

Rajesh Kumar

List of Publications by Year in descending order

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91
papers

7,685
citations

34076

52
h-index

51562

86
g-index

92
all docs

92
docs citations

92
times ranked

6058
citing authors

#	ARTICLE	IF	CITATIONS
1	Heteroatom doping of 2D graphene materials for electromagnetic interference shielding: a review of recent progress. <i>Critical Reviews in Solid State and Materials Sciences</i> , 2022, 47, 570-619.	6.8	68
2	Microwave as a Tool for Synthesis of Carbon-Based Electrodes for Energy Storage. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 20306-20325.	4.0	90
3	Laser processing of graphene and related materials for energy storage: State of the art and future prospects. <i>Progress in Energy and Combustion Science</i> , 2022, 91, 100981.	15.8	124
4	An overview of recent progress in nanostructured carbon-based supercapacitor electrodes: From zero to bi-dimensional materials. <i>Carbon</i> , 2022, 193, 298-338.	5.4	168
5	Electrochemical deposition of uniform and porous Co-Ni layered double hydroxide nanosheets on nickel foam for supercapacitor electrode with improved electrochemical efficiency. <i>Journal of Energy Storage</i> , 2022, 50, 104638.	3.9	59
6	Antioxidant, antimicrobial, and photocatalytic activity of green synthesized ZnO-NPs from <i>Myrica esculenta</i> fruits extract. <i>Inorganic Chemistry Communication</i> , 2022, 141, 109518.	1.8	32
7	Two-dimensional layered molybdenum disulfide (MoS ₂)-reduced graphene oxide (rGO) heterostructures modified with Fe ₃ O ₄ for electrochemical sensing of epinephrine. <i>Materials Chemistry and Physics</i> , 2022, 287, 126274.	2.0	35
8	Microwave-assisted facile synthesis of layered reduced graphene oxide-tungsten disulfide sandwiched Fe ₃ O ₄ nanocomposite as effective and sensitive sensor for detection of dopamine. <i>Materials Chemistry and Physics</i> , 2022, 287, 126283.	2.0	28
9	Advances in pseudocapacitive and battery-like electrode materials for high performance supercapacitors. <i>Journal of Materials Chemistry A</i> , 2022, 10, 13190-13240.	5.2	137
10	<i>In situ</i> growth of laser-induced graphene micro-patterns on arbitrary substrates. <i>Nanoscale</i> , 2022, 14, 8914-8918.	2.8	44
11	A review on the current research on microwave processing techniques applied to graphene-based supercapacitor electrodes: An emerging approach beyond conventional heating. <i>Journal of Energy Chemistry</i> , 2022, 74, 252-282.	7.1	104
12	Two-dimensional layered reduced graphene oxide-tungsten disulphide nanocomposite for highly sensitive and selective determination of para nitrophenol. <i>Environmental Nanotechnology, Monitoring and Management</i> , 2022, 18, 100724.	1.7	5
13	Cutting edge development on graphene derivatives modified by liquid crystal and CdS/TiO ₂ hybrid matrix: optoelectronics and biotechnological aspects. <i>Critical Reviews in Solid State and Materials Sciences</i> , 2021, 46, 385-449.	6.8	117
14	Nanocomposite matrix conjugated with carbon nanomaterials for photocatalytic wastewater treatment. <i>Journal of Hazardous Materials</i> , 2021, 410, 124657.	6.5	66
15	Investigation on influence of thickness variation effect of TiO ₂ film, spacer and counter electrode for improved dye-sensitized solar cells performance. <i>Optik</i> , 2021, 227, 166108.	1.4	12
16	Hydrogen gas sensing properties of microwave-assisted 2D Hybrid Pd/rGO: Effect of temperature, humidity and UV illumination. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 7653-7665.	3.8	71
17	Tunable optical and electrical properties of p-type Cu ₂ O thin films. <i>Journal of Materials Science: Materials in Electronics</i> , 2021, 32, 11158-11172.	1.1	5
18	Recent progress on carbon-based composite materials for microwave electromagnetic interference shielding. <i>Carbon</i> , 2021, 177, 304-331.	5.4	239

