

Jai Prakash

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

75
papers

1,727
citations

25
h-index

39
g-index

78
ext. papers

2,284
ext. citations

5.2
avg, IF

5.31
L-index

#	Paper	IF	Citations
75	Multi-metallic catalysts for the electroreduction of carbon dioxide: Recent advances and perspectives. <i>Renewable and Sustainable Energy Reviews</i> , 2022 , 155, 111922	16.2	6
74	Hydrothermal synthesis and Ta doping of TiO ₂ nanorods: Effect of soaking time and doping on optical and charge transfer properties for enhanced SERS activity. <i>Materials Chemistry and Physics</i> , 2022 , 278, 125642	4.4	3
73	Photocatalytic TiO ₂ nanomaterials as potential antimicrobial and antiviral agents: Scope against blocking the SARS-COV-2 spread. <i>Micro and Nano Engineering</i> , 2022 , 14, 100100	3.4	8
72	An insight into the green synthesis of SiO nanostructures as a novel adsorbent for removal of toxic water pollutants.. <i>Environmental Research</i> , 2022 , 212, 113328	7.9	2
71	TiO ₂ nanoflower photocatalysts: Synthesis, modifications and applications in wastewater treatment for removal of emerging organic pollutants. <i>Environmental Research</i> , 2022 , 212, 113550	7.9	1
70	Engineering metal oxide semiconductor nanostructures for enhanced charge transfer: fundamentals and emerging SERS applications. <i>Journal of Materials Chemistry C</i> , 2021 , 10, 73-95	7.1	11
69	Electrochemical Sensor Based on Nanodiamonds and Manioc Starch for Detection of Tetracycline. <i>Journal of Sensors</i> , 2021 , 2021, 1-10	2	7
68	Hydrothermal synthesis of TiO ₂ nanorods: formation chemistry, growth mechanism, and tailoring of surface properties for photocatalytic activities. <i>Materials Today Chemistry</i> , 2021 , 20, 100428	6.2	18
67	Optical limiting applications of resonating plasmonic Au nanoparticles in a dielectric glass medium. <i>Nanotechnology</i> , 2021 , 32,	3.4	13
66	Surface Gold and Silver-Polymer Nanocomposite Self-Standing Films 2021 , 199-217		0
65	Unmasking Steps in Intramolecular Aromatic Hydroxylation by a Synthetic Nonheme Oxoiron(IV) Complex. <i>Angewandte Chemie</i> , 2021 , 133, 21159-21166	3.6	
64	Unmasking Steps in Intramolecular Aromatic Hydroxylation by a Synthetic Nonheme Oxoiron(IV) Complex. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 20991-20998	16.4	0
63	Novel polypyrrole-graphene oxide-gold nanocomposite for high performance hydrogen peroxide sensing application. <i>Sensors and Actuators A: Physical</i> , 2021 , 328, 112769	3.9	7
62	Novel rare earth metal doped one-dimensional TiO ₂ nanostructures: Fundamentals and multifunctional applications. <i>Materials Today Sustainability</i> , 2021 , 13, 100066	5	20
61	Silver Nanostructures, Chemical Synthesis Methods, and Biomedical Applications. <i>Nanotechnology in the Life Sciences</i> , 2020 , 281-303	1.1	
60	Plasmonic and nonlinear optical behavior of nanostructures in glass matrix for photonics application. <i>Materials Research Bulletin</i> , 2020 , 125, 110799	5.1	19
59	Band gap tailoring of cauliflower-shaped CuO nanostructures by Zn doping for antibacterial applications. <i>Journal of Alloys and Compounds</i> , 2020 , 832, 154968	5.7	20

