Aditya Rawal

List of Publications by Year
in descending order

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112 papers	3,549 citations	172207 29 h-index	161609 54 g-index
116 all docs	116 docs citations	116 times ranked	5469 citing authors

#	Article	IF	Citations
1	Green Stealth Engineering of Lifetime-Biocatalytic Nanocatalyst for Neuroblastoma Therapy. Applied Surface Science, 2022, 572, 151464.	3.1	4
2	Modulating catalytic oxygen activation over Ptâ€“TiO₂/SiO₂ catalysts by defect engineering of a TiO₂/SiO₂ support. Catalysis Science and Technology, 2022, 12, 1049-1059.	2.1	6
3	Coreâ€“Shell NaBH₄@Na₂B₁₂H₁₂ Nanoparticles as Fast Ionic Conductors for Sodium-Ion Batteries. ACS Applied Nano Materials, 2022, 5, 373-379.	2.4	14
4	F-diamane-like nanosheets from expanded fluorinated graphite. Applied Surface Science, 2022, 583, 152534.	3.1	8
5	Nanovoid formation induces property variation within and across individual silkworm silk threads. Journal of Materials Chemistry B, 2022, 10, 5561-5570.	2.9	7
6	A comparison between the characteristics of a biochar-NPK granule and a commercial NPK granule for application in the soil. Science of the Total Environment, 2022, 832, 155021.	3.9	5
7	2D polyaniline with exchangeable interlayer fluid for fast and stable volumetric dual ion storage. Journal of Energy Chemistry, 2021, 54, 587-594.	7.1	9
8	Electrochemical phase evolution of tetradymite-type Bi2Te3 in lithium, sodium and potassium ion half cells. Journal of Alloys and Compounds, 2021, 854, 155621.	2.8	20
9	Hierarchically Porous Biocatalytic MOF Microreactor as a Versatile Platform towards Enhanced Multienzyme and Cofactorâ€Đependent Biocatalysis. Angewandte Chemie - International Edition, 2021, 60, 5421-5428.	7.2	98
10	Hierarchically Porous Biocatalytic MOF Microreactor as a Versatile Platform towards Enhanced Multienzyme and Cofactorâ€Đependent Biocatalysis. Angewandte Chemie, 2021, 133, 5481-5488.	1.6	27
11	Mechanistic impacts of long-term gamma irradiation on physicochemical, structural, and mechanical stabilities of radiation-responsive geopolymer pastes. Journal of Hazardous Materials, 2021, 407, 124805.	6.5	13
12	Long-Term Strength Evolution in Ambient-Cured Solid-Activator Geopolymer Compositions. Minerals (Basel, Switzerland), 2021, 11, 143.	0.8	9
13	Investigating the Factors Affecting the Ionic Conduction in Nanoconfined NaBH4. Inorganics, 2021, 9, 2.	1.2	13
14	Development of Low-Alkali, Fly Ash/Slag Geopolymers: Predictive Strength Modelling and Analyses of Impact of Curing Temperatures. Minerals (Basel, Switzerland), 2021, 11, 60.	0.8	2
15	Mechanistic implications of Liâ€“S cell function through modification of organo-sulfur cathode architectures. Physical Chemistry Chemical Physics, 2021, 23, 14075-14092.	1.3	5
16	Nanoconfinement of Complex Borohydrides for Hydrogen Storage. ACS Applied Nano Materials, 2021, 4, 973-978.	2.4	16
17	Structural Complexity of Graphene Oxide: The Kirigami Model. ACS Applied Materials & Interfaces, 2021, 13, 18255-18263.	4.0	20
18	Liquid-phase exfoliation of F-diamane-like nanosheets. Carbon, 2021, 175, 124-130.	5.4	26

