Ramakrishnan Rajagopalan

List of Publications by Year
in descending order

83 papers	1,957 citations	218381 26 h-index	276539 41 g-index
84 all docs	84 docs citations	84 times ranked	2592 citing authors

#	Article	IF	Citations
1	Characterization of polyanilineâ€“polypyrrole composite coatings on low carbon steel: a XPS and infrared spectroscopy study. Applied Surface Science, 2003, 218, 58-69.	3.1	156
2	Genesis of porosity in polyfurfuryl alcohol derived nanoporous carbon. Carbon, 2006, 44, 2957-2963.	5.4	135
3	Electrochemical synthesis: a novel technique for processing multi-functional coatings. Progress in Organic Coatings, 2003, 47, 365-375.	1.9	74
4	Catalytic Polymerization and Facile Grafting of Poly(furfuryl alcohol) to Single-Wall Carbon Nanotube:Â Preparation of Nanocomposite Carbon. Journal of the American Chemical Society, 2006, 128, 11307-11313.	6.6	74
5	Cold sintering of a Li-ion cathode: LiFePO4-composite with high volumetric capacity. Ceramics International, 2017, 43, 15370-15374.	2.3	69
6	Enhanced ammonia adsorption on functionalized nanoporous carbons. Microporous and Mesoporous Materials, 2015, 218, 15-23.	2.2	68
7	High-Field Dielectric Properties of Oriented Poly(vinylidene fluoride-co-hexafluoropropylene): Structureâ€“Dielectric Property Relationship and Implications for Energy Storage Applications. ACS Applied Polymer Materials, 2020, 2, 1356-1368.	2.0	64
8	Overcoming the barrier to graphitization in a polymer-derived nanoporous carbon. Carbon, 2008, 46, 501-510.	5.4	63
9	Thermally Stable Low-Loss Polymer Dielectrics Enabled by Attaching Cross-Linkable Antioxidant to Polypropylene. ACS Applied Materials & Interfaces, 2020, 12, 14154-14164.	4.0	63
10	High performance nanoporous carbon membranes for air separation. Carbon, 2007, 45, 1267-1278.	5.4	58
11	Development of polyanilineâ€“polypyrrole composite coatings on steel by aqueous electrochemical process. Electrochimica Acta, 2001, 46, 2443-2455.	2.6	56
12	Electrochemical deposition of polyaniline-polypyrrole composite coatings on aluminum. Journal of Applied Polymer Science, 2002, 83, 1970-1977.	1.3	56
13	High energy density capacitor using coal tar pitch derived nanoporous carbon/MnO2 electrodes in aqueous electrolytes. Journal of Power Sources, 2011, 196, 2380-2386.	4.0	49
14	Broad temperature dependence, high conductivity, and structure-property relations of cold sintering of LLZO-based composite electrolytes. Journal of the European Ceramic Society, 2020, 40, 6241-6248.	2.8	45
15	Synthesis of nanoporous carbon with pre-graphitic domains. Carbon, 2007, 45, 2307-2310.	5.4	41
16	Ultrahigh-Power Flexible Electrochemical Capacitors Using Binder-Free Single-Walled Carbon Nanotube Electrodes and Hydrogel Membranes. Journal of Physical Chemistry C, 2014, 118, 2943-2952.	1.5	40
17	On the effects of emulsion polymerization of furfuryl alcohol on the formation of carbon spheres and other structures derived by pyrolysis of polyfurfuryl alcohol. Carbon, 2013, 51, 85-93.	5.4	37
18	Cold sintering approach to fabrication of high rate performance binderless LiFePO4 cathode with high volumetric capacity. Scripta Materialia, 2018, 146, 267-271.	2.6	37

