

# S K Nataraj

## List of Publications by Year in descending order

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88  
papers

5,093  
citations

101543

36  
h-index

88630

70  
g-index

92  
all docs

92  
docs citations

92  
times ranked

7046  
citing authors

#	ARTICLE	IF	CITATIONS
1	Zeolitic imidazolate framework (ZIF-8) based polymer nanocomposite membranes for gas separation. <i>Energy and Environmental Science</i> , 2012, 5, 8359.	30.8	627
2	Polyacrylonitrile-based nanofibers—A state-of-the-art review. <i>Progress in Polymer Science</i> , 2012, 37, 487-513.	24.7	530
3	Nanostructured binary and ternary metal sulfides: synthesis methods and their application in energy conversion and storage devices. <i>Journal of Materials Chemistry A</i> , 2017, 5, 22040-22094.	10.3	341
4	Membrane-based separation of potential emerging pollutants. <i>Separation and Purification Technology</i> , 2019, 210, 850-866.	7.9	277
5	Nanofiltration and reverse osmosis thin film composite membrane module for the removal of dye and salts from the simulated mixtures. <i>Desalination</i> , 2009, 249, 12-17.	8.2	230
6	Distillery wastewater treatment by the membrane-based nanofiltration and reverse osmosis processes. <i>Water Research</i> , 2006, 40, 2349-2356.	11.3	190
7	Chitosan-Based Aerogel Membrane for Robust Oil-in-Water Emulsion Separation. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 24957-24962.	8.0	180
8	Arsenic removal from drinking water using thin film composite nanofiltration membrane. <i>Desalination</i> , 2010, 252, 75-80.	8.2	151
9	Analyses of polysaccharide fouling mechanisms during crossflow membrane filtration. <i>Journal of Membrane Science</i> , 2008, 308, 152-161.	8.2	118
10	Potential application of an electrodialysis pilot plant containing ion-exchange membranes in chromium removal. <i>Desalination</i> , 2007, 217, 181-190.	8.2	108
11	Bio-based superhydrophilic foam membranes for sustainable oil—water separation. <i>Green Chemistry</i> , 2014, 16, 4552-4558.	9.0	95
12	Poly(vinyl alcohol)-iron oxide nanocomposite membranes for pervaporation dehydration of isopropanol, 1,4-dioxane and tetrahydrofuran. <i>Journal of Membrane Science</i> , 2006, 283, 65-73.	8.2	89
13	Deep eutectic solvent promoted one step sustainable conversion of fresh seaweed biomass to functionalized graphene as a potential electrocatalyst. <i>Green Chemistry</i> , 2016, 18, 2819-2826.	9.0	84
14	Prediction of physical properties of nanofiltration membranes using experiment and theoretical models†. <i>Journal of Membrane Science</i> , 2008, 310, 321-336.	8.2	82
15	Structural and optical properties of zirconium oxide (ZrO <sub>2</sub> ) nanoparticles: effect of calcination temperature. <i>Nano Express</i> , 2020, 1, 010022.	2.4	73
16	Stand-up structure of graphene-like carbon nanowalls on CNT directly grown on polyacrylonitrile-based carbon fiber paper as supercapacitor. <i>Diamond and Related Materials</i> , 2012, 25, 176-179.	3.9	67
17	Room-temperature development of thin film composite reverse osmosis membranes from cellulose acetate with antibacterial properties. <i>Journal of Membrane Science</i> , 2014, 453, 212-220.	8.2	66
18	Polyaniline Membranes for Separation and Purification of Gases, Liquids, and Electrolyte Solutions. <i>Separation and Purification Reviews</i> , 2006, 35, 249-283.	5.5	62

