Raju Kumar Gupta

List of Publications by Year
in descending order

100	8,315	70961 41	46693 89
papers	citations	h-index	g-index

101	101	101	9334
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Recent Progress on Ferroelectric Polymer-Based Nanocomposites for High Energy Density Capacitors: Synthesis, Dielectric Properties, and Future Aspects. Chemical Reviews, 2016, 116, 4260-4317.	23.0	1,248
2	Oil/water separation techniques: a review of recent progresses and future directions. Journal of Materials Chemistry A, 2017, 5, 16025-16058.	5.2	859
3	Review: Raw Natural Fiberâ€"Based Polymer Composites. International Journal of Polymer Analysis and Characterization, 2014, 19, 256-271.	0.9	615
4	Green synthesis of carbon quantum dots from lemon peel waste: applications in sensing and photocatalysis. RSC Advances, 2016, 6, 72423-72432.	1.7	336
5	Graphite modified sodium alginate hydrogel composite for efficient removal of malachite green dye. International Journal of Biological Macromolecules, 2020, 148, 1130-1139.	3.6	251
6	Noble metals-TiO2 nanocomposites: From fundamental mechanisms to photocatalysis, surface enhanced Raman scattering and antibacterial applications. Applied Materials Today, 2018, 11, 82-135.	2.3	231
7	Rapid synthesis of graft copolymers from natural cellulose fibers. Carbohydrate Polymers, 2013, 98, 820-828.	5.1	210
8	Graft copolymers of natural fibers for green composites. Carbohydrate Polymers, 2014, 104, 87-93.	5.1	204
9	Synthesis and Applications of Biodegradable Soy Based Graft Copolymers: A Review. ACS Sustainable Chemistry and Engineering, 2016, 4, 1-17.	3.2	195
10	Antibacterial and Antiviral Functional Materials: Chemistry and Biological Activity toward Tackling COVID-19-like Pandemics. ACS Pharmacology and Translational Science, 2021, 4, 8-54.	2.5	174
11	Graft copolymers from cellulose: Synthesis, characterization and evaluation. Carbohydrate Polymers, 2013, 97, 18-25.	5.1	170
12	Surface modification of cellulose using silane coupling agent. Carbohydrate Polymers, 2014, 111, 849-855.	5.1	169
13	Recent progress in micro-scale energy storage devices and future aspects. Journal of Materials Chemistry A, 2015, 3, 22507-22541.	5.2	169
14	Dual Functional Ta-Doped Electrospun TiO₂ Nanofibers with Enhanced Photocatalysis and SERS Detection for Organic Compounds. ACS Applied Materials & Interfaces, 2017, 9, 28495-28507.	4.0	158
15	Gold-Nanoparticle-Functionalized In₂O₃ Nanowires as CO Gas Sensors with a Significant Enhancement in Response. ACS Applied Materials & Interfaces, 2011, 3, 2246-2252.	4.0	144
16	Enhanced visible-light-driven photocatalytic activity of Au@Ag coreâ€"shell bimetallic nanoparticles immobilized on electrospun TiO₂ nanofibers for degradation of organic compounds. Catalysis Science and Technology, 2017, 7, 570-580.	2.1	134
17	Synthesis of In2O3â€"ZnO coreâ€"shell nanowires and their application in gas sensing. Sensors and Actuators B: Chemical, 2011, 160, 1346-1351.	4.0	133
18	Development of functionalized cellulosic biopolymers by graft copolymerization. International Journal of Biological Macromolecules, 2013, 62, 44-51.	3.6	132

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19	Significantly Enhanced Energy Density by Tailoring the Interface in Hierarchically Structured TiO₂â€“BaTiO₃â€“TiO₂ Nanofillers in PVDF-Based Thin-Film Polymer Nanocomposites. ACS Applied Materials & Interfaces, 2019, 11, 14329-14339.	4.0	121
20	Synthesis of lignocellulosic polymer with improved chemical resistance through free radical polymerization. International Journal of Biological Macromolecules, 2013, 61, 121-126.	3.6	99