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19	Stage-1 cationic C60 intercalated graphene oxide films. Carbon, 2021, 175, 131-140.	5.4	11
20	Complex microstructural evolution in high temperature pyrolysis of plastic and biomass. Fuel, 2021, 291, 120153.	3.4	10
21	High volumetric capacity nanoparticle electrodes enabled by nanofluidic fillers. Energy Storage Materials, 2021, 43, 202-211.	9.5	4
22	Chloride diffusion resistance and chloride binding capacity of fly ash-based geopolymer concrete. Cement and Concrete Composites, 2020, 105, 103290.	4.6	139
23	Shock Exfoliation of Graphene Fluoride in Microwave. Small, 2020, 16, e1903397.	5.2	20
24	Decoupling the effects of hydrophilic and hydrophobic moieties at the neuronâ€“nanofibre interface. Chemical Science, 2020, 11, 1375-1382.	3.7	6
25	Biochar-based fertilizer: Supercharging root membrane potential and biomass yield of rice. Science of the Total Environment, 2020, 713, 136431.	3.9	78
26	Imprinting the location of an in-built RAFT agent and selective grafting of polymer chains inside or outside the pores of mesoporous silica nanoparticles. Microporous and Mesoporous Materials, 2020, 294, 109898.	2.2	11
27	The effect of deuteration on the ketoâ€“enol equilibrium and photostability of the sunscreen agent avobenzone. Photochemical and Photobiological Sciences, 2020, 19, 1410-1422.	1.6	12
28	Alkali Metal-Modified P2 NaxMnO2: Crystal Structure and Application in Sodium-Ion Batteries. Inorganic Chemistry, 2020, 59, 12143-12155.	1.9	9
29	Nanostructured LiMnO₂ with Li₃PO₄ Integrated at the Atomic Scale for High-Energy Electrode Materials with Reversible Anionic Redox. ACS Central Science, 2020, 6, 2326-2338.	5.3	22
30	S-Mg₂(dobpdc): a metalâ€“organic framework for determining chirality in amino acids. Chemical Communications, 2020, 56, 14829-14832.	2.2	6
31	Predictive Model of Setting Times and Compressive Strengths for Low-Alkali, Ambient-Cured, Fly Ash/Slag-Based Geopolymers. Minerals (Basel, Switzerland), 2020, 10, 920.	0.8	19
32	Physicochemical Characterization of a Naâ€“Hâ€“F Thermal Battery Material. Journal of Physical Chemistry C, 2020, 124, 5053-5060.	1.5	1
33	Facile Selfâ€Forming Superionic Conductors Based on Complex Borohydride Surface Oxidation. Advanced Sustainable Systems, 2020, 4, 1900113.	2.7	14
34	Nanoporous Zirconium Phosphonate Materials with Enhanced Chemical and Thermal Stability for Sorbent Applications. ACS Applied Nano Materials, 2020, 3, 3717-3729.	2.4	12
35	Evidence of phase coexistence in hydrothermally synthesized K_{0.5}Na_{0.5}NbO₃ nanofibers. Journal of Materials Chemistry A, 2020, 8, 8731-8739.	5.2	11
36	Defect structure and property consequence when small Li+ ions meet BaTiO3. Physical Review Materials, 2020, 4, .	0.9	1