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19	Prediction of physical properties of nanofiltration membranes for neutral and charged solutes. Desalination, 2011, 280, 174-182.	8.2	61
20	Creating ultrahigh surface area functional carbon from biomass for high performance supercapacitor and facile removal of emerging pollutants. Chemical Engineering Journal, 2022, 427, 131477.	12.7	59
21	Collective osmotic shock in ordered materials. Nature Materials, 2012, 11, 53-57.	27.5	56
22	Effect of added nickel nitrate on the physical, thermal and morphological characteristics of polyacrylonitrile-based carbon nanofibers. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2009, 162, 75-81.	3.5	54
23	Binder free self-standing high performance supercapacitive electrode based on graphene/titanium carbide composite aerogel. Applied Surface Science, 2019, 481, 892-899.	6.1	52
24	Membrane-based microfiltration/electrodialysis hybrid process for the treatment of paper industry wastewater. Separation and Purification Technology, 2007, 57, 185-192.	7.9	51
25	Preparation of a natural deep eutectic solvent mediated self polymerized highly flexible transparent gel having super capacitive behaviour. RSC Advances, 2016, 6, 28586-28592.	3.6	50
26	One-step green route synthesis of spinel ZnMn <sub>2</sub> O <sub>4</sub> nanoparticles decorated on MWCNTs as a novel electrode material for supercapacitor. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2020, 252, 114481.	3.5	50
27	Bionanomaterial Scaffolds for Effective Removal of Fluoride, Chromium, and Dye. ACS Sustainable Chemistry and Engineering, 2017, 5, 895-903.	6.7	46
28	Molecular dynamics simulations on the blends of poly(vinyl pyrrolidone) and poly(bisphenol A ether) Tj ETQq0 0,0 rgBT /Overlock 10	2.6	44
29	Free standing thin webs of porous carbon nanofibers of polyacrylonitrile containing iron-oxide by electrospinning. Materials Letters, 2009, 63, 218-220.	2.6	44
30	Low operating pressure nanofiltration membrane with functionalized natural nanoclay as antifouling and flux promoting agent. Chemical Engineering Journal, 2019, 358, 821-830.	12.7	43
31	Cellulose acetate-coated $\gamma$ -alumina ceramic composite tubular membranes for wastewater treatment. Desalination, 2011, 281, 348-353.	8.2	42
32	Biomolecule-derived quantum dots for sustainable optoelectronics. Nanoscale Advances, 2019, 1, 913-936.	4.6	42
33	Turmeric, naturally available colorimetric receptor for quantitative detection of fluoride and iron. Chemical Engineering Journal, 2016, 303, 14-21.	12.7	40
34	Constructing a High-Performance Aqueous Rechargeable Zinc-Ion Battery Cathode with Self-Assembled Mat-like Packing of Intertwined Ag(I) Pre-Inserted V <sub>3</sub> O <sub>7</sub> ·H <sub>2</sub> O Microbelts with Reduced Graphene Oxide Core. ACS Sustainable Chemistry and Engineering, 2021, 9, 3985-3995.	6.7	40
35	Ultrafast synthesis of exfoliated manganese oxides in deep eutectic solvents for water purification and energy storage. Chemical Engineering Journal, 2020, 379, 122327.	12.7	38
36	Solvent-free production of nano-FeS anchored graphene from Ulva fasciata: A scalable synthesis of super-adsorbent for lead, chromium and dyes. Journal of Hazardous Materials, 2018, 353, 190-203.	12.4	37

