

# Raju Kumar Gupta

## 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.

99  
papers

5,868  
citations

35  
h-index

76  
g-index

101  
ext. papers

7,039  
ext. citations

6.5  
avg, IF

6.66  
L-index

#	Paper	IF	Citations
99	Dielectric properties of biofiber-based polymer composites <b>2022</b> , 159-191		
98	Integration of biological control with engineered heterojunction nano-photocatalysts for sustainable and effective management of water hyacinth weed. <i>Journal of Environmental Chemical Engineering</i> , <b>2022</b> , 10, 106976	6.8	3
97	Hydrothermal synthesis and Ta doping of TiO <sub>2</sub> nanorods: Effect of soaking time and doping on optical and charge transfer properties for enhanced SERS activity. <i>Materials Chemistry and Physics</i> , <b>2022</b> , 278, 125642	4.4	3
96	Industrially viable electrochemical techniques for water treatment <b>2022</b> , 283-301		
95	Low-Temperature Microwave Processed TiO <sub>2</sub> as an Electron Transport Layer for Enhanced Performance and Atmospheric Stability in Planar Perovskite Solar Cells. <i>ACS Applied Energy Materials</i> , <b>2022</b> , 5, 2679-2696	6.1	3
94	Electrically Conductive MoS <sub>2</sub> Reinforced Polyacrylonitrile Nanofibers for Biomedical Applications. <i>Advanced NanoBiomed Research</i> , <b>2022</b> , 2, 2100105	0	0
93	TiO <sub>2</sub> nanoflower photocatalysts: Synthesis, modifications and applications in wastewater treatment for removal of emerging organic pollutants. <i>Environmental Research</i> , <b>2022</b> , 212, 113550	7.9	1
92	Engineering metal oxide semiconductor nanostructures for enhanced charge transfer: fundamentals and emerging SERS applications. <i>Journal of Materials Chemistry C</i> , <b>2021</b> , 10, 73-95	7.1	11
91	Antibacterial and Antiviral Functional Materials: Chemistry and Biological Activity toward Tackling COVID-19-like Pandemics. <i>ACS Pharmacology and Translational Science</i> , <b>2021</b> , 4, 8-54	5.9	75
90	Recent advances in heterogeneous micro-photoreactors for wastewater treatment application. <i>Chemical Engineering Science</i> , <b>2021</b> , 235, 116511	4.4	7
89	Two-dimensional metal organic frameworks for biomedical applications. <i>Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology</i> , <b>2021</b> , 13, e1674	9.2	15
88	Hydrogel of gelatin in the presence of graphite for the adsorption of dye: Towards the concept for water purification. <i>Journal of Environmental Chemical Engineering</i> , <b>2021</b> , 9, 104762	6.8	14
87	Semiconductor based photocatalysts for detoxification of emerging pharmaceutical pollutants from aquatic systems: A critical review. <i>Nano Materials Science</i> , <b>2021</b> , 3, 25-46	10.2	24
86	Microwave absorption study of composites based on CQD@BaTiO <sub>3</sub> core shell and BaFe <sub>12</sub> O <sub>19</sub> nanoparticles. <i>Journal of Alloys and Compounds</i> , <b>2021</b> , 855, 157411	5.7	12
85	Titania modified gum tragacanth based hydrogel nanocomposite for water remediation. <i>Journal of Environmental Chemical Engineering</i> , <b>2021</b> , 9, 104608	6.8	42
84	Biosafe sustainable antimicrobial encapsulation and coatings for targeted treatment and infections prevention: Preparation for another pandemic. <i>Current Research in Green and Sustainable Chemistry</i> , <b>2021</b> , 4, 100074	4.1	4
83	2D materials production and generation of functional inks: general discussion. <i>Faraday Discussions</i> , <b>2021</b> , 227, 141-162	3.6	2