21	Titania modified gum tragacanth based hydrogel nanocomposite for water remediation. Journal of Environmental Chemical Engineering, 2021, 9, 104608.	3.3	94
22	Design and engineering of high-performance photocatalytic systems based on metal oxideâ€“grapheneâ€“noble metal nanocomposites. Molecular Systems Design and Engineering, 2017, 2, 422-439.	1.7	92
23	Graft Copolymers from Natural Polymers Using Free Radical Polymerization. International Journal of Polymer Analysis and Characterization, 2013, 18, 495-503.	0.9	89
24	Engineered thiol anchored Au-BaTiO3/PVDF polymer nanocomposite as efficient dielectric for electronic applications. Composites Science and Technology, 2019, 174, 158-168.	3.8	89
25	Effect of tantalum doping in a TiO₂ compact layer on the performance of planar spiro-OMeTAD free perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 1037-1047.	5.2	86
26	Significant electrochemical stability of manganese dioxide/polyaniline coaxial nanowires by self-terminated double surfactant polymerization for pseudocapacitor electrode. Journal of Materials Chemistry, 2012, 22, 23921.	6.7	82
27	Semiconductor based photocatalysts for detoxification of emerging pharmaceutical pollutants from aquatic systems: A critical review. Nano Materials Science, 2021, 3, 25-46.	3.9	72
28	Engineering metal oxide semiconductor nanostructures for enhanced charge transfer: fundamentals and emerging SERS applications. Journal of Materials Chemistry C, 2021, 10, 73-95.	2.7	72
29	Engineering of transition metal dichalcogenide-based 2D nanomaterials through doping for environmental applications. Molecular Systems Design and Engineering, 2019, 4, 804-827.	1.7	71
30	Hydrothermally Tailored Three-Dimensional Niâ€“V Layered Double Hydroxide Nanosheets as High-Performance Hybrid Supercapacitor Applications. ACS Omega, 2019, 4, 3257-3267.	1.6	69
31	Quantum dot sensitized electrospun mesoporous titanium dioxide hollow nanofibers for photocatalytic applications. RSC Advances, 2016, 6, 48109-48119.	1.7	64
32	In-situ synthesis of TiO2 nanoparticles in ACF: Photocatalytic degradation under continuous flow. Solar Energy, 2019, 189, 35-44.	2.9	59
33	Progress in tailoring perovskite based solar cells through compositional engineering: Materials properties, photovoltaic performance and critical issues. Materials Today Energy, 2018, 9, 440-486.	2.5	58
34	Mutton bone derived hydroxyapatite supported TiO2 nanoparticles for sustainable photocatalytic applications. Journal of Environmental Chemical Engineering, 2018, 6, 459-467.	3.3	57
35	Temperature dependent, shape variant synthesis of photoluminescent and biocompatible carbon nanostructures from almond husk for applications in dye removal. RSC Advances, 2016, 6, 29545-29553.	1.7	56
36	Milli-Watt Power Harvesting from Dual Triboelectric and Piezoelectric Effects of Multifunctional Green and Robust Reduced Graphene Oxide/P(VDF-TrFE) Composite Flexible Films. ACS Applied Materials & Interfaces, 2019, 11, 38177-38189.	4.0	56

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37	Interfacial engineering of Fe2O3@BOC heterojunction for efficient detoxification of toxic metal and dye under visible light illumination. Journal of Environmental Chemical Engineering, 2019, 7, 102843.	3.3	56
38	Multifunctional and Flexible Polymeric Nanocomposite Films with Improved Ferroelectric and Piezoelectric Properties for Energy Generation Devices. ACS Applied Energy Materials, 2019, 2, 6364-6374.	2.5	52
39	The effect of dimensionality on the charge carrier mobility of halide perovskites. Journal of Materials Chemistry A, 2021, 9, 21551-21575.	5.2	49
