Rahul Singhal

List of Publications by Year
in descending order

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102	1,449	361413	395702
papers	citations	20 h-index	33 g-index

102	102	102	1293
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ripple patterns over oblique Ar+ sputtered SiC/Si(1 1 1) surfaces: Role of preferential sputtering. Materials Letters, 2022, 307, 131011.	2.6	4
2	220ÂkeV Ag ion irradiation-induced surface plasmon resonance shift of gold nanoparticles in fullerene C60 matrix. Materials Letters, 2022, 308, 131293.	2.6	4
3	Microâ€morphological investigations on wettability of Alâ€incorporated câ€Si thin films using statistical surface roughness parameters. Surface and Interface Analysis, 2022, 54, 174-186.	1.8	3
4	ZnO based RRAM performance enhancement by 100 MeV Ag9+ irradiation. Applied Surface Science Advances, 2022, 9, 100260.	6.8	1
5	Unveiling Temperature-Mediated Dual-Band Edge in TiO2 Nanotubes with Enhanced Photocatalytic Effect. Journal of Physical Chemistry C, 2021, 125, 4846-4859.	3.1	10
6	High-efficiency fullerene free ternary organic solar cells based with two small molecules as donor. Optical Materials, 2021, 118, 111217.	3.6	2
7	Influence of fractal and multifractal morphology on the wettability and reflectivity of crystalline-Si thin film surfaces as photon absorber layers for solar cell. Journal of Applied Physics, 2021, 129, .	2.5	12
8	Tuning of SPR and Structural Properties of Cu-Fullerene Nanocomposite. Advances in Sustainability Science and Technology, 2021, , 123-135.	0.6	0
9	Thickness effect on scaling law and surface properties of nano-dimensional SnTe thin films. Journal of Applied Physics, 2021, 130, .	2.5	4
10	Surface patterning of argon ion sputtered low density polyethylene. Materials Letters, 2021, , 131375.	2.6	0
11	Optical and structural modifications of copper-fullerene nanocomposite thin films by 120â€MeV Au ion irradiation. Radiation Physics and Chemistry, 2020, 166, 108442.	2.8	6
12	Phase transformation by the irradiation with swift heavy ions on vanadium oxide thin films. Radiation Effects and Defects in Solids, 2020, 175, 450-457.	1.2	1
13	Enhancing Non-linear Response of Fullerene via Incorporation of Gold Nanoparticles. Plasmonics, 2020, 15, 361-370.	3.4	1
14	Morphology Controlled CuO Nanostructures for Efficient Catalytic Reduction of 4-Nitrophenol. Catalysis Letters, 2020, 150, 471-481.	2.6	21
15	Nano-scale depth-varying recrystallization of oblique Ar+ sputtered Si(111) layers. Scientific Reports, 2020, 10, 11905.	3.3	2
16	Structural, Optical and Decay Properties of Zinc(II) 8-Hydroxyquinoline and Its Thin Film. Journal of Electronic Materials, 2020, 49, 6096-6106.	2.2	8
17	Efficacy of ion irradiation in strengthening the surface plasmon resonance effect of Au nanoparticles. Surfaces and Interfaces, 2020, 21, 100633.	3.0	3
18	RF magnetron sputtered Ag-Cu2O-CuO nanocomposite thin films with highly enhanced photocatalytic and catalytic performance. Applied Surface Science, 2020, 517, 146169.	6.1	38