82	Insights and Perspectives Regarding Nanostructured Fluorescent Materials toward Tackling COVID-19 and Future Pandemics. <i>ACS Applied Nano Materials</i> , <b>2021</b> , 4, 911-948	5.6	15
81	Unveiling the Role of Graphene Oxide as an Interface Interlocking Ingredient in Polyvinylidene Fluoride-Based Multilayered Thin-Film Capacitors for High Energy Density and Ultrafast Discharge Applications. <i>Energy Technology</i> , <b>2021</b> , 9, 2000905	3.5	5
80	Novel polypyrrole-graphene oxide-gold nanocomposite for high performance hydrogen peroxide sensing application. <i>Sensors and Actuators A: Physical</i> , <b>2021</b> , 328, 112769	3.9	7
79	Enhanced thermal and moisture stability via dual additives approach in methylammonium lead iodide based planar perovskite solar cells. <i>Solar Energy</i> , <b>2021</b> , 225, 200-210	6.8	5
78	Modifications in metal oxide electrospun nanofibers for environmental applications <b>2021</b> , 621-639		
77	Inverted PTB7-Th:PC71BM organic solar cells with 11.8% PCE via incorporation of gold nanoparticles in ZnO electron transport layer. <i>Solar Energy</i> , <b>2021</b> , 214, 220-230	6.8	16
76	Development of RGO/BaFe <sub>12</sub> O <sub>19</sub> -based composite medium for improved microwave absorption applications. <i>Applied Physics A: Materials Science and Processing</i> , <b>2020</b> , 126, 1	2.6	8
75	Interface modulation in multi-layered BaTiO <sub>3</sub> nanofibers/PVDF using the PVP linker layer as an adhesive for high energy density capacitor applications. <i>Materials Advances</i> , <b>2020</b> , 1, 680-688	3.3	10
74	Graphite modified sodium alginate hydrogel composite for efficient removal of malachite green dye. <i>International Journal of Biological Macromolecules</i> , <b>2020</b> , 148, 1130-1139	7.9	119
73	Doping engineering of V-TiO <sub>2</sub> for its use as corrosion inhibitor. <i>Journal of Alloys and Compounds</i> , <b>2020</b> , 816, 152545	5.7	8
72	Effect of neodymium doping on microwave absorption property of barium hexaferrite in X-band. <i>Materials Research Express</i> , <b>2020</b> , 7, 016109	1.7	14
71	High-performance hybrid microsupercapacitors based on CoMn layered double hydroxide nanosheets. <i>Electrochimica Acta</i> , <b>2020</b> , 334, 135590	6.7	13
70	Role of PC60BM in defect passivation and improving degradation behaviour in planar perovskite solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2020</b> , 207, 110335	6.4	15
69	Effect of NiO Precursor Solution Ageing on the Perovskite Film Formation and Their Integration as Hole Transport Material for Perovskite Solar Cells. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2020</b> , 20, 3710-3717	1.3	8
68	Probing the Interface Activation in Designing Defect-Free Multilayered Polymer Nanocomposites for Dielectric Capacitor Applications. <i>Journal of Physical Chemistry C</i> , <b>2020</b> , 124, 22914-22924	3.8	9
67	Emerging Carbon-Based Nanocomposites for Remediation of Heavy Metals and Organic Pollutants from Wastewater <b>2020</b> , 1-29		
66	Multifunctional and Flexible Polymeric Nanocomposite Films with Improved Ferroelectric and Piezoelectric Properties for Energy Generation Devices. <i>ACS Applied Energy Materials</i> , <b>2019</b> , 2, 6364-6374	6.1	30
65	Enhanced efficiency and thermal stability of mesoscopic perovskite solar cells by adding PC70BM acceptor. <i>Solar Energy Materials and Solar Cells</i> , <b>2019</b> , 202, 110130	6.4	18