40	TiO2 nanoflower photocatalysts: Synthesis, modifications and applications in wastewater treatment for removal of emerging organic pollutants. Environmental Research, 2022, 212, 113550.	3.7	47
41	Influence of gold core concentration on visible photocatalytic activity of goldâ€“zinc sulfide coreâ€“shell nanoparticle. Journal of Power Sources, 2015, 294, 580-587.	4.0	46
42	Green synthesis of Ag nanoparticles in large quantity by cryomilling. RSC Advances, 2016, 6, 111380-111388.	1.7	40
43	Recycling, reclamation and re-manufacturing of carbon fibres. Current Opinion in Green and Sustainable Chemistry, 2018, 13, 86-90.	3.2	40
44	Microwave absorption study of composites based on CQD@BaTiO3 core shell and BaFe12O19 nanoparticles. Journal of Alloys and Compounds, 2021, 855, 157411.	2.8	40
45	Ethylenediamine mediated luminescence enhancement of pollutant derivatized carbon quantum dots for intracellular trinitrotoluene detection: soot to shine. RSC Advances, 2018, 8, 32684-32694.	1.7	39
46	Enhancing charge-storage capacity of non-volatile memory devices using template-directed assembly of gold nanoparticles. Nanoscale, 2012, 4, 2296.	2.8	38
47	Poly(vinylpyrrolidone)/Poly(vinylidene fluoride) as Guest/Host Polymer Blends: Understanding the Role of Compositional Transformation on Nanoscale Dielectric Behavior through a Simple Solutionâ€“Process Route. ACS Applied Energy Materials, 2019, 2, 6146-6152.	2.5	38
48	Three-dimensional nickel vanadium layered double hydroxide nanostructures grown on carbon cloth for high-performance flexible supercapacitor applications. Nanoscale Advances, 2019, 1, 2400-2407.	2.2	35
49	A novel star-shaped triazine-triphenylamineâ€“based fluorescent chemosensor for the selective detection of picric acid. Materials Today Chemistry, 2019, 12, 178-186.	1.7	34
50	Hydrogel of gelatin in the presence of graphite for the adsorption of dye: Towards the concept for water purification. Journal of Environmental Chemical Engineering, 2021, 9, 104762.	3.3	34
51	Enhancing the corrosion resistance performance of structural steel via a novel deep cryogenic treatment process. Vacuum, 2019, 159, 468-475.	1.6	32
52	Inverted PTB7-Th:PC71BM organic solar cells with 11.8% PCE via incorporation of gold nanoparticles in ZnO electron transport layer. Solar Energy, 2021, 214, 220-230.	2.9	31
53	Covalent Assembly of Gold Nanoparticles for Nonvolatile Memory Applications. ACS Applied Materials & Interfaces, 2011, 3, 4619-4625.	4.0	29
54	Insights and Perspectives Regarding Nanostructured Fluorescent Materials toward Tackling COVID-19 and Future Pandemics. ACS Applied Nano Materials, 2021, 4, 911-948.	2.4	29

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55	Effect of neodymium doping on microwave absorption property of barium hexaferrite in X-band. Materials Research Express, 2020, 7, 016109.	0.8	28
56	Novel polypyrrole-graphene oxide-gold nanocomposite for high performance hydrogen peroxide sensing application. Sensors and Actuators A: Physical, 2021, 328, 112769.	2.0	28
57	Improved supercapacitive performance in electrospun TiO2 nanofibers through Ta-doping for electrochemical capacitor applications. Catalysis Today, 2019, 325, 33-40.	2.2	27
58	<scp>Twoâ€dimensional</scp> metal organic frameworks for biomedical applications. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2021, 13, e1674.	3.3	27
59	Dicyanovinylene and Thiazolo[5,4-d]thiazole Core Containing Dâ€“Aâ€“D Type Hole-Transporting Materials for Spiro-OMeTAD-Free Perovskite Solar Cell Applications with Superior Atmospheric Stability. ACS Applied Energy Materials, 2019, 2, 7609-7618.	2.5	26