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37	Elucidation of structures and lithium environments for an organo-sulfur cathode. Physical Chemistry Chemical Physics, 2019, 21, 18667-18679.	1.3	7
38	Cooperative defect-enriched SiO2 for oxygen activation and organic dehydrogenation. Journal of Catalysis, 2019, 376, 168-179.	3.1	16
39	Polymorphic Transformation of Drugs Induced by Glycopolymeric Vesicles Designed for Anticancer Therapy Probed by Solid-State NMR Spectroscopy. ACS Applied Materials & Interfaces, 2019, 11, 28278-28288.	4.0	17
40	Effect of Ionothermal Synthesis on the Acidity and Catalytic Performance of a SAPOâ€5 Molecular Sieve. ChemistrySelect, 2019, 4, 10520-10524.	0.7	9
41	Investigation of K modified P2 Na_{0.7}Mn_{0.8}Mg_{0.2}O₂ as a cathode material for sodium-ion batteries. CrystEngComm, 2019, 21, 172-181.	1.3	12
42	Zirconium bistriazolylpyridine phosphonate materials for efficient, selective An(<scp>iii</scp>)/Ln(<scp>iii</scp>) separations. Chemical Communications, 2019, 55, 1168-1171.	2.2	14
43	Biocatalytic self-propelled submarine-like metal-organic framework microparticles with pH-triggered buoyancy control for directional vertical motion. Materials Today, 2019, 28, 10-16.	8.3	73
44	Improving the Acidic Stability of Zeolitic Imidazolate Frameworks by Biofunctional Molecules. CheM, 2019, 5, 1597-1608.	5.8	148
45	Rb/Cs-Modified P2 Na_{0.7}Mn_{0.8}Mg_{0.2}O₂: Application in Sodium-Ion Batteries. ACS Omega, 2019, 4, 5784-5794.	1.6	4
46	Green Synthesis of Zwitterion-Functionalized Nano-Octahedral Ceria for Enhanced Intracellular Delivery and Cancer Therapy. ACS Sustainable Chemistry and Engineering, 2019, 7, 9189-9201.	3.2	13
47	DNP NMR spectroscopy reveals new structures, residues and interactions in wild spider silks. Chemical Communications, 2019, 55, 4687-4690.	2.2	20
48	High population and dispersion of pentacoordinated AlV species on the surface of flame-made amorphous silica-alumina. Science Bulletin, 2019, 64, 516-523.	4.3	25
49	Amorphous nanoparticles by self-assembly: processing for controlled release of hydrophobic molecules. Soft Matter, 2019, 15, 2400-2410.	1.2	29
50	An Unusual Mercury(II) Diisopropyldithiocarbamate Coordination Polymer. Crystal Growth and Design, 2019, 19, 1125-1133.	1.4	12
51	Application of low-field, 1H/13C high-field solution and solid state NMR for characterisation of oil fractions responsible for wettability change in sandstones. Magnetic Resonance Imaging, 2019, 56, 77-85.	1.0	8
52	Hydrogen storage properties of nanoconfined aluminium hydride (AlH3). Chemical Engineering Science, 2019, 194, 64-70.	1.9	46
53	Salen-Based Metal Complexes and the Physical Properties of their Porous Organic Polymers. Australian Journal of Chemistry, 2019, 72, 916.	0.5	1
54	Enhanced colloidal stability and protein resistance of layered double hydroxide nanoparticles with phosphonic acid-terminated PEG coating for drug delivery. Journal of Colloid and Interface Science, 2018, 521, 242-251.	5.0	62

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55	Formation of aluminium hydride (AlH3) via the decomposition of organoaluminium and hydrogen storage properties. International Journal of Hydrogen Energy, 2018, 43, 16749-16757.	3.8	15
56	Nanosizing Ammonia Borane with Nickel: A Path toward the Direct Hydrogen Release and Uptake of Bï£¿Nï£¿H Systems. Advanced Sustainable Systems, 2018, 2, 1700122.	2.7	17
57	Millisecond Self-Assembly of Stable Nanodispersed Drug Formulations. Molecular Pharmaceutics, 2018, 15, 495-507.	2.3	3
58	Electrochemically activated solid synthesis: an alternative solid-state synthetic method. Dalton Transactions, 2018, 47, 14604-14611.	1.6	4
59	Transformation of E-Waste Plastics into Sustainable Filaments for 3D Printing. ACS Sustainable Chemistry and Engineering, 2018, 6, 14432-14440.	3.2	56
60	Effect of clay and iron sulphate on volatile and water-extractable organic compounds in bamboo biochars. Journal of Analytical and Applied Pyrolysis, 2018, 133, 22-29.	2.6	12
61	Approaching Piezoelectric Response of Pb-Piezoelectrics in Hydrothermally Synthesized Bi_{0.5}(Na_{1â€“x}K_x)_{0.5}TiO₃ Nanotubes. ACS Applied Materials & Interfaces, 2018, 10, 20816-20825.	4.0	12
62	Electroactive Co(<scp>iii</scp>) salen metal complexes and the electrophoretic deposition of their porous organic polymers onto glassy carbon. RSC Advances, 2018, 8, 24128-24142.	1.7	18
63	Aliphatic hydrocarbon content of interstellar dust. Monthly Notices of the Royal Astronomical Society, 2018, 479, 4336-4344.	1.6	15
64	Photo-driven synthesis of polymer-coated platinized ZnO nanoparticles with enhanced photoelectrochemical charge transportation. Journal of Materials Chemistry A, 2017, 5, 4568-4575.	5.2	16
65	Total quantification and extraction of shikimic acid from star anise (Illicium verum) using solid-state NMR and cellulose-dissolving aqueous hydroxide solutions. Sustainable Chemistry and Pharmacy, 2017, 5, 115-121.	1.6	11
66	Nanoconfined lithium aluminium hydride (LiAlH4) and hydrogen reversibility. International Journal of Hydrogen Energy, 2017, 42, 14144-14153.	3.8	58
67	Preparation of composite zeolites in polymer hydrogels and their catalytic performances in the methanol-to-olefin reaction. Fuel Processing Technology, 2017, 165, 87-93.	3.7	11
68	The Effect of Drug Loading on Micelle Properties: Solidâ€State NMR as a Tool to Gain Structural Insight. Angewandte Chemie - International Edition, 2017, 56, 8441-8445.	7.2	50
69	Mechanisms of Sodium Insertion/Extraction on the Surface of Defective Graphenes. ACS Applied Materials & Interfaces, 2017, 9, 431-438.	4.0	18
70	Redox-State Dependent Spectroscopic Properties of Porous Organic Polymers Containing Furan, Thiophene, and Selenophene. Australian Journal of Chemistry, 2017, 70, 1227.	0.5	3
71	Lattice evolution and enhanced piezoelectric properties of hydrothermally synthesised 0.94(Bi_{0.5}Na_{0.5})TiO₃â€“0.06BaTiO₃nanofibers. Journal of Materials Chemistry C, 2017, 5, 10976-10984.	2.7	21
72	Pyrolysis of attapulgite clay blended with yak dung enhances pasture growth and soil health: Characterization and initial field trials. Science of the Total Environment, 2017, 607-608, 184-194.	3.9	36