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19	Microwave-assisted thin reduced graphene oxide-cobalt oxide nanoparticles as hybrids for electrode materials in supercapacitor. <i>Journal of Energy Storage</i> , 2021, 40, 102724.	3.9	137
20	A review of the microwave-assisted synthesis of carbon nanomaterials, metal oxides/hydroxides and their composites for energy storage applications. <i>Nanoscale</i> , 2021, 13, 11679-11711.	2.8	93
21	Microwave-assisted synthesis of Mn ₃ O ₄ -Fe ₂ O ₃ /Fe ₃ O ₄ @rGO ternary hybrids and electrochemical performance for supercapacitor electrode. <i>Diamond and Related Materials</i> , 2020, 101, 107622.	1.8	102
22	Facile synthesis of highly fluorescent free-standing films comprising graphitic carbon nitride (g-C ₃ N ₄) nanolayers. <i>New Journal of Chemistry</i> , 2020, 44, 2644-2651.	1.4	29
23	Synthesis of mesoporous Co(OH) ₂ nanostructure film via electrochemical deposition using lyotropic liquid crystal template as improved electrode materials for supercapacitors application. <i>Journal of Electroanalytical Chemistry</i> , 2020, 857, 113728.	1.9	51
24	One-pot synthesis of reduced graphene oxide nanosheets anchored ZnO nanoparticles via microwave approach for electrochemical performance as supercapacitor electrode. <i>Journal of Materials Science: Materials in Electronics</i> , 2020, 31, 15456-15465.	1.1	47
25	Fe ₃ O ₄ -embedded rGO composites as anode for rechargeable FeOx-air batteries. <i>Materials Today Communications</i> , 2020, 25, 101540.	0.9	18
26	Heteroatom doped graphene engineering for energy storage and conversion. <i>Materials Today</i> , 2020, 39, 47-65.	8.3	400
27	Honeycomb-like open-edged reduced-graphene-oxide-enclosed transition metal oxides (NiO/Co ₃ O ₄) as improved electrode materials for high-performance supercapacitor. <i>Journal of Energy Storage</i> , 2020, 30, 101539.	3.9	112
28	One step synthesis Pd/NiO@rGO/CNTs nanocomposite for energy storage as supercapacitor application. <i>Journal of Physics: Conference Series</i> , 2020, 1461, 012109.	0.3	1
29	Synthesis, structural analysis, upconversion luminescence and magnetic properties of Ho ³⁺ /Yb ³⁺ co-doped GdVO ₄ nanophosphor. <i>Materials Chemistry and Physics</i> , 2020, 253, 123333.	2.0	22
30	Superior performance of Ni(OH) ₂ -ErGO@ NF electrode materials as pseudocapacitance using electrochemical deposition via two simple successive steps. <i>Journal of Energy Storage</i> , 2020, 30, 101485.	3.9	49
31	Functionalized Nanosize Graphene and Its Derivatives for Removal of Contaminations and Water Treatment. , 2019, , 133-185.		5
32	Graphene/Graphene Oxide and Carbon Nanotube Based Sensors for the Determination and Removal of Bisphenols. , 2019, , 329-372.		1
33	Recent progress in the synthesis of graphene and derived materials for next generation electrodes of high performance lithium ion batteries. <i>Progress in Energy and Combustion Science</i> , 2019, 75, 100786.	15.8	379
34	A review on synthesis of graphene, h-BN and MoS ₂ for energy storage applications: Recent progress and perspectives. <i>Nano Research</i> , 2019, 12, 2655-2694.	5.8	283
35	Nitrogen-Sulfur Co-Doped Reduced Graphene Oxide-Nickel Oxide Nanoparticle Composites for Electromagnetic Interference Shielding. <i>ACS Applied Nano Materials</i> , 2019, 2, 4626-4636.	2.4	94
36	Fabrication and electrochemical evaluation of micro-supercapacitors prepared by direct laser writing on free-standing graphite oxide paper. <i>Energy</i> , 2019, 179, 676-684.	4.5	82

