse of vertical-MoS <sub>2</sub> nanostructure photodetector by Au nanoparticles. <i>Applied Surface Science</i> , 2019, 490, 165-171.	3.1	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.	1.2	75
8	Confined Dissipative Droplet Solitons in Spin-Valve Nanowires with Perpendicular Magnetic Anisotropy. <i>Physical Review Letters</i> , 2014, 112, 047201.	2.9	53
9	Spin transfer torque generated magnetic droplet solitons (invited). <i>Journal of Applied Physics</i> , 2014, 115, .	1.1	47
10	Magnetic droplet nucleation boundary in orthogonal spin-torque nano-oscillators. <i>Nature Communications</i> , 2016, 7, 11209.	5.8	46
11	Three-dimensional graphene foam as a conductive scaffold for cardiac tissue engineering. <i>Journal of Biomaterials Applications</i> , 2019, 34, 74-85.	1.2	41
12	Nanostructured MnGa films on Si/SiO <sub>2</sub> with 20.5 kOe room temperature coercivity. <i>Journal of Applied Physics</i> , 2011, 110, .	1.1	40
13	Role of boron diffusion in CoFeB/MgO magnetic tunnel junctions. <i>Physical Review B</i> , 2015, 91, .	1.1	40
14	Facile, scalable and transfer free vertical-MoS <sub>2</sub> nanostructures grown on Au/SiO <sub>2</sub> . <i>Applied Physics Letters</i> , 2011, 98, 172502.	3.1	37
15	Magnetic droplet solitons in orthogonal nano-contact spin torque oscillators. <i>Physica B: Condensed Matter</i> , 2014, 435, 84-87.	1.3	35
16	Parametric autoexcitation of magnetic droplet soliton perimeter modes. <i>Physical Review B</i> , 2017, 95, .	1.1	32
17	Tunable bandgap and spin-orbit coupling by composition control of MoS <sub>2</sub> and MoO <sub>x</sub> (x = 2 and 3) thin film compounds. <i>Materials and Design</i> , 2017, 122, 220-225.	3.3	32
18	Tunable spin configuration in [Co/Ni]-NiFe spring magnets. <i>Journal Physics D: Applied Physics</i> , 2013, 46, 125004.	1.3	31



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37	ZnO thin layer/Fe-based ribbon/ZnO thin layer sandwich structure: Introduction of a new GMI optimization method. Journal of Magnetism and Magnetic Materials, 2020, 493, 165697.	1.0	20
38	Magnetoimpedance effect in current annealed Co-based amorphous wires. Journal of Magnetism and Magnetic Materials, 2006, 304, e706-e708.	1.0	19
39	Effect of magnetic field current annealing on the magnetoimpedance of Co-based ribbons. Journal of Non-Crystalline Solids, 2007, 353, 899-901.	1.5	19
40	Effect of nanoconfinement on the formation, structural transition and magnetic behavior of mesoporous copper ferrite. Journal of Alloys and Compounds, 2014, 598, 191-197.	2.8	18
41	Direct observation of magnetization dynamics generated by nanocontact spin-torque vortex oscillators. Physical Review B, 2016, 94, .	1.1	18
42	Extraordinary magneto-optical Kerr effect via MoS <sub>2</sub> monolayer in Au/Py/MoS <sub>2</sub> plasmonic cavity. RSC Advances, 2016, 6, 106591-106599.	1.7	17
43	Order of magnitude improvement of nano-contact spin torque nano-oscillator performance. Nanoscale, 2017, 9, 1896-1900.	2.8	17
44	Magnetic droplet soliton nucleation in oblique fields. Physical Review B, 2018, 97, .	1.1	17
45	Study of magnetoimpedance effect of Co-based amorphous ribbons after current annealing at various kinds of ambient pressure. Journal of Non-Crystalline Solids, 2009, 355, 2653-2656.	1.5	16
46	Microwave Signal Generation in Single-Layer Nano-Contact Spin Torque Oscillators. IEEE Transactions on Magnetics, 2013, 49, 4331-4334.	1.2	15
47	Magnetic graphene/Ni-nano-crystal hybrid for small field magnetoresistive effect synthesized via electrochemical exfoliation/deposition technique. Journal of Materials Science: Materials in Electronics, 2018, 29, 4171-4178.	1.1	15
48	Sulfurization of planar MoO <sub>3</sub> optical crystals: Enhanced Raman response and surface porosity. Materials Research Bulletin, 2019, 118, 110527.	2.7	15
49	Pseudo Spin Valves Using a (111)-Textured D <sub>02</sub> Mn <sub>2.3-2.4</sub> Ga Fixed Layer. IEEE Magnetics Letters, 2010, 1, 2500104-2500104.	0.6	14
50	Promising memristive behavior in MoS <sub>2</sub> /MoO <sub>2</sub> /MoO <sub>3</sub> scalable composite thin films. Journal of Alloys and Compounds, 2020, 835, 155291.	2.8	14
51	Structural Characterization and Magnetoimpedance Effect of Current Annealed Co-Based Amorphous Ribbons at Different Ambient. Journal of Superconductivity and Novel Magnetism, 2015, 28, 265-269.	0.8	13
52	Electrophoretic deposition of graphene oxide on magnetic ribbon: Toward high sensitive and selectable magnetoimpedance response. Applied Surface Science, 2018, 447, 423-429.	3.1	13