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19	Metal-fullerene multilayer thin films for plasmonic properties. Materials Today: Proceedings, 2020, 32, 385-391.	1.8	4
20	An assessment on crystallization phenomena of Si in Al/a-Si thin films via thermal annealing and ion irradiation. RSC Advances, 2020, 10, 4414-4426.	3.6	9
21	Mapping the local structure of fullerene C60 and Cuâ€“C60 nanocomposite thin films by gamma rays irradiation. Materials Chemistry and Physics, 2020, 252, 123192.	4.0	7
22	Structural Transformations in Fullerene C70 Thin Film by 65ÂMeV Ni Ion Beam Irradiation. Springer Proceedings in Energy, 2020, , 149-157.	0.3	0
23	Tuning of structural and optical properties of Au nanoparticles in amorphous-carbon. Physica Scripta, 2020, 95, 105002.	2.5	1
24	Synergistic Effect of Singly Charged Oxygen Vacancies and Ligand Field for Regulating Transport Properties of Resistive Switching Memories. Journal of Physical Chemistry C, 2019, 123, 26812-26822.	3.1	11
25	Electronic excitation induced modifications of Au-Carbon nanocomposite. Materials Research Express, 2019, 6, 115004.	1.6	0
26	Surface patterning of high density polyethylene by oblique argon ion irradiation. Journal of Applied Physics, 2019, 126, .	2.5	5
27	Aluminum induced crystallization of amorphous Si: Thermal annealing and ion irradiation process. Journal of Non-Crystalline Solids, 2019, 523, 119628.	3.1	13
28	Influence of thermal treatment on the structural and optical properties of methoxy-substituted 2, 4-diphenyl quinoline. Applied Physics A: Materials Science and Processing, 2019, 125, 1.	2.3	2
29	Thermally induced plasmonic resonance of Cu nanoparticles in fullerene C70 matrix. Vacuum, 2019, 159, 423-429.	3.5	5
30	Self-assembled nano-dots structures on Si(111) surfaces by oblique angle sputter-deposition. Nanotechnology, 2019, 30, 385301.	2.6	8
31	Temperature induced surface plasmon resonance in Au/a-C nanocomposite thin film. Vacuum, 2019, 167, 40-46.	3.5	6
32	Ion irradiation (low & high energy ion) induced surface plasmon resonance in Cu(10%)C70 nanocomposite thin films. Materials Research Express, 2019, 6, 085626.	1.6	3
33	Investigation of sequential thermal annealing effect on Cu-C70 nanocomposite thin film. Thin Solid Films, 2019, 680, 75-80.	1.8	7
34	Enhanced room temperature ferromagnetism and green photoluminescence in Cu doped ZnO thin film synthesised by neutral beam sputtering. Scientific Reports, 2019, 9, 6675.	3.3	86
35	Evolution of SPR in 120ÂMeV silver ion irradiated Cu (18%) C60 nanocomposites thin films. Journal of Materials Science: Materials in Electronics, 2019, 30, 8301-8311.	2.2	2
36	Large Tuning of Surface Plasmon Resonance of Auâ€“Fullerene Nanocomposite. Electronic Materials Letters, 2019, 15, 111-118.	2.2	7

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37	Study on Cu-fullerene C₇₀ nanocomposite thin films under electronic excitations. Materials Research Express, 2019, 6, 015027.	1.6	3
38	Synthesis and modification of Cu-C70 nanocomposite for plasmonic applications. Applied Surface Science, 2019, 466, 615-627.	6.1	6
39	SHI irradiation induced modifications of plasmonic properties of Ag-TiO₂ thin film and study using FDTD simulation. Materials Science-Poland, 2019, 37, 373-380.	1.0	3
40	Optical properties of Cu-C70nanocomposite under low energy ion irradiation. Materials Research Express, 2018, 5, 035044.	1.6	11
41	Effect of high energy ions on the electrical and morphological properties of Poly(3-Hexylthiophene) (P3HT) thin film. Physica B: Condensed Matter, 2018, 537, 306-313.	2.7	5
42	Thermal-induced SPR tuning of Ag-ZnO nanocomposite thin film for plasmonic applications. Applied Surface Science, 2018, 439, 919-926.	6.1	13
43	Low energy ion irradiation studies of fullerene C 70 thin films â€“ An emphasis on mapping the local structure modifications. Journal of Physics and Chemistry of Solids, 2018, 117, 204-214.	4.0	9
44	Thermal-induced structural and optical investigations of Ag ZnO nanocomposite thin films. Superlattices and Microstructures, 2018, 119, 72-80.	3.1	4
45	Structural and optical investigations of 120â€¯keV Ag ion implanted ZnO thin films. Thin Solid Films, 2018, 653, 377-383.	1.8	13
46	Effect of crystallographic orientation on structural and mechanical behaviors of Niâ€“Ti thin films irradiated by Ag7+ ions. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	2.3	4
47	Effect of Ag Ion Implantation on SPR of Cu-C60 Nanocomposite Thin Film. Plasmonics, 2018, 13, 669-679.	3.4	16
48	Synthesis and characterization of Cu-C60 plasmonic nanocomposite. Physica B: Condensed Matter, 2018, 550, 225-234.	2.7	5
49	Reduced Energy Offsets and Low Energy Losses Lead to Efficient (â¼10% at 1 sun) Ternary Organic Solar Cells. ACS Energy Letters, 2018, 3, 2418-2424.	17.4	20
50	The modification in the photoâ€“physical properties via transformation of synthetic dihydrated Znq2 to anhydrous (Znq2)4 tetramer by sublimation process. Optical Materials, 2018, 82, 175-189.	3.6	6
51	Study on copperâ€“fullerene nanocomposite irradiated by 120â€¯MeV Au ions. Radiation Physics and Chemistry, 2018, 151, 276-282.	2.8	5
52	Low energy ion irradiation induced SPR of Cu-Fullerene C70 nanocomposite thin films. Journal of Alloys and Compounds, 2018, 767, 733-744.	5.5	13
53	Investigation of C60 and C70 fullerenes under low energy ion impact. Journal of Materials Science: Materials in Electronics, 2018, 29, 14762-14773.	2.2	5
54	Impact of SHI on structural and mechanical behavior of intermetallic NiTi thin films. Physica B: Condensed Matter, 2018, 546, 80-88.	2.7	3