58	Fundamentals and applications of recyclable SERS substrates. <i>International Reviews in Physical Chemistry</i> , 2019 , 38, 201-242	7	19
57	Emerging applications of atomic layer deposition for the rational design of novel nanostructures for surface-enhanced Raman scattering. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 1447-1471	7.1	18
56	Recent Progress on Novel Ag ^{III} /TiO ₂ Nanocomposites for Antibacterial Applications. <i>Nanotechnology in the Life Sciences</i> , 2019 , 121-143	1.1	4
55	Iron (II) phthalocyanine/N-doped graphene: A highly efficient non-precious metal catalyst for oxygen reduction. <i>International Journal of Hydrogen Energy</i> , 2019 , 44, 18103-18114	6.7	26
54	Engineering of transition metal dichalcogenide-based 2D nanomaterials through doping for environmental applications. <i>Molecular Systems Design and Engineering</i> , 2019 , 4, 804-827	4.6	40
53	Rational design of multifunctional air electrodes for rechargeable Zn/Air batteries: Recent progress and future perspectives. <i>Energy Storage Materials</i> , 2019 , 21, 253-286	19.4	102
52	Facile Conversion of syn-[FeIV(O)(TMC)] ²⁺ into the anti Isomer via Meunier's Oxo-Hydroxo Tautomerism Mechanism. <i>Angewandte Chemie</i> , 2019 , 131, 2017-2021	3.6	2
51	Rational Design of Novel Catalysts with Atomic Layer Deposition for the Reduction of Carbon Dioxide. <i>Advanced Energy Materials</i> , 2019 , 9, 1900889	21.8	33
50	Chemical vapour deposition of graphene: layer control, the transfer process, characterisation, and related applications. <i>International Reviews in Physical Chemistry</i> , 2019 , 38, 149-199	7	28
49	3D Graphene and Its Nanocomposites: From Synthesis to Multifunctional Applications. <i>Carbon Nanostructures</i> , 2019 , 363-388	0.6	1
48	Study of Tunable Plasmonic, Photoluminescence, and Nonlinear Optical Behavior of Ag Nanoclusters Embedded in a Glass Matrix for Multifunctional Applications. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2019 , 216, 1800768	1.6	10
47	Facile Conversion of syn-[Fe (O)(TMC)] into the anti Isomer via Meunier's Oxo-Hydroxo Tautomerism Mechanism. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 1995-1999	16.4	4
46	Noble metals-TiO ₂ nanocomposites: From fundamental mechanisms to photocatalysis, surface enhanced Raman scattering and antibacterial applications. <i>Applied Materials Today</i> , 2018 , 11, 82-135	6.6	148
45	Phosphor Polymer Nanocomposite: ZnO:Tb ³⁺ Embedded Polystyrene Nanocomposite Thin Films for Solid-State Lighting Applications. <i>ACS Applied Nano Materials</i> , 2018 , 1, 977-988	5.6	29
44	Progress in tailoring perovskite based solar cells through compositional engineering: Materials properties, photovoltaic performance and critical issues. <i>Materials Today Energy</i> , 2018 , 9, 440-486	7	40
43	Design and chemical engineering of carbazole-based donor small molecules for organic solar cell applications. <i>Journal of Materials Science: Materials in Electronics</i> , 2018 , 29, 14842-14851	2.1	5
42	Synthesis and studies of carbazole-based donor polymer for organic solar cell applications. <i>Colloid and Polymer Science</i> , 2018 , 296, 1193-1203	2.4	7
41	Improvement of opto-electro-structural properties of nanocrystalline CdS thin films induced by Au ⁹ + ion irradiation. <i>Thin Solid Films</i> , 2017 , 626, 117-125	2.2	10

40	Chiral adsorption studied by field emission techniques: the case of alanine on platinum. <i>New Journal of Chemistry</i> , 2017 , 41, 6638-6645	3.6	1
39	Design and engineering of high-performance photocatalytic systems based on metal oxide-graphene-noble metal nanocomposites. <i>Molecular Systems Design and Engineering</i> , 2017 , 2, 422-439	4.6	69
38	Role of silver doping on the defects related photoluminescence and antibacterial behaviour of zinc oxide nanoparticles. <i>Colloids and Surfaces B: Biointerfaces</i> , 2017 , 159, 191-199	6	36
37	Dual Functional Ta-Doped Electrospun TiO Nanofibers with Enhanced Photocatalysis and SERS Detection for Organic Compounds. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 28495-28507	9.5	111
36	Nanoscale Chiral Recognition Using Field Ion and Field Emission Microscopy. <i>Microscopy and Microanalysis</i> , 2017 , 23, 626-627	0.5	1
35	Formation of the syn isomer of [Fe(IV)(Oanti)(TMC)(NCMe)](2+) in the reaction of Lewis acids with the side-on bound peroxo ligand in [Fe(III)([O2-O2)(TMC)](.). <i>Chemical Communications</i> , 2016 , 52, 8146-8	5.8	5
34	Synthesis, characterization and multifunctional properties of plasmonic Ag-TiO2 nanocomposites. <i>Nanotechnology</i> , 2016 , 27, 355707	3.4	59
33	Embedded plasmonic nanostructures: synthesis, fundamental aspects and their surface enhanced Raman scattering applications. <i>International Reviews in Physical Chemistry</i> , 2016 , 35, 353-398	7	41
32	Optical and surface enhanced Raman scattering properties of Au nanoparticles embedded in and located on a carbonaceous matrix. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 2468-80	3.6	41
31	Fabrication and characterization of nitrogen doped p-ZnO on n-Si heterojunctions. <i>Sensors and Actuators A: Physical</i> , 2016 , 247, 475-481	3.9	20
30	Spectroscopic identification of an Fe(III) center, not Fe(IV), in the crystalline Sc-O-Fe adduct derived from [Fe(IV)(O)(TMC)] ⁺ . <i>Journal of the American Chemical Society</i> , 2015 , 137, 3478-81	16.4	51
29	Oxoiron(IV) Complex of the Ethylene-Bridged Dialkylcyclam Ligand Me2EBC. <i>Inorganic Chemistry</i> , 2015 , 54, 7828-39	5.1	22
28	Upside Down! Crystallographic and Spectroscopic Characterization of an [Fe IV(O syn)(TMC)] ²⁺ Complex. <i>Inorganic Chemistry</i> , 2015 , 54, 11055-7	5.1	29
27	Role of surface and subsurface defects in MgO thin film: XANES and magnetic investigations. <i>Superlattices and Microstructures</i> , 2015 , 77, 313-324	2.8	27
26	Noble metal nanoparticles embedding into polymeric materials: From fundamentals to applications. <i>Advances in Colloid and Interface Science</i> , 2015 , 226, 187-202	14.3	69
25	Plasmonic resonance of Ag nanoclusters diffused in soda-lime glasses. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 8596-603	3.6	48
24	Opacity and plasmonic properties of Ag embedded glass based metamaterials. <i>RSC Advances</i> , 2015 , 5, 12555-12562	3.7	44
23	Phenomenological understanding of dewetting and embedding of noble metal nanoparticles in thin films induced by ion irradiation. <i>Materials Chemistry and Physics</i> , 2014 , 147, 920-924	4.4	23

