

Rajesh K Singh

List of Publications by Year in descending order

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85
papers

6,318
citations

70961

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66788

78
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87
all docs

87
docs citations

87
times ranked

5639
citing authors

#	ARTICLE	IF	CITATIONS
1	Graphene oxide: strategies for synthesis, reduction and frontier applications. RSC Advances, 2016, 6, 64993-65011.	1.7	428
2	Heteroatom doped graphene engineering for energy storage and conversion. Materials Today, 2020, 39, 47-65.	8.3	400
3	Recent progress in the synthesis of graphene and derived materials for next generation electrodes of high performance lithium ion batteries. Progress in Energy and Combustion Science, 2019, 75, 100786.	15.8	379
4	A review on synthesis of graphene, h-BN and MoS ₂ for energy storage applications: Recent progress and perspectives. Nano Research, 2019, 12, 2655-2694.	5.8	283
5	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. ACS Applied Materials & Interfaces, 2017, 9, 8880-8890.	4.0	271
6	Recent advances in the synthesis and modification of carbon-based 2D materials for application in energy conversion and storage. Progress in Energy and Combustion Science, 2018, 67, 115-157.	15.8	271
7	Recent progress on carbon-based composite materials for microwave electromagnetic interference shielding. Carbon, 2021, 177, 304-331.	5.4	239
8	Laser-assisted synthesis, reduction and micro-patterning of graphene: Recent progress and applications. Coordination Chemistry Reviews, 2017, 342, 34-79.	9.5	230
9	Graphene oxide: An efficient material and recent approach for biotechnological and biomedical applications. Materials Science and Engineering C, 2018, 86, 173-197.	3.8	212
10	Natural and waste hydrocarbon precursors for the synthesis of carbon based nanomaterials: Graphene and CNTs. Renewable and Sustainable Energy Reviews, 2016, 58, 976-1006.	8.2	179
11	An overview of recent progress in nanostructured carbon-based supercapacitor electrodes: From zero to bi-dimensional materials. Carbon, 2022, 193, 298-338.	5.4	168
12	Self-Assembled Hierarchical Formation of Conjugated 3D Cobalt Oxide Nanobead@CNT@Graphene Nanostructure Using Microwaves for High-Performance Supercapacitor Electrode. ACS Applied Materials & Interfaces, 2015, 7, 15042-15051.	4.0	156
13	Progress in microwave-assisted synthesis of quantum dots (graphene/carbon/semiconducting) for bioapplications: a review. Materials Today Chemistry, 2019, 12, 282-314.	1.7	155
14	Advances in pseudocapacitive and battery-like electrode materials for high performance supercapacitors. Journal of Materials Chemistry A, 2022, 10, 13190-13240.	5.2	137
15	Laser processing of graphene and related materials for energy storage: State of the art and future prospects. Progress in Energy and Combustion Science, 2022, 91, 100981.	15.8	124
16	A review on the current research on microwave processing techniques applied to graphene-based supercapacitor electrodes: An emerging approach beyond conventional heating. Journal of Energy Chemistry, 2022, 74, 252-282.	7.1	104
17	Structural and up-conversion properties of Er ³⁺ and Yb ³⁺ co-doped Y ₂ Ti ₂ O ₇ phosphors. Physical Chemistry Chemical Physics, 2013, 15, 3480.	1.3	98
18	Nitrogen@Sulfur Co-Doped Reduced Graphene Oxide-Nickel Oxide Nanoparticle Composites for Electromagnetic Interference Shielding. ACS Applied Nano Materials, 2019, 2, 4626-4636.	2.4	94

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19	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
20	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
21	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
22	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
23	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
24	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
25	Freestanding 3D Grapheneâ€“Nickel Encapsulated Nitrogenâ€“Rich Aligned Bamboo Like Carbon Nanotubes for Highâ€“Performance Supercapacitors with Robust Cycle Stability. <i>Advanced Materials Interfaces</i> , 2015, 2, 1500191.	1.9	82
26	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
27	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
28	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
29	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
30	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
31	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
32	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
33	Hydrothermal synthesis of a uniformly dispersed hybrid grapheneâ€“TiO ₂ nanostructure for optical and enhanced electrochemical applications. <i>RSC Advances</i> , 2015, 5, 7112-7120.	1.7	60
34	Catalyst-free synthesis of a three-dimensional nanoworm-like gallium oxideâ€“graphene nanosheet hybrid structure with enhanced optical properties. <i>RSC Advances</i> , 2016, 6, 17669-17677.	1.7	58
35	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
36	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

