Pawan Tyagi

List of Publications by Year
in descending order

55 papers	782 citations	516710 16 h-index	526287 27 g-index
60 all docs	60 docs citations	60 times ranked	699 citing authors

#	Article	IF	Citations
1	Reducing the roughness of internal surface of an additive manufacturing produced 316 steel component by chempolishing and electropolishing. Additive Manufacturing, 2019, 25, 32-38.	3.0	96
2	Multilayer edge molecular electronics devices: a review. Journal of Materials Chemistry, 2011, 21, 4733.	6.7	60
3	Reversible Actuation of Microstructures by Surfaceâ€Chemical Modification of Thinâ€Film Bilayers. Advanced Materials, 2010, 22, 407-410.	21.0	55
4	Reducing surface roughness by chemical polishing of additively manufactured 3D printed 316 stainless steel components. International Journal of Advanced Manufacturing Technology, 2019, 100, 2895-2900.	3.0	54
5	Molecular Electrodes at the Exposed Edge of Metal/Insulator/Metal Trilayer Structures. Journal of the American Chemical Society, 2007, 129, 4929-4938.	13.7	53
6	Patternable Nanowire Sensors for Electrochemical Recording of Dopamine. Analytical Chemistry, 2009, 81, 9979-9984.	6.5	50
7	Self-Assembly Based on Chromium/Copper Bilayers. Journal of Microelectromechanical Systems, 2009, 18, 784-791.	2.5	46
8	Paramagnetic molecule induced strong antiferromagnetic exchange coupling on a magnetic tunnel junction based molecular spintronics device. Nanotechnology, 2015, 26, 305602.	2.6	30
9	Quantitative analysis of parallel nanowire array assembly by dielectrophoresis. Nanoscale, 2011, 3, 1059-1065.	5.6	25
10	Large resistance change on magnetic tunnel junction based molecular spintronics devices. Journal of Magnetism and Magnetic Materials, 2018, 453, 186-192.	2.3	22
11	Mechanism of ultrathin tunnel barrier failure due to mechanical-stress-induced nanosized hillocks and voids. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, 517-521.	1.2	21
12	Magnetic tunnel junction based molecular spintronics devices exhibiting current suppression at room temperature. Organic Electronics, 2019, 64, 188-194.	2.6	21
13	Roughness Reduction of Additively Manufactured Steel by Electropolishing. International Journal of Advanced Manufacturing Technology, 2020, 106, 1337-1344.	3.0	21
14	Magnetic force microscopy revealing long range molecule impact on magnetic tunnel junction based molecular spintronics devices. Organic Electronics, 2019, 75, 105421.	2.6	19
15	Exploring room-temperature transport of single-molecule magnet-based molecular spintronics devices using the magnetic tunnel junction as a device platform. RSC Advances, 2020, 10, 13006-13015.	3.6	19
16	Addressing the challenges of using ferromagnetic electrodes in the magnetic tunnel junction-based molecular spintronics devices. Journal of Nanoparticle Research, 2015, 17, 1.	1.9	17
17	Molecular spintronics devices exhibiting properties of a solar cell. Nanotechnology, 2019, 30, 495401.	2.6	17
18	MOLECULAR SPIN DEVICES: CURRENT UNDERSTANDING AND NEW TERRITORIES. Nano, 2009, 04, 325-338.	1.0	16