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37	Facile in-situ simultaneous electrochemical reduction and deposition of reduced graphene oxide embedded palladium nanoparticles as high performance electrode materials for supercapacitor with excellent rate capability. <i>Electrochimica Acta</i> , 2019, 314, 124-134.	2.6	93
38	Facile and fast microwave-assisted formation of reduced graphene oxide-wrapped manganese cobaltite ternary hybrids as improved supercapacitor electrode material. <i>Applied Surface Science</i> , 2019, 481, 296-306.	3.1	86
39	Homogeneous reduced graphene oxide supported NiO-MnO ₂ ternary hybrids for electrode material with improved capacitive performance. <i>Electrochimica Acta</i> , 2019, 303, 246-256.	2.6	140
40	Self-assembled nanostructures of 3D hierarchical faceted-iron oxide containing vertical carbon nanotubes on reduced graphene oxide hybrids for enhanced electromagnetic interface shielding. <i>Composites Part B: Engineering</i> , 2019, 168, 66-76.	5.9	88
41	Microwave-Assisted Modification of Graphene and Its Derivatives: Synthesis, Reduction and Exfoliation. <i>Carbon Nanostructures</i> , 2019, , 279-311.	0.1	5
42	Graphene oxide: An efficient material and recent approach for biotechnological and biomedical applications. <i>Materials Science and Engineering C</i> , 2018, 86, 173-197.	3.8	212
43	Microwave-assisted synthesis of palladium nanoparticles intercalated nitrogen doped reduced graphene oxide and their electrocatalytic activity for direct-ethanol fuel cells. <i>Journal of Colloid and Interface Science</i> , 2018, 515, 160-171.	5.0	91
44	Surface modification of aligned TiO ₂ nanotubes by Cu ₂ O nanoparticles and their enhanced photo electrochemical properties and hydrogen generation application. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 6867-6878.	3.8	46
45	Recent advances in the synthesis and modification of carbon-based 2D materials for application in energy conversion and storage. <i>Progress in Energy and Combustion Science</i> , 2018, 67, 115-157.	15.8	271
46	Rapid and controllable synthesis of Fe ₃ O ₄ octahedral nanocrystals embedded-reduced graphene oxide using microwave irradiation for high performance lithium-ion batteries. <i>Electrochimica Acta</i> , 2018, 281, 78-87.	2.6	87
47	Simple and Fast Approach for Synthesis of Reduced Graphene Oxide-MoS ₂ Hybrids for Room Temperature Gas Detection. <i>IEEE Transactions on Electron Devices</i> , 2018, 65, 3943-3949.	1.6	40
48	Self-Assembled and One-Step Synthesis of Interconnected 3D Network of Fe ₃ O ₄ /Reduced Graphene Oxide Nanosheets Hybrid for High-Performance Supercapacitor Electrode. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 8880-8890.	4.0	271
49	Controlled density of defects assisted perforated structure in reduced graphene oxide nanosheets-palladium hybrids for enhanced ethanol electro-oxidation. <i>Carbon</i> , 2017, 117, 137-146.	5.4	65
50	Synthesis of self-assembled and hierarchical palladium-CNTs-reduced graphene oxide composites for enhanced field emission properties. <i>Materials and Design</i> , 2017, 122, 110-117.	3.3	57
51	Facile and single step synthesis of three dimensional reduced graphene oxide-NiCoO ₂ composite using microwave for enhanced electron field emission properties. <i>Applied Surface Science</i> , 2017, 416, 259-265.	3.1	67
52	Laser-assisted synthesis, reduction and micro-patterning of graphene: Recent progress and applications. <i>Coordination Chemistry Reviews</i> , 2017, 342, 34-79.	9.5	230
53	Synthesis of self-aligned and vertically oriented carbon incorporated titania nanotube for improved photoelectrochemical hydrogen generation. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 4782-4792.	3.8	16
54	Direct laser writing of micro-supercapacitors on thick graphite oxide films and their electrochemical properties in different liquid inorganic electrolytes. <i>Journal of Colloid and Interface Science</i> , 2017, 507, 271-278.	5.0	72