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37	Synthesis, characterization and optical properties of graphene sheets-ZnO multipod nanocomposites. Journal of Alloys and Compounds, 2012, 526, 129-134.	2.8	55
38	Pressure-dependent synthesis of high-quality few-layer graphene by plasma-enhanced arc discharge and their thermal stability. Journal of Nanoparticle Research, 2013, 15, 1.	0.8	55
39	Effect of different sized CeO ₂ nano particles on decomposition and hydrogen absorption kinetics of magnesium hydride. International Journal of Hydrogen Energy, 2013, 38, 6221-6225.	3.8	52
40	Microwave heating time dependent synthesis of various dimensional graphene oxide supported hierarchical ZnO nanostructures and its photoluminescence studies. Materials and Design, 2016, 111, 291-300.	3.3	52
41	Hydrogen energy in changing environmental scenario: Indian context. International Journal of Hydrogen Energy, 2009, 34, 7358-7367.	3.8	45
42	Growth analysis and high-yield synthesis of aligned-stacked branched nitrogen-doped carbon nanotubes using sesame oil as a natural botanical hydrocarbon precursor. Materials and Design, 2016, 94, 166-175.	3.3	42
43	Simple and Fast Approach for Synthesis of Reduced Graphene Oxide-MoS ₂ Hybrids for Room Temperature Gas Detection. IEEE Transactions on Electron Devices, 2018, 65, 3943-3949.	1.6	40
44	Investigations on hydrogenation behaviour of CNT admixed Mg ₂ Ni. International Journal of Hydrogen Energy, 2009, 34, 9379-9384.	3.8	37
45	Mesoporous silica particle embedded functional graphene oxide as an efficient platform for urea biosensing. Analytical Methods, 2014, 6, 6711-6720.	1.3	36
46	Synthesis of reduced graphene oxide nanosheet-supported agglomerated cobalt oxide nanoparticles and their enhanced electron field emission properties. New Journal of Chemistry, 2017, 41, 8431-8436.	1.4	36
47	Enhanced magnetic performance of iron oxide nanoparticles anchored pristine/ N-doped multi-walled carbon nanotubes by microwave-assisted approach. Journal of Alloys and Compounds, 2017, 695, 1793-1801.	2.8	36
48	Two-dimensional layered molybdenum disulfide (MoS ₂)-reduced graphene oxide (rGO) heterostructures modified with Fe ₃ O ₄ for electrochemical sensing of epinephrine. Materials Chemistry and Physics, 2022, 287, 126274.	2.0	35
49	Mechanical pressure induced chemical cutting of boron nitride sheets into boron nitride quantum dots and optical properties. Journal of Alloys and Compounds, 2016, 683, 38-45.	2.8	33
50	Synthesis of La _{0.9} Sr _{0.1} Ga _{0.8} Mg _{0.2} O _{3-δ} electrolyte via ethylene glycol route and its characterizations for IT-SOFC. Ceramics International, 2014, 40, 7177-7184.	2.3	32
51	Effect of admixing different carbon structural variants on the decomposition and hydrogen sorption kinetics of magnesium hydride. International Journal of Hydrogen Energy, 2010, 35, 4131-4137.	3.8	30
52	Effect of isovalent ion substitution on electrical and dielectric properties of LaCrO ₃ . Journal of Alloys and Compounds, 2013, 576, 154-160.	2.8	30
53	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. Materials Chemistry and Physics, 2022, 287, 126283.	2.0	28
54	On the synthesis and hydrogenation behaviour of MmNi _{5-x} Fe _x alloys and computer simulation of their P-T curves. Journal of Alloys and Compounds, 2004, 373, 208-213.	2.8	27