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73	Novel multidimensional carbons from structural transformations of waste lignin: A low temperature pyrolysis investigation. Fuel Processing Technology, 2017, 166, 312-321.	3.7	20
74	Formation of carbyne-like materials during low temperature pyrolysis of lignocellulosic biomass: A natural resource of linear sp carbons. Scientific Reports, 2017, 7, 16832.	1.6	15
75	Zirconium phosphonate sorbents with tunable structure and function. Microporous and Mesoporous Materials, 2017, 252, 90-104.	2.2	27
76	Evidence of Decoupling Protein Structure from Spidroin Expression in Spider Dragline Silks. International Journal of Molecular Sciences, 2016, 17, 1294.	1.8	14
77	Sodium insertion/extraction from single-walled and multi-walled carbon nanotubes: The differences and similarities. Journal of Power Sources, 2016, 314, 102-108.	4.0	26
78	Nanocellulose characteristics from the inner and outer layer of banana pseudo-stem prepared by TEMPO-mediated oxidation. Cellulose, 2016, 23, 3023-3037.	2.4	49
79	Mineralâ€“Biochar Composites: Molecular Structure and Porosity. Environmental Science & Technology, 2016, 50, 7706-7714.	4.6	148
80	Molecular structures driving pseudo-capacitance in hydrothermal nanostructured carbons. RSC Advances, 2016, 6, 12964-12976.	1.7	28
81	Redox tunable viologen-based porous organic polymers. Journal of Materials Chemistry C, 2016, 4, 2535-2544.	2.7	55
82	Site-specific synthesis of a hybrid boronâ€“graphene salt. Chemical Communications, 2016, 52, 1290-1292.	2.2	3
83	Solid-state NMR as a probe of anion binding: molecular dynamics and associations in a [5]polynorbornane bisurea host complexed with terephthalate. Physical Chemistry Chemical Physics, 2015, 17, 22195-22203.	1.3	3
84	Bioactive poly(methyl methacrylate) for bone fixation. RSC Advances, 2015, 5, 60681-60690.	1.7	5
85	The electronic, optical and magnetic consequences of delocalization in multifunctional donorâ€“acceptor organic polymers. Physical Chemistry Chemical Physics, 2015, 17, 11252-11259.	1.3	17
86	Feeding Biochar to Cows: An Innovative Solution for Improving Soil Fertility and Farm Productivity. Pedosphere, 2015, 25, 666-679.	2.1	74
87	Exploiting stable radical states for multifunctional properties in triarylamine-based porous organic polymers. Journal of Materials Chemistry A, 2014, 2, 12466-12474.	5.2	33
88	Specific molecular structure changes and radical evolution during biomassâ€“polyethylene terephthalate co-pyrolysis detected by 13 C and 1 H solid-state NMR. Bioresource Technology, 2014, 170, 248-255.	4.8	25
89	Microstructural characterization of white charcoal. Journal of Analytical and Applied Pyrolysis, 2014, 109, 215-221.	2.6	24
90	Carborane functionalization of the aromatic network in chemically-synthesized graphene. Chemical Communications, 2014, 50, 11332.	2.2	23