53	Simple One-Step Fabrication of Semiconductive Lateral Heterostructures Using Bipolar Electrodeposition. Physica Status Solidi - Rapid Research Letters, 2018, 12, 1800418.	1.2	13
54	Au/NiFe/M(Au, MoS <sub>2</sub> , graphene) trilayer magnetoplasmonics DNA-hybridized sensors with high record of sensitivity. Journal of Biomedical Optics, 2017, 22, 1.	1.4	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, .	1.1	13
56	Magnetoimpedance effect in laser annealed amorphous ribbons. <i>Journal of Magnetism and Magnetic Materials</i> , 2006, 304, e633-e635.	1.0	12
57	A Nonvolatile Spintronic Memory Element with a Continuum of Resistance States. <i>Advanced Functional Materials</i> , 2013, 23, 1919-1922.	7.8	12
58	Superharmonic injection locking of nanocontact spin-torque vortex oscillators. <i>Physical Review B</i> , 2016, 94, .	1.1	12
59	Symmetry enhanced spin-Nernst effect in honeycomb antiferromagnetic transition metal trichalcogenide monolayers. <i>Physical Review B</i> , 2021, 103, .	1.1	12
60	Magnetoimpedance effect in surface pinned nanostructured Fe-based alloys. <i>Journal of Non-Crystalline Solids</i> , 2007, 353, 896-898.	1.5	11
61	Thick Double-Biased IrMn/NiFe/IrMn Planar Hall Effect Bridge Sensors. <i>IEEE Transactions on Magnetics</i> , 2014, 50, 1-4.	1.2	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.	1.0	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.	0.8	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.	1.3	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 &amp; Interfaces</i> , 2021, 13, 46951-46966.	4.0	11
66	Spin-orbit-torque driven magnetoimpedance in Pt-layer/magnetic-ribbon heterostructures. <i>Applied Physics Letters</i> , 2017, 111, .	1.5	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.	1.6	10
68	Spin-Torque Oscillator in an Electromagnet Package. <i>IEEE Transactions on Magnetics</i> , 2012, 48, 4378-4381.	1.2	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.	0.3	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.	0.8	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.	2.1	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.	5.9	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.	2.0	9
74	High-sensitive optoelectronic SPR biosensor based on Fano resonance in the integrated MIM junction and optical layers. Optics Communications, 2020, 477, 126323.	1.0	9
75	Chiral excitations of magnetic droplet solitons driven by their own inertia. Physical Review B, 2020, 101, .	1.1	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.	1.6	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.	1.5	8
78	Thermoanalytical study of siloxane-polyurethane thermosets: Kinetic deconvolution of overlapping heterogeneous curing reactions. Progress in Organic Coatings, 2017, 112, 234-243.	1.9	8
79	Voltage-driven magneto-optical Kerr effect in a glass/Au/NiFe/dielectric/WS <sub>2</sub> magneto-plasmonic structure. Journal of the Optical Society of America B: Optical Physics, 2017, 34, 2436.	0.9	8
80	Designing magnetic droplet soliton nucleation employing spin polarizer. Nanotechnology, 2018, 29, 155402.	1.3	8
81	Electrical and magneto-optical characterization of Py/MoS <sub>2</sub> bilayer: A facile growth of magnetic-metal/semiconductor heterostructure. Materials Letters, 2020, 265, 127454.	1.3	8
82	Magnetic behaviors of amorphous Fe <sub>78</sub> Si <sub>9</sub> B <sub>13</sub> thin films prepared by pulsed laser deposition. Journal of Non-Crystalline Solids, 2008, 354, 5178-5180.	1.5	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.	1.5	7
84	Fine-tunable plasma nano-machining for fabrication of 3D hollow nanostructures: SERS application. Nanotechnology, 2017, 28, 315301.	1.3	7
85	Metal/metal-oxide thin layer heterostructure by laser treatment for memristor application. Materials Letters, 2020, 261, 127094.	1.3	7
86	Propagating Magnetic Droplet Solitons as Moveable Nanoscale Spin-Wave Sources with Tunable Direction of Emission. Physical Review Applied, 2020, 13, .	1.5	7
87	Nonlinear Optical Properties of Vertically-Aligned MoS <sub>2</sub> Nanosheets. Journal of Electronic Materials, 2021, 50, 3645-3651.	1.0	7
88	Structural and magnetic study of metallo-organic YIG powder using 2-ethylhexanoate carboxylate-based precursors. Modern Physics Letters B, 2019, 33, 1950100.	1.0	6
89	Growth behavior of Cu, Ni and Cu/Ni electrodeposited microwires within porous Si. Surface and Coatings Technology, 2019, 364, 16-21.	2.2	6
90	Freezing and thawing magnetic droplet solitons. Nature Communications, 2022, 13, 2462.	5.8	6