60	Waste carbon paper derivatized Carbon Quantum Dots/(3-Aminopropyl)triethoxysilane based fluorescent probe for trinitrotoluene detection. Materials Research Express, 2019, 6, 025605.	0.8	26
61	Covalent Assembly of Gold Nanoparticles: An Application toward Transistor Memory. Journal of Physical Chemistry B, 2012, 116, 9784-9790.	1.2	24
62	Controlling surface cation segregation in a nanostructured double perovskite GdBaCo₂O_{5+Î´} electrode for solid oxide fuel cells. Nanoscale, 2019, 11, 21404-21418.	2.8	24
63	Interface modulation in multi-layered BaTiO₃ nanofibers/PVDF using the PVP linker layer as an adhesive for high energy density capacitor applications. Materials Advances, 2020, 1, 680-688.	2.6	24
64	A facile synthesis of novel polyaniline/graphene nanocomposite thin films for enzyme-free electrochemical sensing of hydrogen peroxide. Molecular Systems Design and Engineering, 2022, 7, 158-170.	1.7	24
65	Enhanced efficiency and thermal stability of mesoscopic perovskite solar cells by adding PC70BM acceptor. Solar Energy Materials and Solar Cells, 2019, 202, 110130.	3.0	23
66	Role of PC60BM in defect passivation and improving degradation behaviour in planar perovskite solar cells. Solar Energy Materials and Solar Cells, 2020, 207, 110335.	3.0	23
67	Quantitative Detection with Surface Enhanced Raman Scattering (SERS) Using Self-Assembled Gold Nanoparticle Cluster Arrays. Australian Journal of Chemistry, 2013, 66, 1034.	0.5	22
68	Development of RGO/BaFe12O19-based composite medium for improved microwave absorption applications. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	1.1	21
69	Thiazolothiazoleâ€Based Fluorescence Probe towards Detection of Copper and Iron Ions through Formation of Radical Cations. ChemistrySelect, 2019, 4, 11718-11725.	0.7	20
70	Stabilization of a Highly Concentrated Colloidal Suspension of Pristine Metallic Nanoparticles. Langmuir, 2019, 35, 2668-2673.	1.6	20
71	High-performance hybrid microsupercapacitors based on Coâ€“Mn layered double hydroxide nanosheets. Electrochimica Acta, 2020, 334, 135590.	2.6	20
72	Copper nanoparticles embedded in a polyimide film for non-volatile memory applications. Materials Letters, 2012, 68, 287-289.	1.3	19

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73	Synthesis of 16-Mercaptohexadecanoic acid capped gold nanoparticles and their immobilization on a substrate. Materials Letters, 2012, 67, 315-319.	1.3	18
74	Probing the Interface Activation in Designing Defect-Free Multilayered Polymer Nanocomposites for Dielectric Capacitor Applications. Journal of Physical Chemistry C, 2020, 124, 22914-22924.	1.5	18
75	Recent advances in heterogeneous micro-photoreactors for wastewater treatment application. Chemical Engineering Science, 2021, 235, 116511.	1.9	18
76	Integration of biological control with engineered heterojunction nano-photocatalysts for sustainable and effective management of water hyacinth weed. Journal of Environmental Chemical Engineering, 2022, 10, 106976.	3.3	18
77	Modelling studies for photocatalytic degradation of organic dyes using TiO2 nanofibers. Environmental Science and Pollution Research, 2018, 25, 20466-20472.	2.7	17
78	An activated carbon fiber supported Fe₂O₃@bismuth carbonate heterojunction for enhanced visible light degradation of emerging pharmaceutical pollutants. Reaction Chemistry and Engineering, 2021, 6, 2029-2041.	1.9	17
79	Hydrothermal synthesis and Ta doping of TiO2 nanorods: Effect of soaking time and doping on optical and charge transfer properties for enhanced SERS activity. Materials Chemistry and Physics, 2022, 278, 125642.	2.0	17