22	Nitrogen-doping processes of graphene by a versatile plasma-based method. <i>Carbon</i> , 2014 , 73, 216-224	10.4	51
21	Swift heavy ion irradiation induced modification of structure and surface morphology of BiFeO ₃ thin film. <i>Bulletin of Materials Science</i> , 2013 , 36, 813-818	1.7	14
20	Synthesis Of Ag Nanoparticles On Polymer Surface: 150 KeV Ar Ion Irradiation Of Ag-PVC Bilayer. <i>Advanced Materials Letters</i> , 2013 , 4, 408-412	2.4	10
19	130MeV Au ion irradiation induced dewetting on In ₂ Te ₃ thin film. <i>Applied Surface Science</i> , 2012 , 258, 8558-8563	6.7	11
18	PbTe formation by swift heavy ion beam induced interface mixing of Te/PbO bilayer. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2012 , 289, 22-27	1.2	10
17	Magnetization in MgO based multilayers fabricated by e-beam evaporation 2012 ,		5
16	Modifications Induced by Swift Heavy Ion Beam of 60 MeV Si ⁵⁺ in Poly(3-octylthiophene). <i>Science of Advanced Materials</i> , 2012 , 4, 1024-1030	2.3	4
15	Study Of Surface Morphology And Grain Size Of Irradiated MgO Thin Films. <i>Advanced Materials Letters</i> , 2012 , 3, 112-117	2.4	25
14	Synthesis of Au nanoparticles at the surface and embedded in carbonaceous matrix by 150 keV Ar ion irradiation. <i>Journal Physics D: Applied Physics</i> , 2011 , 44, 125302	3	44
13	Spectral studies on Ag ⁸⁺ ions irradiated LAHClH ₂ O and LAHBrH ₂ O single crystals. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2011 , 79, 884-8	4.4	3
12	Investigation of swift heavy ion-induced mixing in metal/polymer systems. <i>Radiation Effects and Defects in Solids</i> , 2011 , 166, 682-688	0.9	9
11	Surface evolution of titanium oxide thin film with swift heavy ion irradiation. <i>Radiation Effects and Defects in Solids</i> , 2011 , 166, 571-577	0.9	12
10	Study on synthesis of magnetic nanocomposite (Ni-Teflon) by swift heavy ion beam mixing. <i>Advanced Materials Letters</i> , 2011 , 2, 71-75	2.4	12
9	Surface modifications of ultra-thin gold films by swift heavy ion irradiation. <i>Indian Journal of Physics</i> , 2010 , 84, 1391-1397	1.4	9
8	Swift heavy ion irradiation induced modification of the microstructure of NiO thin films. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2010 , 268, 1613-1617	1.2	42
7	High-energy ion induced physical and surface modifications in antimony sulphide thin films. <i>Current Applied Physics</i> , 2010 , 10, 1112-1116	2.6	12
6	Structural phase transformation in ZnS nanocrystalline thin films by swift heavy ion irradiation. <i>Solid State Communications</i> , 2010 , 150, 1158-1161	1.6	29
5	Ion beam induced interface mixing of Ni on PTFE bilayer system studied by quadrupole mass analysis and electron spectroscopy for chemical analysis. <i>Vacuum</i> , 2010 , 84, 1275-1279	3.7	21

4	Surface roughness and power spectral density study of SHI irradiated ultra-thin gold films. <i>Applied Surface Science</i> , 2009 , 256, 558-561	6.7	37
3	Design and engineering of graphene nanostructures as independent solar-driven photocatalysts for emerging applications in the field of energy and environment. <i>Molecular Systems Design and Engineering</i> ,	4.6	0
2	A facile synthesis of novel polyaniline/graphene nanocomposite thin films for enzyme-free electrochemical sensing of hydrogen peroxide. <i>Molecular Systems Design and Engineering</i> ,	4.6	5
1	A novel and facile green synthesis of SiO ₂ nanoparticles for removal of toxic water pollutants. <i>Applied Nanoscience (Switzerland)</i> ,1	3.3	1