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91	Effect of Microwave Annealing on the Structure and Magnetic Properties of Co-based Amorphous Ribbons. <i>Journal of Superconductivity and Novel Magnetism</i> , 2011, 24, 1263-1265.	0.8	5
92	Theory of the spin Hall effect in metal oxide structures. <i>Physical Review B</i> , 2019, 99, .	1.1	5
93	Two-dimensional graphene-plasmonic crystals for all-optical switch applications. <i>Optical and Quantum Electronics</i> , 2020, 52, 1.	1.5	5
94	Investigation of the Tunability of the Spin Configuration Inside Exchange Coupled Springs of Hard/Soft Magnets. <i>IEEE Transactions on Magnetics</i> , 2014, 50, 1-6.	1.2	4
95	Current induced multi-mode propagating spin waves in a spin transfer torque nano-contact with strong perpendicular magnetic anisotropy. <i>Journal of Magnetism and Magnetic Materials</i> , 2018, 450, 40-45.	1.0	4
96	Exchange bias training effect in IrMn-layer/ferromagnetic-ribbon heterostructures probed with magnetoimpedance. <i>Superlattices and Microstructures</i> , 2020, 147, 106710.	1.4	4
97	Morphological magnetostatic coupling in spin valves due to anisotropic self-affine interface roughness. <i>Journal of Applied Physics</i> , 2020, 127, 095301.	1.1	4
98	Optimization of Pt composition with magnetic thin films for magnetic field sensor application. <i>Materials Letters</i> , 2020, 276, 128184.	1.3	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. <i>Applied Physics Letters</i> , 2016, 109, .	1.5	3
101	Magnetostatically driven domain replication in Ni/Co based perpendicular pseudo-spin-valves. <i>Journal Physics D: Applied Physics</i> , 2016, 49, 415004.	1.3	3
102	Fabrication and thermo-physical properties characterization of ethylene glycol-MoS <sub>2</sub> heat exchange fluids. <i>International Communications in Heat and Mass Transfer</i> , 2017, 89, 185-189.	2.9	3
103	Reduction and control of permalloy thin film damping factor under microwave irradiation. <i>Journal of Alloys and Compounds</i> , 2017, 723, 960-966.	2.8	3
104	Facilitate Measurement of Electrochemical Reactions in Redox-Based Memristors by Simply Thickening the Electrolyte Layer. <i>Physica Status Solidi - Rapid Research Letters</i> , 2018, 12, 1800046.	1.2	3
105	Spin Hall effect originated from fractal surface. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 195804.	0.7	3
106	Investigation of magnetic droplet solitons using x-ray holography with extended references. <i>Scientific Reports</i> , 2018, 8, 11533.	1.6	3
107	Tuning exchange-dominated spin-waves using lateral current spread in nanocontact spin-torque nano-oscillators. <i>Journal of Magnetism and Magnetic Materials</i> , 2019, 492, 165503.	1.0	3
108	A Domain Dynamic Model Study of Magneto-impedance Sensor in the Presence of Inhomogeneous Magnetic Fields. <i>Journal of Superconductivity and Novel Magnetism</i> , 2021, 34, 571-580.	0.8	3

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109	Tuning the dynamics of magnetic droplet solitons using dipolar interactions. <i>Physical Review B</i> , 2021, 103, .	1.1	3
110	Observation of the Dzyaloshinskiiâ€Moriya interaction via asymmetry in magnetization reversal. <i>Journal Physics D: Applied Physics</i> , 2020, 53, 465001.	1.3	3
111	Holographonics. <i>Materials Today</i> , 2016, 19, 368-369.	8.3	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, .	1.1	2
113	Demonstration of tunable complex refractive index of graphene covered one dimensional photonic crystals. <i>Optical and Quantum Electronics</i> , 2018, 50, 1.	1.5	2
114	Interface-induced negative differential resistance and memristive behavior in Gr/MoSe <sub>2</sub> heterostructure. <i>Journal of Materials Science: Materials in Electronics</i> , 2022, 33, 6403-6410.	1.1	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, .	1.1	2
116	Dynamics of magnetic nano-flake vortices in Newtonian fluids. <i>Journal of Magnetism and Magnetic Materials</i> , 2016, 419, 547-552.	1.0	1
117	Temperature-induced coupledâ€decoupled transition in perpendicular pseudo spin valves. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 115003.	1.3	1
118	Oscillation in the electrical conductivity of a thick graphene oxide membrane. <i>Journal of Applied Physics</i> , 2021, 129, 235105.	1.1	1
119	Ferromagnetic properties of iron-porphyrin-like structurally deformed graphene. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2022, 139, 115165.	1.3	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.	1.1	0