64	Milli-Watt Power Harvesting from Dual Triboelectric and Piezoelectric Effects of Multifunctional Green and Robust Reduced Graphene Oxide/P(VDF-TrFE) Composite Flexible Films. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 38177-38189	9.5	32
63	Stabilization of a Highly Concentrated Colloidal Suspension of Pristine Metallic Nanoparticles. <i>Langmuir</i> , <b>2019</b> , 35, 2668-2673	4	12
62	Engineering of transition metal dichalcogenide-based 2D nanomaterials through doping for environmental applications. <i>Molecular Systems Design and Engineering</i> , <b>2019</b> , 4, 804-827	4.6	40
61	Three-dimensional nickel vanadium layered double hydroxide nanostructures grown on carbon cloth for high-performance flexible supercapacitor applications. <i>Nanoscale Advances</i> , <b>2019</b> , 1, 2400-2407 <sup>5.1</sup>	5.1	19
60	Significantly Enhanced Energy Density by Tailoring the Interface in Hierarchically Structured TiO-BaTiO-TiO Nanofillers in PVDF-Based Thin-Film Polymer Nanocomposites. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 14329-14339	9.5	79
59	A novel star-shaped triazine-triphenylamine-based fluorescent chemosensor for the selective detection of picric acid. <i>Materials Today Chemistry</i> , <b>2019</b> , 12, 178-186	6.2	23
58	Engineered thiol anchored Au-BaTiO <sub>3</sub> /PVDF polymer nanocomposite as efficient dielectric for electronic applications. <i>Composites Science and Technology</i> , <b>2019</b> , 174, 158-168	8.6	56
57	Improved supercapacitive performance in electrospun TiO <sub>2</sub> nanofibers through Ta-doping for electrochemical capacitor applications. <i>Catalysis Today</i> , <b>2019</b> , 325, 33-40	5.3	19
56	Poly(vinylpyrrolidone)/Poly(vinylidene fluoride) as Guest/Host Polymer Blends: Understanding the Role of Compositional Transformation on Nanoscale Dielectric Behavior through a Simple Solution-Process Route. <i>ACS Applied Energy Materials</i> , <b>2019</b> , 2, 6146-6152	6.1	22
55	In-situ synthesis of TiO <sub>2</sub> nanoparticles in ACF: Photocatalytic degradation under continuous flow. <i>Solar Energy</i> , <b>2019</b> , 189, 35-44	6.8	37
54	Dicyanovinylene and Thiazolo[5,4-d]thiazole Core Containing DAD Type Hole-Transporting Materials for Spiro-OMeTAD-Free Perovskite Solar Cell Applications with Superior Atmospheric Stability. <i>ACS Applied Energy Materials</i> , <b>2019</b> , 2, 7609-7618	6.1	16
53	Thiazolothiazole-Based Fluorescence Probe towards Detection of Copper and Iron Ions through Formation of Radical Cations. <i>ChemistrySelect</i> , <b>2019</b> , 4, 11718-11725	1.8	9
52	Hydrothermally Tailored Three-Dimensional Ni-V Layered Double Hydroxide Nanosheets as High-Performance Hybrid Supercapacitor Applications. <i>ACS Omega</i> , <b>2019</b> , 4, 3257-3267	3.9	38
51	Controlling surface cation segregation in a nanostructured double perovskite GdBaCoO electrode for solid oxide fuel cells. <i>Nanoscale</i> , <b>2019</b> , 11, 21404-21418	7.7	19
50	Interfacial engineering of Fe <sub>2</sub> O <sub>3</sub> @BOC heterojunction for efficient detoxification of toxic metal and dye under visible light illumination. <i>Journal of Environmental Chemical Engineering</i> , <b>2019</b> , 7, 102843	6.8	41
49	Enhancing the corrosion resistance performance of structural steel via a novel deep cryogenic treatment process. <i>Vacuum</i> , <b>2019</b> , 159, 468-475	3.7	20
48	Waste carbon paper derivatized Carbon Quantum Dots/(3-Aminopropyl)triethoxysilane based fluorescent probe for trinitrotoluene detection. <i>Materials Research Express</i> , <b>2019</b> , 6, 025605	1.7	17
47	Noble metals-TiO <sub>2</sub> nanocomposites: From fundamental mechanisms to photocatalysis, surface enhanced Raman scattering and antibacterial applications. <i>Applied Materials Today</i> , <b>2018</b> , 11, 82-135	6.6	148