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55	Synthesis of reduced graphene oxide nanosheet-supported agglomerated cobalt oxide nanoparticles and their enhanced electron field emission properties. <i>New Journal of Chemistry</i> , 2017, 41, 8431-8436.	1.4	36
56	Enhanced magnetic performance of iron oxide nanoparticles anchored pristine/ N-doped multi-walled carbon nanotubes by microwave-assisted approach. <i>Journal of Alloys and Compounds</i> , 2017, 695, 1793-1801.	2.8	36
57	Synthesis, Characterization, and Tribological Evaluation of TiO ₂ -Reinforced Boron and Nitrogen co-Doped Reduced Graphene Oxide Based Hybrid Nanomaterials as Efficient Antiwear Lubricant Additives. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 11698-11710.	4.0	104
58	Microwave heating time dependent synthesis of various dimensional graphene oxide supported hierarchical ZnO nanostructures and its photoluminescence studies. <i>Materials and Design</i> , 2016, 111, 291-300.	3.3	52
59	Fabrication of interdigitated micro-supercapacitor devices by direct laser writing onto ultra-thin, flexible and free-standing graphite oxide films. <i>RSC Advances</i> , 2016, 6, 84769-84776.	1.7	77
60	Reply to "Comment on "Nanohole-Structured and Palladium-Embedded 3D Porous Graphene for Ultrahigh Hydrogen Storage and CO Oxidation Multifunctionalities" ACS Nano, 2016, 10, 9057-9060.	7.3	0
61	Mechanical pressure induced chemical cutting of boron nitride sheets into boron nitride quantum dots and optical properties. <i>Journal of Alloys and Compounds</i> , 2016, 683, 38-45.	2.8	33
62	Simultaneous reduction and covalent grafting of polythiophene on graphene oxide sheets for excellent capacitance retention. <i>RSC Advances</i> , 2016, 6, 52945-52949.	1.7	57
63	Graphene oxide: strategies for synthesis, reduction and frontier applications. <i>RSC Advances</i> , 2016, 6, 64993-65011.	1.7	428
64	Natural and waste hydrocarbon precursors for the synthesis of carbon based nanomaterials: Graphene and CNTs. <i>Renewable and Sustainable Energy Reviews</i> , 2016, 58, 976-1006.	8.2	179
65	Growth analysis and high-yield synthesis of aligned-stacked branched nitrogen-doped carbon nanotubes using sesame oil as a natural botanical hydrocarbon precursor. <i>Materials and Design</i> , 2016, 94, 166-175.	3.3	42
66	Catalyst-free synthesis of a three-dimensional nanoworm-like gallium oxide-graphene nanosheet hybrid structure with enhanced optical properties. <i>RSC Advances</i> , 2016, 6, 17669-17677.	1.7	58
67	Microwave-assisted synthesis of void-induced graphene-wrapped nickel oxide hybrids for supercapacitor applications. <i>RSC Advances</i> , 2016, 6, 26612-26620.	1.7	90
68	Bio-Inspired Engineering of 3D Carbon Nanostructures. <i>Springer Series in Biomaterials Science and Engineering</i> , 2016, , 365-420.	0.7	1
69	Freestanding 3D Graphene-Nickel Encapsulated Nitrogen-Rich Aligned Bamboo Like Carbon Nanotubes for High-Performance Supercapacitors with Robust Cycle Stability. <i>Advanced Materials Interfaces</i> , 2015, 2, 1500191.	1.9	82
70	Nanohole-Structured and Palladium-Embedded 3D Porous Graphene for Ultrahigh Hydrogen Storage and CO Oxidation Multifunctionalities. <i>ACS Nano</i> , 2015, 9, 7343-7351.	7.3	122
71	Self-Assembled Hierarchical Formation of Conjugated 3D Cobalt Oxide Nanobead-CNT-Graphene Nanostructure Using Microwaves for High-Performance Supercapacitor Electrode. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 15042-15051.	4.0	156
72	Highly zone-dependent synthesis of different carbon nanostructures using plasma-enhanced arc discharge technique. <i>Journal of Nanoparticle Research</i> , 2015, 17, 1.	0.8	17