80	Synthesis of short chain thiol capped gold nanoparticles, their stabilization and immobilization on silicon surface. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2011, 390, 149-156.	2.3	13
81	Inâ€situ fabrication of barium titanate@polyvinyl pyrrolidone in polyvinylidene fluoride polymer nanocomposites for dielectric capacitor applications. Journal of Polymer Science, 2022, 60, 961-967.	2.0	13
82	Recent Progress on Hole-Transporting Materials for Perovskite-Sensitized Solar Cells. , 2018, , 279-324.		12
83	Unveiling the Role of Graphene Oxide as an Interface Interlocking Ingredient in Polyvinylidene Fluorideâ€Based Multilayered Thinâ€Film Capacitors for High Energy Density and Ultrafast Discharge Applications. Energy Technology, 2021, 9, 2000905.	1.8	11
84	Low-Temperature Microwave Processed TiO₂ as an Electron Transport Layer for Enhanced Performance and Atmospheric Stability in Planar Perovskite Solar Cells. ACS Applied Energy Materials, 2022, 5, 2679-2696.	2.5	11
85	Doping engineering of V-TiO2 for its use as corrosion inhibitor. Journal of Alloys and Compounds, 2020, 816, 152545.	2.8	10
86	Effect of NiO Precursor Solution Ageing on the Perovskite Film Formation and Their Integration as Hole Transport Material for Perovskite Solar Cells. Journal of Nanoscience and Nanotechnology, 2020, 20, 3710-3717.	0.9	9
87	Biosafe sustainable antimicrobial encapsulation and coatings for targeted treatment and infections prevention: Preparation for another pandemic. Current Research in Green and Sustainable Chemistry, 2021, 4, 100074.	2.9	9
88	Enhanced thermal and moisture stability via dual additives approach in methylammonium lead iodide based planar perovskite solar cells. Solar Energy, 2021, 225, 200-210.	2.9	9
89	Defect State Modulation of TiO₂ Nanostructures for Photocatalytic Abatement of Emerging Pharmaceutical Pollutant in Wastewater Effluent. Advanced Energy and Sustainability Research, 2022, 3, .	2.8	9
90	Electrochemical and microstructural analysis of azomethine polyamides as inhibitor for rebar corrosion under chloride contaminated pore solution. , 0, 1, 1004.		7

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91	Electrically Conductive MoS₂ Reinforced Polyacrylonitrile Nanofibers for Biomedical Applications. Advanced NanoBiomed Research, 2022, 2, .	1.7	6
92	Ultrathin PFPE Film Systems Fabricated by Covalent Assembly: An Application to Tribology. Tribology Letters, 2012, 45, 371-378.	1.2	5
93	Reaction Performance and Flow Behavior of Isobutane/1-Butene and H₂SO₄ in the Microreactor Configured with the Micro-mixer. Industrial & Engineering Chemistry Research, 2022, 61, 9122-9135.	1.8	4
94	Gold nanoparticles adsorption study onto periodic block copolymer using quartz crystal microbalance. Materials Letters, 2015, 148, 118-121.	1.3	3
95	Visible-light-mediated synthesis of Î±,Î²-diamino esters via coupling of N,N-dimethylanilines and glyoxalic oxime ethers. Organic and Biomolecular Chemistry, 2022, 20, 4522-4525.	1.5	3
96	Micropatterned Arrays of ZnSe Nanospheres as Antireflection Coatings. Australian Journal of Chemistry, 2014, 67, 1427.	0.5	2
97	2D materials production and generation of functional inks: general discussion. Faraday Discussions, 2021, 227, 141-162.	1.6	2
98	Industrially viable electrochemical techniques for water treatment. , 2022, , 283-301.		0
99	Modifications in metal oxide electrospun nanofibers for environmental applications. , 2021, , 621-639.		0
100	Dielectric properties of biofiber-based polymer composites. , 2022, , 159-191.		0