46	Mutton bone derived hydroxyapatite supported TiO <sub>2</sub> nanoparticles for sustainable photocatalytic applications. <i>Journal of Environmental Chemical Engineering</i> , <b>2018</b> , 6, 459-467	6.8	40
45	Modelling studies for photocatalytic degradation of organic dyes using TiO nanofibers. <i>Environmental Science and Pollution Research</i> , <b>2018</b> , 25, 20466-20472	5.1	12
44	Progress in tailoring perovskite based solar cells through compositional engineering: Materials properties, photovoltaic performance and critical issues. <i>Materials Today Energy</i> , <b>2018</b> , 9, 440-486	7	40
43	Recent Progress on Hole-Transporting Materials for Perovskite-Sensitized Solar Cells <b>2018</b> , 279-324		12
42	Effect of tantalum doping in a TiO <sub>2</sub> compact layer on the performance of planar spiro-OMeTAD free perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 1037-1047	13	68
41	Ethylenediamine mediated luminescence enhancement of pollutant derivatized carbon quantum dots for intracellular trinitrotoluene detection: soot to shine.. <i>RSC Advances</i> , <b>2018</b> , 8, 32684-32694	3.7	30
40	Recycling, reclamation and re-manufacturing of carbon fibres. <i>Current Opinion in Green and Sustainable Chemistry</i> , <b>2018</b> , 13, 86-90	7.9	18
39	Oil/water separation techniques: a review of recent progresses and future directions. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 16025-16058	13	585
38	Enhanced visible-light-driven photocatalytic activity of Au@Ag core-shell bimetallic nanoparticles immobilized on electrospun TiO <sub>2</sub> nanofibers for degradation of organic compounds. <i>Catalysis Science and Technology</i> , <b>2017</b> , 7, 570-580	5.5	109
37	Design and engineering of high-performance photocatalytic systems based on metal oxide-graphene noble metal nanocomposites. <i>Molecular Systems Design and Engineering</i> , <b>2017</b> , 2, 422-439	4.6	69
36	Dual Functional Ta-Doped Electrospun TiO Nanofibers with Enhanced Photocatalysis and SERS Detection for Organic Compounds. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 28495-28507	9.5	111
35	Green synthesis of carbon quantum dots from lemon peel waste: applications in sensing and photocatalysis. <i>RSC Advances</i> , <b>2016</b> , 6, 72423-72432	3.7	224
34	Green synthesis of Ag nanoparticles in large quantity by cryomilling. <i>RSC Advances</i> , <b>2016</b> , 6, 111380-111388	3.7	28
33	Synthesis and Applications of Biodegradable Soy Based Graft Copolymers: A Review. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2016</b> , 4, 1-17	8.3	178
32	Temperature dependent, shape variant synthesis of photoluminescent and biocompatible carbon nanostructures from almond husk for applications in dye removal. <i>RSC Advances</i> , <b>2016</b> , 6, 29545-29553	3.7	50
31	Quantum dot sensitized electrospun mesoporous titanium dioxide hollow nanofibers for photocatalytic applications. <i>RSC Advances</i> , <b>2016</b> , 6, 48109-48119	3.7	59
30	Recent Progress on Ferroelectric Polymer-Based Nanocomposites for High Energy Density Capacitors: Synthesis, Dielectric Properties, and Future Aspects. <i>Chemical Reviews</i> , <b>2016</b> , 116, 4260-317	68.1	909
29	Influence of gold core concentration on visible photocatalytic activity of gold-zinc sulfide core-shell nanoparticle. <i>Journal of Power Sources</i> , <b>2015</b> , 294, 580-587	8.9	41