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73	Evaluation of antiwear activity of substituted benzoylhydrazones and their copper(Cu^{II}) complexes in paraffin oil as efficient low SAPS additives and their interactions with the metal surface using density functional theory. <i>Journal of Materials Chemistry A</i> , 2015, 3, 5092-5109.	5.2	28
74	Microwave-assisted synthesis and deposition of a thin ZnO layer on microwave-exfoliated graphene: optical and electrochemical evaluations. <i>RSC Advances</i> , 2015, 5, 67988-67995.	1.7	61
75	Hydrothermal synthesis of a uniformly dispersed hybrid graphene-TiO ₂ nanostructure for optical and enhanced electrochemical applications. <i>RSC Advances</i> , 2015, 5, 7112-7120.	1.7	60
76	Non-Functionalized Fluorescent Carbon Nanoparticles: <i>In Vitro</i> Imaging and Organic Solvent Sensing Applications. <i>Science of Advanced Materials</i> , 2015, 7, 706-713.	0.1	7
77	Tribological studies of some SAPS-free Schiff bases derived from 4-aminoantipyrine and aromatic aldehydes and their synergistic interaction with borate ester. <i>Journal of Materials Chemistry A</i> , 2014, 2, 10424-10434.	5.2	42
78	Tribological studies of stearic acid-modified CaCu _{2.9} Zn _{0.1} Ti ₄ O ₁₂ nanoparticles as effective zero SAPS antiwear lubricant additives in paraffin oil. <i>Journal of Materials Chemistry A</i> , 2014, 2, 375-386.	5.2	42
79	Graphene-wrapped and cobalt oxide-intercalated hybrid for extremely durable super-capacitor with ultrahigh energy and power densities. <i>Carbon</i> , 2014, 79, 192-202.	5.4	166
80	Clean and Efficient Synthesis of Graphene Nanosheets and Rectangular Aligned-Carbon Nanotubes Bundles Using Green Botanical Hydrocarbon Precursor: Sesame Oil. <i>Science of Advanced Materials</i> , 2014, 6, 76-83.	0.1	26
81	Synthesis of coal-derived single-walled carbon nanotube from coal by varying the ratio of Zr/Ni as bimetallic catalyst. <i>Journal of Nanoparticle Research</i> , 2013, 15, 1.	0.8	18
82	An ionic liquid-assisted method for splitting carbon nanotubes to produce graphene nano-ribbons by microwave radiation. <i>Carbon</i> , 2013, 53, 391-398.	5.4	65
83	Pressure-dependent synthesis of high-quality few-layer graphene by plasma-enhanced arc discharge and their thermal stability. <i>Journal of Nanoparticle Research</i> , 2013, 15, 1.	0.8	55
84	Synthesis of carbon and carbon-nitrogen nanotubes using green precursor: jatropha-derived biodiesel. <i>Journal of Experimental Nanoscience</i> , 2013, 8, 606-620.	1.3	21
85	Synthesis, characterization and optical properties of graphene sheets-ZnO multipod nanocomposites. <i>Journal of Alloys and Compounds</i> , 2012, 526, 129-134.	2.8	55
86	EFFECT OF NITROGEN VARIATION ON THE SYNTHESIS OF VERTICALLY ALIGNED BAMBOO-SHAPED C_nN NANOTUBES USING SUNFLOWER OIL. <i>International Journal of Nanoscience</i> , 2011, 10, 809-813.	0.4	17
87	Synthesis of nano-carbon (nanotubes, nanofibres, graphene) materials. <i>Bulletin of Materials Science</i> , 2011, 34, 607-614.	0.8	70
88	Scalable synthesis of aligned carbon nanotubes bundles using green natural precursor: neem oil. <i>Nanoscale Research Letters</i> , 2011, 6, 92.	3.1	65
89	PREPARATION OF CARBON-NITROGEN NANOTUBES (CNNTs)-POLY ETHYLENE OXIDE (PEO) COMPOSITES FILMS AND THEIR ELECTRICAL CONDUCTIVITY MEASUREMENT. <i>International Journal of Nanoscience</i> , 2011, 10, 1091-1094.	0.4	4
90	Large scale synthesis of bundles of aligned carbon nanotubes using a natural precursor: turpentine oil. <i>Journal of Experimental Nanoscience</i> , 2010, 5, 498-508.	1.3	51

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91	Functionalization Effects on the Electrical Properties of Multi-Walled Carbon Nanotube-Polyacrylamide Composites. <i>Journal of Nanoscience and Nanotechnology</i> , 2009, 9, 5455-5460.	0.9	16