#	Article	IF	Citations
19	Advantages of Prefabricated Tunnel Junction-Based Molecular Spintronics Devices. Nano, 2015, 10, 1530002.	1.0	16
20	Fabrication of tunnel junction-based molecular electronics and spintronics devices. Journal of Nanoparticle Research, 2012, 14, 1.	1.9	11
21	Taguchi Design of Experiment for the Optimization of Electrochemical Polishing of Metal Additive Manufacturing Components. , 2016, , .		9
22	Impact of ferromagnetic electrode length and thickness on Magnetic Tunnel Junction-Based Molecular Spintronic Devices (MTJMSD). Organic Electronics, 2022, 102, 106429.	2.6	8
23	Catalytic Action of Gold and Copper Crystals in the Growth of Carbon Nanotubes. Journal of Nanoscience and Nanotechnology, 2011, 11, 3609-3615.	0.9	7
24	Ultrathin TaOx film based photovoltaic device. Thin Solid Films, 2011, 519, 2355-2361.	1.8	7
25	Molecule Induced Strong Coupling between Ferromagnetic Electrodes of a Molecular Spintronics Device. Materials Science Forum, 2012, 736, 32-54.	0.3	7
26	Interaction between magnetic molecules and two ferromagnetic electrodes of a magnetic tunnel junction (MTJ). Journal of Magnetism and Magnetic Materials, 2021, 529, 167902.	2.3	7
27	Molecular coupling competing with defects within insulator of the magnetic tunnel junction-based molecular spintronics devices. Scientific Reports, 2021, 11, 17128.	3.3	7
28	Spin state of a single-molecule magnet (SMM) creating long-range ordering on ferromagnetic layers of a magnetic tunnel junction â€“ a Monte Carlo study. RSC Advances, 2021, 11, 32275-32285.	3.6	6
29	Monte Carlo simulation to study the effect of molecular spin state on the spatio-temporal evolution of equilibrium magnetic properties of magnetic tunnel junction based molecular spintronics devices. AIP Advances, 2021, 11, 015340.	1.3	6
30	Molecular electronics and spintronics devices produced by the plasma oxidation of photolithographically defined metal electrode. Applied Physics A: Materials Science and Processing, 2012, 108, 529-536.	2.3	5
31	Monte Carlo and Experimental Magnetic Studies of Molecular Spintronics Devices. Nano, 2015, 10, 1550056.	1.0	5
32	Electrochemically grown rough-textured nanowires. Journal of Nanoparticle Research, 2010, 12, 1065-1072.	1.9	4
33	Nanoscale Tantalum layer impacting magnetic properties of tunnel junction-based molecular devices. MRS Communications, 2018, 8, 1024-1028.	1.8	4
34	Selective lateral ZnO nanowire growth by surface diffusion on nanometer scaleâ€“patterned alumina on silicon. Journal of Materials Research, 2011, 26, 2224-2231.	2.6	3
35	Nanowire-based surface-enhanced Raman spectroscopy (SERS) for chemical warfare simulants. Proceedings of SPIE, 2012, , .	0.8	3
36	Impact of direct exchange coupling via the insulator on the magnetic tunnel junction based molecular spintronics devices with competing molecule induced inter-electrode coupling. AIP Advances, 2021, 11, 015228.	1.3	3

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37	Easy axis anisotropy creating high contrast magnetic zones on magnetic tunnel junctions based molecular spintronics devices (MTJMSD). Scientific Reports, 2022, 12, 5721.	3.3	3
38	Insulator Film Thickness to Fix the Spacing between Electrodes to Molecular Length Scale. , 2007, , .		2
39	Taguchi Design of Experiment Enabling the Reduction of Spikes on the Sides of Patterned Thin Films for Tunnel Junction Fabrication. MRS Advances, 2017, 2, 3025-3030.	0.9	2
40	Dramatic effect of electrode type on tunnel junction based molecular spintronic devices. Organic Electronics, 2022, 106, 106526.	2.6	2
41	Scanning surface-enhanced Raman spectroscopy (SERS) of chemical agent simulants on templated Au-Ag nanowire substrates. , 2009, , .		1
42	Dielectrophoretic assembly of ordered nanostructures: Harnessing thermal randomness and inter-particle interactions. , 2012, , .		1
43	Molecular Magnet Induced Transformative Effects in Molecular Spintronics Devices: A Monte Carlo Study. Materials Research Society Symposia Proceedings, 2013, 1508, 1.	0.1	1
44	Patternable Rough Textured Gold Microwire for Neurochemical Sensing. MRS Advances, 2016, 1, 717-721.	0.9	1
45	GaAs(100) Surface Passivation with Sulfide and Fluoride Ions. MRS Advances, 2017, 2, 2915-2920.	0.9	1
46	A Monte Carlo Study of Molecular Spintronics Devices. , 2013, , .		1
47	Spatial influence of paramagnetic molecules on magnetic tunnel junction-based molecular spintronic devices (MTJMSD). Chemical Physics Letters, 2022, 800, 139667.	2.6	1
48	Room Temperature Current Suppression on Magnetic Tunnel Junction Based Molecular Spintronics Devices. Materials Research Society Symposia Proceedings, 2013, 1507, 1.	0.1	0
49	Spin Photovoltaic Effect on Molecule Coupled Ferromagnetic Films of a Magnetic Tunnel Junction. , 2013, , .		0
50	Tunnel junction testbed based molecular devices. , 2014, , .		0
51	A Monte Carlo study of molecular nanostructure based spintronics devices. , 2014, , .		0
52	Addressing the Challenges of Using Ferromagnetic Electrodes in Molecular Devices. MRS Advances, 2016, 1, 483-488.	0.9	0
53	Study of Anisotropy on Ferromagnetic Electrodes of a Magnetic Tunnel Junction-Based Molecular Spintronics Device (MTJMSD). , 2021, , .		0
54	The Hysteresis LOOP Studies Of Magnetic TunnelJunction-basedMolecular Spintronics Devices (mtjmsd) Employing Monte Carlo Simulations. , 2021, , .		0

#	Article	IF	Citations
55	Impact of Spin Fluctuation on the magnetic properties of Magnetic Tunnel Junction-Based Molecular Spintronic Device (MTJMSD). , 2021, , .		0