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55	Phase stability and transformation of the Î± to Îµ-phase of Alq3 phosphor after thermal treatment and their photo-physical properties. Journal of Physics and Chemistry of Solids, 2018, 121, 396-408.	4.0	10
56	Swift heavy ion induced optical and structural modifications in RF sputtered nanocrystalline ZnO thin film. Indian Journal of Physics, 2017, 91, 547-554.	1.8	16
57	Study on swift heavy ions induced modifications of Ag-ZnO nanocomposite thin film. Superlattices and Microstructures, 2017, 103, 195-204.	3.1	12
58	Influence of high energy ion irradiation on fullerene derivative (PCBM) thin films. Nuclear Instruments & Methods in Physics Research B, 2017, 396, 5-10.	1.4	6
59	Modulation of microstructure and interface properties of co-sputter derived Hf1â^'xTixO2 thin films with various Ti content. Journal of Materials Science: Materials in Electronics, 2017, 28, 12408-12414.	2.2	3
60	Fabrication, characterization and annealing of polymer-fullerene bulk heterojunction organic solar cells. AIP Conference Proceedings, 2017, , .	0.4	1
61	Electronic excitation induced modifications of structural, electrical and optical properties of Cu-C 60 nanocomposite thin films. Nuclear Instruments & Methods in Physics Research B, 2017, 407, 73-79.	1.4	8
62	Synthesis, characterization and thermally induced structural transformation of Au-C 70 nanocomposite thin films. Vacuum, 2017, 142, 146-153.	3.5	11
63	Effect of low fluence radiation on nanocomposite thin films of Cu nanoparticles embedded in fullerene C 60. Vacuum, 2017, 142, 5-12.	3.5	24
64	A comprehensive study of SHI irradiated fullerene C 60 thin films: Polymerization to amorphization. Synthetic Metals, 2017, 227, 93-99.	3.9	3
65	Investigations on the Thermal Stability of Fullerene-Based (Ag-C70) Nanocomposite Thin Films. Plasmonics, 2017, 12, 1701-1708.	3.4	14
66	Ion track in fullerene C70 thin film: Dependence of electronic energy loss. AIP Conference Proceedings, 2017, , .	0.4	0
67	Ag implantation-induced modification of Niâ€“Ti shape memory alloy thin films. Radiation Effects and Defects in Solids, 2017, 172, 629-642.	1.2	5
68	Thermal annealing and SHI irradiation induced modifications in sandwiched structured Carbon-gold-Carbon (a-C/Au/a-C) nanocomposite thin film. Nuclear Instruments & Methods in Physics Research B, 2017, 407, 118-124.	1.4	6
69	Ion irradiation induced modifications of P3HT: A donor material for organic photovoltaic devices. Vacuum, 2017, 135, 73-85.	3.5	18
70	Synthesis and characterizations of Au-C60 nanocomposite. Journal of Alloys and Compounds, 2017, 696, 9-15.	5.5	28
71	Synthesis of Ag metallic nanoparticles by 120â€‰keV Agâ^' ion implantation in TiO2 matrix. Radiation Effects and Defects in Solids, 2017, 172, 896-902.	1.2	2
72	Modifications in Fullerene C 70 Thin Film induced by Dense Ionization and Thermal Treatment. Procedia Engineering, 2017, 215, 89-108.	1.2	0