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55	Thermodynamical, structural, hydrogen storage properties and simulation studies of Pâ€‘C isotherms of (La,Mm)Ni ₅ -yFe _y . International Journal of Hydrogen Energy, 2007, 32, 2971-2976.	3.8	26
56	Clean and Efficient Synthesis of Graphene Nanosheets and Rectangular Aligned-Carbon Nanotubes Bundles Using Green Botanical Hydrocarbon Precursor: Sesame Oil. Science of Advanced Materials, 2014, 6, 76-83.	0.1	26
57	Electrical conductivity of barium substituted LSGM electrolyte materials for IT-SOFC. Solid State Ionics, 2014, 262, 428-432.	1.3	23
58	Synthesis, structural analysis, upconversion luminescence and magnetic properties of Ho ³⁺ /Yb ³⁺ co-doped GdVO ₄ nanophosphor. Materials Chemistry and Physics, 2020, 253, 123333.	2.0	22
59	Influence of Ni/Mo ratio on structural and electrical properties of double perovskite system Sr ₂ Ni _{1+x} Mo _{1-x} O ₆ . Applied Physics A: Materials Science and Processing, 2015, 121, 635-644.	1.1	21
60	Effect of Pb addition on dielectric relaxation in Se ₈₀ In ₂₀ glassy system. Journal of Alloys and Compounds, 2013, 552, 480-485.	2.8	20
61	Electrical conductivity of LSGMâ€‘YSZ composite materials synthesized via coprecipitation route. Journal of Materials Science, 2014, 49, 5571-5578.	1.7	20
62	Synthesis and optical properties of GdVO ₄ : Eu ³⁺ âˆ‘phosphor. Materials Research Express, 2021, 8, 026201.	0.8	19
63	Synthesis of coal-derived single-walled carbon nanotube from coal by varying the ratio of Zr/Ni as bimetallic catalyst. Journal of Nanoparticle Research, 2013, 15, 1.	0.8	18
64	Highly zone-dependent synthesis of different carbon nanostructures using plasma-enhanced arc discharge technique. Journal of Nanoparticle Research, 2015, 17, 1.	0.8	17
65	Structural characterization, electrical and dielectric relaxations in Dy-doped zirconia. Journal of Alloys and Compounds, 2013, 549, 238-244.	2.8	16
66	High temperature polymer electrolyte membrane fuel cells with Polybenzimidazole-Ce _{0.9} Gd _{0.1} P ₂ O ₇ and polybenzimidazole-Ce _{0.9} Gd _{0.1} P ₂ O ₇ -graphite oxide composite electrolytes. Journal of Power Sources, 2018, 401, 149-157.	4.0	15
67	Electrical conduction mechanism in Se _{90-x} Te ₅ Sn ₅ In _x (x = 0, 3, 6 and 9) multi-component glassy alloys. AIP Advances, 2015, 5, .	0.6	13
68	Investigations on structural and electrical properties of calcium substituted LSGM electrolyte materials for IT-SOFC. Ceramics International, 2014, 40, 10711-10718.	2.3	9
69	Fabrication of dense Ce _{0.9} Mg _{0.1} P ₂ O ₇ -PmOn composites by microwave heating for application as electrolyte in intermediate-temperature fuel cells. Ceramics International, 2018, 44, 6170-6175.	2.3	9
70	Influence of Grain and Grainâˆ‘Boundary Resistances on Dielectric Properties of KNbO ₃ Under Small DC Bias Field. Journal of the American Ceramic Society, 2013, 96, 3127-3132.	1.9	8
71	Magnetically recyclable palladium nanoparticles (Fe ₃ O ₄ âˆ‘Pd) for oxidative coupling between amides and olefins at room temperature. Applied Organometallic Chemistry, 2019, 33, e4985.	1.7	7
72	Structural and Electrical Characterizations of Lanthanum Chromite: Effect of Synthesis Routes. Transactions of the Indian Ceramic Society, 2012, 71, 239-242.	0.4	6

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73	Sintering and electrical behavior of ZrP2O7â€“CeP2O7 solid solutions Zr1-xCexP2O7; xâ€“=â€“0â€“0.2 and (Zr0.92Y0.08)1-yCeyP2O7; yâ€“=â€“0â€“0.1 for application as electrolyte in intermediate temperature fuel cells. Ionics, 2019, 25, 155-162.		6
74	Electrical properties of Ba doped LSGM for electrolyte material of solid oxide fuel cells. , 2013, , .		5
75	Functionalized Nanosize Graphene and Its Derivatives for Removal of Contaminations and Water Treatment. , 2019, , 133-185.		5
76	A new solution phase synthesis of cerium(IV) pyrophosphate compounds of different morphologies using cerium(III) precursor. Journal of Alloys and Compounds, 2019, 793, 686-694.	2.8	5
77	Microwave-Assisted Modification of Graphene and Its Derivatives: Synthesis, Reduction and Exfoliation. Carbon Nanostructures, 2019, , 279-311.	0.1	5
78	Two-dimensional layered reduced graphene oxide-tungsten disulphide nanocomposite for highly sensitive and selective determination of para nitrophenol. Environmental Nanotechnology, Monitoring and Management, 2022, 18, 100724.	1.7	5
79	Physicochemical and electrochemical behaviours of manganese oxide electrodes for supercapacitor application. Journal of Energy Storage, 2020, 28, 101228.	3.9	4
80	The angular dependence of the backscattering coefficient for 3.0 and 5.0 keV electrons from tungsten. Journal Physics D: Applied Physics, 1998, 31, 2221-2224.	1.3	3
81	Thick-target X-ray bremsstrahlung spectra produced in 6.5 keV and 7.5 keV-Hf collisions. Pramana - Journal of Physics, 1999, 52, 493-502.	0.9	3
82	Effect of dilution of both A- and B- sites on the multiferroic properties of spinal Mott insulators. Materials Research Express, 2015, 2, 076501.	0.8	3
83	Influence of small DC bias field on the electrical behaviour of Sr- and Mg-doped lanthanum gallate. Applied Physics A: Materials Science and Processing, 2014, 116, 1793-1800.	1.1	2
84	Structural and Electrical Behavior of Double Perovskite Material Sr₂NiMoO₆. Advanced Science Letters, 2014, 20, 647-649.	0.2	2
85	Graphene/Graphene Oxide and Carbon Nanotube Based Sensors for the Determination and Removal of Bisphenols. , 2019, , 329-372.		1