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19	A one-step electrochemical synthesis of polyanilineâ€“polypyrrole composite coatings on carbon fibers. Electrochimica Acta, 2002, 47, 1847-1855.	2.6	35
20	Facile catalytic growth of cyanoacrylate nanofibers. Chemical Communications, 2006, , 1139.	2.2	35
21	Surface compression of light adsorbates inside microporous PFA-derived carbons. Carbon, 2013, 60, 538-549.	5.4	34
22	Bimodal porous carbon cathode and prelithiated coalesced carbon onion anode for ultrahigh power energy efficient lithium ion capacitors. Carbon, 2019, 152, 89-97.	5.4	33
23	Mechanical testing of pyrolysed poly-furfuryl alcohol nanofibres. Nanotechnology, 2007, 18, 115704.	1.3	31
24	Abnormal high voltage resistivity of polyvinylidene fluoride and implications for applications in high energy density film capacitors. Applied Physics Letters, 2018, 113, .	1.5	31
25	Molecular sieving platinum nanoparticle catalysts kinetically frozen in nanoporous carbon. Chemical Communications, 2004, , 2498.	2.2	30
26	Modification of macroporous stainless steel supports with silica nanoparticles for size selective carbon membranes with improved flux. Carbon, 2006, 44, 2051-2058.	5.4	26
27	Synthesis of boron/nitrogen substituted carbons for aqueous asymmetric capacitors. Electrochimica Acta, 2011, 56, 5369-5375.	2.6	25
28	Synthesis of electro-active manganese oxide thin films by plasma enhanced chemical vapor deposition. Thin Solid Films, 2014, 556, 28-34.	0.8	25
29	High pressure hydrogen adsorption apparatus: Design and error analysis. International Journal of Hydrogen Energy, 2012, 37, 9123-9136.	3.8	23
30	Cold sintering, enabling a route to co-sinter an all-solid-state lithium-ion battery. Japanese Journal of Applied Physics, 2021, 60, 037001.	0.8	22
31	Processing and Characterization of Ultrathin Carbon Coatings on Glass. ACS Applied Materials & Interfaces, 2009, 1, 927-933.	4.0	20
32	Influence of initiators on the growth of poly(ethyl 2-cyanoacrylate) nanofibers. Polymer, 2008, 49, 2235-2242.	1.8	19
33	Prediction of Charge-Discharge and Impedance Characteristics of Electric Double-Layer Capacitors Using Porous Electrode Theory. Journal of the Electrochemical Society, 2017, 164, A2899-A2913.	1.3	19
34	Synthesis of V-MoS₂ Layered Alloys as Stable Li-Ion Battery Anodes. ACS Applied Energy Materials, 2019, 2, 8625-8632.	2.5	19
35	Control of interfaces on electrical properties of SiO2â€“Parylene-C laminar composite dielectrics. Journal of Colloid and Interface Science, 2009, 332, 65-73.	5.0	18
36	Factors influencing high voltage performance of coconut char derived carbon based electrical double layer capacitor made using acetonitrile and propylene carbonate based electrolytes. Journal of Power Sources, 2014, 272, 90-99.	4.0	18

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37	Electrochemical polymerization of aniline on carbon fibers in aqueous toluene sulfonate solution. Journal of Applied Polymer Science, 2000, 76, 1503-1509.	1.3	17
38	A Simple Technique To Grow Polymer Brushes Using in Situ Surface Ligation of an Organometallic Initiator. Journal of the American Chemical Society, 2006, 128, 13040-13041.	6.6	17
39	Role of Additives in Formation of Solidâ€“Electrolyte Interfaces on Carbon Electrodes and their Effect on Highâ€Voltage Stability. ChemSusChem, 2014, 7, 1162-1169.	3.6	17
40	Platinum embedded within carbon nanospheres for shape selective liquid phase hydrogenation. Carbon, 2013, 57, 485-497.	5.4	16
41	Solar powered wrist worn acquisition system for continuous photoplethysmogram monitoring. , 2014, 2014, 3142-5.		15
42	Intrinsic limitations of atomic layer deposition for pseudocapacitive metal oxides in porous electrochemical capacitor electrodes. Journal of Materials Chemistry A, 2017, 5, 13086-13097.	5.2	15
43	Synthesis of carbon with bimodal porosity by simultaneous polymerization of furfuryl alcohol and phloroglucinol. Microporous and Mesoporous Materials, 2014, 196, 235-242.	2.2	14
44	High field dielectric properties of clay filled silicone rubber composites. Materials Today Communications, 2020, 23, 100947.	0.9	14
45	Surface Initiated Growth of Poly(ethyl 2-cyanoacrylate) Nanofibers on Surface-Modified Glass Substrates. Chemistry of Materials, 2009, 21, 831-842.	3.2	12
46	Temperature effects on electrical transport in semiconducting nanoporous carbon nanowires. Nanotechnology, 2008, 19, 275702.	1.3	11
47	High temperature rearrangement of disordered nanoporous carbon at the interface with single wall carbon nanotubes. Carbon, 2009, 47, 2303-2309.	5.4	11
48	Room temperature amorphous to nanocrystalline transformation in ultra-thin films under tensile stress: anin situTEM study. Nanotechnology, 2010, 21, 505707.	1.3	11
49	Localized crystallization of polyfurfuryl alcohol derived carbon by alkali metals. Carbon, 2013, 56, 109-120.	5.4	11
50	Cold sintering process for fabrication of a high volumetric capacity Li4Ti5O12 anode. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2019, 250, 114435.	1.7	11
51	On the effects of confinement within a catalyst consisting of platinum embedded within nanoporous carbon for the hydrogenation of alkenes. Carbon, 2014, 66, 459-466.	5.4	10
52	Prediction of Discharge Performances of Pseudocapacitors Using Their Impedance Characteristics. Journal of the Electrochemical Society, 2020, 167, 013536.	1.3	10
53	Improved thermal conductivity and AC dielectric breakdown strength of silicone rubber/BN composites. Composites Part C: Open Access, 2020, 2, 100023.	1.5	9
54	Effect of pyrolysis temperature on the microstructure of disordered carbon nanowires. Thin Solid Films, 2010, 519, 91-95.	0.8	8