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73	Ion Irradiation Induced SPR of Au Nanoparticles in Carbon. Procedia Engineering, 2017, 215, 41-59.	1.2	6
74	Thermally induced tuning of SPR of metal-fullerene Ag(26%)-C 70 nanocomposite. Surface and Coatings Technology, 2017, 324, 361-367.	4.8	14
75	Synthesis and annealing study of RF sputtered ZnO thin film. AIP Conference Proceedings, 2016, , .	0.4	3
76	Electronic excitation induced modification in fullerene C70 thin films. Nuclear Instruments & Methods in Physics Research B, 2016, 379, 188-194.	1.4	5
77	Electronic excitation induced modifications of optical and morphological properties of PCBM thin films. Nuclear Instruments & Methods in Physics Research B, 2016, 379, 176-180.	1.4	9
78	Structural, optical and electronic properties of Agâ€“TiO2 nanocomposite thin film. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	14
79	Ion track diameter in fullerene C70 thin film using Raman active vibrational modes of C70 molecule. Vacuum, 2016, 123, 35-41.	3.5	27
80	Surface and structural studies of fullerene C₇₀under ion irradiation. Surface Engineering, 2016, 32, 846-852.	2.2	13
81	Ion beam irradiation-induced tuning of SPR of Au nanoparticles in fullerene C70 matrix: dependence of energy loss. Journal of Nanoparticle Research, 2013, 15, 1.	1.9	38
82	Blue-Shifted SPR of Au Nanoparticles with Ordering of Carbon by Dense Ionization and Thermal Treatment. Plasmonics, 2013, 8, 295-305.	3.4	46
83	Ion irradiation studies of silver/amorphous carbon nanocomposite thin film. Surface and Coatings Technology, 2013, 229, 50-54.	4.8	36
84	Energetic ion irradiation induced crystallization of Niâ€“Mnâ€“Sn ferromagnetic shape memory alloy thin film. Vacuum, 2013, 89, 190-196.	3.5	11
85	Electronic excitation induced phase transformation in FSMA thin film. Vacuum, 2013, 89, 215-219.	3.5	5
86	Synthesis Of Carbon Nanowires By SHI Irradiation Of Fullerene C70 thin Film. Advanced Materials Letters, 2013, 4, 413-417.	0.6	16
87	Phase transformation in Niâ€“Mnâ€“Sn ferromagnetic shape memory alloy thin films induced by dense ionization. Applied Physics A: Materials Science and Processing, 2012, 107, 925-934.	2.3	12
88	Engineering of hydrophilic and plasmonic properties of Ag thin film by atom beam irradiation. Applied Surface Science, 2011, 258, 1464-1469.	6.1	32
89	Ion irradiation induced modifications of nanostructured Niâ€“Mnâ€“Sn ferromagnetic shape memory alloy thin films. Thin Solid Films, 2011, 520, 1631-1637.	1.8	22
90	Thickness dependent phase transformation of magnetron-sputtered Niâ€“Mnâ€“Sn ferromagnetic shape memory alloy thin films. Journal of Nanoparticle Research, 2011, 13, 3975-3990.	1.9	44

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91	Electronic excitation induced controlled modifications of semiconductor-to-metal transition in epitaxial VO₂ thin films. Journal of Materials Research, 2011, 26, 2901-2906.	2.6	41
92	Synthesis of Plasmonic Nanocomposites for Diverse Applications. Journal of Nanoscience and Nanotechnology, 2010, 10, 2705-2712.	0.9	38
93	Studies on Carbon Nanotubes and Fullerenes Under Extreme Conditions. Journal of Nanoscience and Nanotechnology, 2010, 10, 3767-3779.	0.9	19
94	Synthesis, characterizations, and thermal induced structural transformation of silver-fullerene C60 nanocomposite thin films for applications in optical devices. Journal of Applied Physics, 2010, 107, .	2.5	29
95	Au-ZnO: A tunable plasmonic nanocomposite for SERS and switching. , 2009, , .		0
96	Electronic excitation induced tuning of surface plasmon resonance of Ag nanoparticles in fullerene C₇₀matrix. Journal Physics D: Applied Physics, 2009, 42, 155103.	2.8	55
97	Swift heavy ion induced modifications of optical and microstructural properties of silverâ€“fullerene C60 nanocomposite. Nuclear Instruments & Methods in Physics Research B, 2009, 267, 1349-1352.	1.4	41
98	A comparative study of ion-induced damages in C60and C70fullerenes. Radiation Effects and Defects in Solids, 2009, 164, 38-48.	1.2	34
99	Swift heavy ion induced modifications of fullerene C70 thin films. Nuclear Instruments & Methods in Physics Research B, 2008, 266, 3257-3262.	1.4	37
100	Auâ€“ZnO: A tunable localized surface plasmonic nanocomposite. Applied Physics Letters, 2008, 92, 043107.	3.3	153
101	Synthesis and characterizations of silver-fullerene C70 nanocomposite. Applied Physics Letters, 2008, 93, .	3.3	42
102	120ÂkeV Ar ion-induced red and blue shift of SPR Wavelength of Au nanoparticles in fullerene C60. Journal of Materials Science: Materials in Electronics, 0, , .	2.2	0