28	Recent progress in micro-scale energy storage devices and future aspects. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 22507-22541	13	154
27	Gold nanoparticles adsorption study onto periodic block copolymer using quartz crystal microbalance. <i>Materials Letters</i> , <b>2015</b> , 148, 118-121	3-3	3
26	Review: Raw Natural FiberBased Polymer Composites. <i>International Journal of Polymer Analysis and Characterization</i> , <b>2014</b> , 19, 256-271	1-7	524
25	Surface modification of cellulose using silane coupling agent. <i>Carbohydrate Polymers</i> , <b>2014</b> , 111, 849-55	10-3	139
24	Micropatterned Arrays of ZnSe Nanospheres as Antireflection Coatings. <i>Australian Journal of Chemistry</i> , <b>2014</b> , 67, 1427	1-2	2
23	Graft copolymers of natural fibers for green composites. <i>Carbohydrate Polymers</i> , <b>2014</b> , 104, 87-93	10-3	184
22	Rapid synthesis of graft copolymers from natural cellulose fibers. <i>Carbohydrate Polymers</i> , <b>2013</b> , 98, 820-8	10-3	188
21	Graft copolymers from cellulose: synthesis, characterization and evaluation. <i>Carbohydrate Polymers</i> , <b>2013</b> , 97, 18-25	10-3	141
20	Synthesis of lignocellulosic polymer with improved chemical resistance through free radical polymerization. <i>International Journal of Biological Macromolecules</i> , <b>2013</b> , 61, 121-6	7-9	91
19	Development of functionalized cellulosic biopolymers by graft copolymerization. <i>International Journal of Biological Macromolecules</i> , <b>2013</b> , 62, 44-51	7-9	110
18	Quantitative Detection with Surface Enhanced Raman Scattering (SERS) Using Self-Assembled Gold Nanoparticle Cluster Arrays. <i>Australian Journal of Chemistry</i> , <b>2013</b> , 66, 1034	1-2	22
17	Graft Copolymers from Natural Polymers Using Free Radical Polymerization. <i>International Journal of Polymer Analysis and Characterization</i> , <b>2013</b> , 18, 495-503	1-7	84
16	Synthesis of 16-Mercaptohexadecanoic acid capped gold nanoparticles and their immobilization on a substrate. <i>Materials Letters</i> , <b>2012</b> , 67, 315-319	3-3	11
15	Copper nanoparticles embedded in a polyimide film for non-volatile memory applications. <i>Materials Letters</i> , <b>2012</b> , 68, 287-289	3-3	19
14	Ultrathin PFPE Film Systems Fabricated by Covalent Assembly: An Application to Tribology. <i>Tribology Letters</i> , <b>2012</b> , 45, 371-378	2-8	3
13	Enhancing charge-storage capacity of non-volatile memory devices using template-directed assembly of gold nanoparticles. <i>Nanoscale</i> , <b>2012</b> , 4, 2296-300	7-7	34
12	Significant electrochemical stability of manganese dioxide/polyaniline coaxial nanowires by self-terminated double surfactant polymerization for pseudocapacitor electrode. <i>Journal of Materials Chemistry</i> , <b>2012</b> , 22, 23921		75
11	Covalent assembly of gold nanoparticles: an application toward transistor memory. <i>Journal of Physical Chemistry B</i> , <b>2012</b> , 116, 9784-90	3-4	23

10	Gold-nanoparticle-functionalized In <sub>2</sub> O <sub>3</sub> nanowires as CO gas sensors with a significant enhancement in response. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2011</b> , 3, 2246-52	9.5	131
9	Synthesis of In <sub>2</sub> O <sub>3</sub> /ZnO core-shell nanowires and their application in gas sensing. <i>Sensors and Actuators B: Chemical</i> , <b>2011</b> , 160, 1346-1351	8.5	115
8	Synthesis of short chain thiol capped gold nanoparticles, their stabilization and immobilization on silicon surface. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , <b>2011</b> , 390, 149-156	5.1	12
7	Covalent assembly of gold nanoparticles for nonvolatile memory applications. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2011</b> , 3, 4619-25	9.5	25
6	Electrochemical and microstructural analysis of azomethine polyamides as inhibitor for rebar corrosion under chloride contaminated pore solution <sup>1</sup> , 1004		4
5	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
4	The effect of dimensionality on the charge carrier mobility of halide perovskites. <i>Journal of Materials Chemistry A</i> ,	13	12
3	An activated carbon fiber supported Fe <sub>2</sub> O <sub>3</sub> @bismuth carbonate heterojunction for enhanced visible light degradation of emerging pharmaceutical pollutants. <i>Reaction Chemistry and Engineering</i> ,	4.9	6
2	Defect State Modulation of TiO <sub>2</sub> Nanostructures for Photocatalytic Abatement of Emerging Pharmaceutical Pollutant in Wastewater Effluent. <i>Advanced Energy and Sustainability Research</i> , 2100162	1.6	0
1	Visible-light-mediated synthesis of $\alpha$ -diamino esters via coupling of N,N-dimethylanilines and glyoxalic oxime ethers. <i>Organic and Biomolecular Chemistry</i> ,	3.9	