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55	Molecular sieving carbon catalysts for liquid phase reactions: Study of alkene hydrogenation using platinum embedded nanoporous carbon. Journal of Molecular Catalysis A, 2013, 367, 61-68.	4.8	8
56	Synthesis and characterization of boron substituted carbon deposits on PFA-derived carbon substrates for hydrogen adsorption. Carbon, 2015, 89, 392-403.	5.4	8
57	Cold Sintering of a Covalently Bonded MoS₂/Graphite Composite as a High Capacity Liâ€“Ion Electrode. ChemNanoMat, 2018, 4, 1088-1094.	1.5	8
58	Electrochemical synthesis of polyanilineâ€“polypyrrole composite coatings on carbon fibres in aqueous toluene sulphonate solution. Surface Engineering, 2000, 16, 481-486.	1.1	7
59	Selective adsorption of nitrate esters with nanostructured carbons. RSC Advances, 2012, 2, 12298.	1.7	6
60	Effects of Interfacial Modifications on Electrical Properties of Laminar Composite Dielectrics. Langmuir, 2010, 26, 18817-18823.	1.6	5
61	Characterization of Micro- and Mesoporous Materials Using Accelerated Dynamics Adsorption. Langmuir, 2013, 29, 12400-12409.	1.6	5
62	Enhanced mechanical stability of high temperature ultra-thin glass/polymer composite dielectrics. Materials Letters, 2017, 208, 10-13.	1.3	5
63	Bimodal porous carbon electrodes derived from polyfurfuryl alcohol/phloroglucinol for ionic liquid based electrical double layer capacitors. Journal of Materials Research, 2018, 33, 1189-1198.	1.2	5
64	Flexible robust binder-free carbon nanotube membranes for solid state and microcapacitor application. Nanotechnology, 2018, 29, 035605.	1.3	4
65	Impacts of Crosslinking and Degassing on the Conductivity, Dielectric Loss, and Morphology of Low-Density Polyethylene and Crosslinked Polyethylene. ACS Symposium Series, 2021, , 239-260.	0.5	4
66	Porous (Swiss-Cheese) Graphite. Journal of Carbon Research, 2018, 4, 27.	1.4	3
67	CNT flexible membranes for energy storage and conversion systems. MRS Communications, 2019, 9, 670-674.	0.8	3
68	Densification and Strengthening of Ferrousâ€Based Powder Compacts Through Cold Sintering Aided Warm Compaction. Advanced Engineering Materials, 2022, 24, .	1.6	3
69	Highâ€Voltage Stability of Ionicâ€Liquidâ€Based Electrochemical Double Layer Capacitors with a Bimodal Porous Carbon Electrode. ChemElectroChem, 2018, 5, 3460-3467.	1.7	2
70	Electrochemical copolymerization and characterization of aniline and isoprene in aqueousp-toluene sulfonic acid solution. Journal of Applied Polymer Science, 2002, 84, 184-192.	1.3	1
71	Chemical stability of glass with an ultra-thin disordered carbon coating. Journal of Non-Crystalline Solids, 2010, 356, 263-269.	1.5	1
72	Preparation and characterization of ultrathin free-standing carbon films. Journal of the Korean Physical Society, 2013, 63, 1859-1863.	0.3	1

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73	Enhanced Performance of Symmetric Double Layer Capacitor by Flexible Binder-free SWCNT Membrane Electrodes. Materials Research Society Symposia Proceedings, 2013, 1505, 1.	0.1	1
74	Study of the effect of hydrogen on Pt supported Nanoporous Carbon derived from Polyfurfuryl alcohol. Materials Research Society Symposia Proceedings, 2002, 756, 1.	0.1	0
75	Using nanoporous carbon membranes in fuel cells. Materials Research Society Symposia Proceedings, 2003, 801, 181.	0.1	0
76	Porous carbon nanoturf using anodized alumina templating. Materials Research Society Symposia Proceedings, 2003, 788, 671.	0.1	0
77	Study of the Dispersion of Platinum Nanoparticles in Nanoporous Carbon. Microscopy and Microanalysis, 2003, 9, 422-423.	0.2	0
78	Preparation and Characterization of NPC/SWNT Nanocomposite. Materials Research Society Symposia Proceedings, 2006, 963, 1.	0.1	0
79	Carbon Membranes: A Viable Technology for the Recovery and Purification of Hydrogen Gas. Materials Research Society Symposia Proceedings, 2006, 971, 1.	0.1	0
80	A Simple Method to Grow Polymer Nanofibers from Superglue. Materials Research Society Symposia Proceedings, 2006, 948, 1.	0.1	0
81	High field dielectric properties of polymer-glass laminate. , 2016, , .		0
82	High Power Interdigitated Carbon Nanotube Based Micro-Capacitors. MRS Advances, 2017, 2, 413-418.	0.5	0
83	High electrical reliability glass-polymer laminates. IEEE Transactions on Dielectrics and Electrical Insulation, 2019, 26, 885-889.	1.8	0