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91	Solid-State NMR Structure Characterization of a 13CO-Labeled Ir(I) Complex with a P,N-Donor Ligand Including Ultrafast MAS Methods. Inorganic Chemistry, 2014, 53, 7146-7153.	1.9	2
92	Superior Chemotherapeutic Benefits from the Ruthenium-Based Anti-Metastatic Drug NAMI-A through Conjugation to Polymeric Micelles. Macromolecules, 2014, 47, 1646-1655.	2.2	40
93	Analysis of thermal degradation kinetics and carbon structure changes of co-pyrolysis between macadamia nut shell and PET using thermogravimetric analysis and 13C solid state nuclear magnetic resonance. Energy Conversion and Management, 2014, 86, 154-164.	4.4	47
94	Shifting paradigms: development of high-efficiency biochar fertilizers based on nano-structures and soluble components. Carbon Management, 2013, 4, 323-343.	1.2	310
95	Molecular interactions in coupled PMMAâ€“bioglass hybrid networks. Journal of Materials Chemistry B, 2013, 1, 1835.	2.9	34
96	Synthesis of per-deuterated alkyl amines for the preparation of deuterated organic pyromellitamide gelators. Tetrahedron Letters, 2013, 54, 2538-2541.	0.7	12
97	Analysis of Phase Separation in High Performance PbTeâ€“PbS Thermoelectric Materials. Advanced Functional Materials, 2013, 23, 747-757.	7.8	52
98	Templated and Bioinspired Aqueous Phase Synthesis and Characterization of Mesoporous Zirconia. Science of Advanced Materials, 2013, 5, 354-365.	0.1	1
99	Understanding and Controlling Organicâ€“Inorganic Interfaces in Mesostructured Hybrid Photovoltaic Materials. Journal of the American Chemical Society, 2011, 133, 10119-10133.	6.6	54
100	Reduced Crystallinity and Mobility of Nylon-6 Confined near the Organicâ€“Inorganic Interface in a Phosphate Glass-Rich Nanocomposite Detected by ¹Hâ€“¹³C NMR. Macromolecules, 2011, 44, 8100-8105.	2.2	19
101	Origins of saccharide-dependent hydration at aluminate, silicate, and aluminosilicate surfaces. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 8949-8954.	3.3	61
102	Molecular Silicate and Aluminate Species in Anhydrous and Hydrated Cements. Journal of the American Chemical Society, 2010, 132, 7321-7337.	6.6	83
103	Unifying Design Strategies in Demosponge and Hexactinellid Skeletal Systems. Journal of Adhesion, 2010, 86, 72-95.	1.8	36
104	Strongly bound citrate stabilizes the apatite nanocrystals in bone. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 22425-22429.	3.3	438
105	Promotion of the Î³â€phase of polyamide 6 in its nanocomposite with phosphate glass. Journal of Polymer Science, Part B: Polymer Physics, 2008, 46, 857-860.	2.4	9
106	Dispersion of Silicate in Tricalcium Phosphate Elucidated by Solid-State NMR. Chemistry of Materials, 2008, 20, 2583-2591.	3.2	22
107	Synthesis and Characterization of Ionic Block Copolymer Templated Calcium Phosphate Nanocomposites. Chemistry of Materials, 2008, 20, 5922-5932.	3.2	33
108	A new NMR method for determining the particle thickness in nanocomposites, using T2,H-selective X{H1} recoupling. Journal of Chemical Physics, 2007, 126, 054701.	1.2	42

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109	Synthesis and characterization of self-assembled block copolymer templated calcium phosphate nanocomposite gels. Journal of Materials Chemistry, 2007, 17, 1570.	6.7	36
110	Detection of Nanometer-Scale Mixing in Phosphate-Glass/Polyamide-6 Hybrids by 1Hâ˜'31P NMR. Chemistry of Materials, 2006, 18, 6333-6338.	3.2	26
111	Bulk magnetization and nuclear magnetic resonance of magnetically purified layered silicates and their polymer-based nanocomposites. Journal of Applied Physics, 2005, 98, 114315.	1.1	8
112	Aprotic vs Protic Ionic Liquids for Lignocellulosic Biomass Pretreatment: Anion Effects, Enzymatic Hydrolysis, Solid-State NMR, Distillation, and Recycle. ACS Sustainable Chemistry and Engineering, 0, , .	3.2	15