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37	Synthesis and photoluminescence properties of titanium oxide (TiO <sub>2</sub> ) nanoparticles: Effect of calcination temperature. <i>Optik</i> , 2019, 194, 163070.	2.9	37
38	Introducing deep eutectic solvents as flux boosting and surface cleaning agents for thin film composite polyamide membranes. <i>Green Chemistry</i> , 2020, 22, 2381-2387.	9.0	33
39	Sustainable Water Reclamation from Different Feed Streams by Forward Osmosis Process Using Deep Eutectic Solvents as Reusable Draw Solution. <i>Industrial &amp; Engineering Chemistry Research</i> , 2017, 56, 14623-14632.	3.7	32
40	Forward osmosis for industrial effluents treatment – sustainability considerations. <i>Separation and Purification Technology</i> , 2021, 254, 117568.	7.9	32
41	Progress in marine derived renewable functional materials and biochar for sustainable water purification. <i>Green Chemistry</i> , 2021, 23, 8305-8331.	9.0	31
42	Four-fold concentration of sucrose in sugarcane juice through energy efficient forward osmosis using sea bitters as draw solution. <i>RSC Advances</i> , 2015, 5, 17872-17878.	3.6	29
43	Electrodialytic removal of nitrates and hardness from simulated mixtures using ion-exchange membranes. <i>Journal of Applied Polymer Science</i> , 2006, 99, 1788-1794.	2.6	28
44	Development of high-performance supercapacitor electrode derived from sugar industry spent wash waste. <i>Journal of Hazardous Materials</i> , 2017, 340, 189-201.	12.4	28
45	Catalyzing the Intercalation Storage Capacity of Aqueous Zinc-Ion Battery Constructed with Zn(II) Preinserted Organo-Vanadyl Hybrid Cathode. <i>ACS Applied Energy Materials</i> , 2020, 3, 3425-3434.	5.1	27
46	Application of the electrodialytic pilot plant for fluoride removal. <i>Journal of Water Chemistry and Technology</i> , 2011, 33, 293-300.	0.6	26
47	Deep eutectic solvents as a new class of draw agent to enrich low abundance DNA and proteins using forward osmosis. <i>RSC Advances</i> , 2015, 5, 89539-89544.	3.6	25
48	Functionalizing Biomaterials to Be an Efficient Proton-Exchange Membrane and Methanol Barrier for DMFCs. <i>ACS Sustainable Chemistry and Engineering</i> , 2015, 3, 302-308.	6.7	24
49	Developing helical carbon functionalized chitosan-based loose nanofiltration membranes for selective separation and wastewater treatment. <i>Chemical Engineering Journal</i> , 2021, 417, 127911.	12.7	23
50	Electrospun Nanocomposite Fiber Mats of Zinc-Oxide Loaded Polyacrylonitrile. <i>Carbon Letters</i> , 2008, 9, 108-114.	5.9	23
51	Developing High-Performance Flexible Zinc Ion Capacitors from Agricultural Waste-Derived Carbon Sheets. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 1471-1481.	6.7	23
52	Engineering a Biopolymer-Based Ultrafast Permeable Aerogel Membrane Decorated with Task-Specific Fe@Al Nanocomposites for Robust Water Purification. <i>ACS Applied Bio Materials</i> , 2020, 3, 5233-5243.	4.6	21
53	Fe@Al based nanocomposite reinforced hydrothermal carbon: Efficient and robust absorbent for anionic dyes. <i>Chemosphere</i> , 2020, 259, 127421.	8.2	21
54	Multifunctional solvothermal carbon derived from alginate using water-in-deep eutectic solvents™ for enhancing enzyme activity. <i>Chemical Communications</i> , 2020, 56, 9659-9662.	4.1	21

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55	Highly Proton-Selective Biopolymer Layer-Coated Ion-Exchange Membrane for Direct Methanol Fuel Cells. <i>ChemSusChem</i> , 2012, 5, 392-395.	6.8	20
56	Engineering Fe-doped highly oxygenated solvothermal carbon from glucose-based eutectic system as active microcleaner and efficient carbocatalyst. <i>Journal of Materials Chemistry A</i> , 2019, 7, 4988-4997.	10.3	20
57	Bioinspired engineering protein nanofibrils-based multilayered self-cleaning membranes for universal water purification. <i>Journal of Hazardous Materials</i> , 2022, 424, 127561.	12.4	20
58	Morphological characterization of electrospun carbon nanofiber mats of polyacrylonitrile containing heteropolyacids. <i>Synthetic Metals</i> , 2009, 159, 1496-1504.	3.9	19
59	Direct conversion of lignocellulosic biomass to biomimetic tendril-like functional carbon helices: a protein friendly host for cytochrome C. <i>Green Chemistry</i> , 2018, 20, 3711-3716.	9.0	19
60	Facile Process for Metallizing DNA in a Multitasking Deep Eutectic Solvent for Ecofriendly C-C Coupling Reaction and Nitrobenzene Reduction. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 14225-14235.	6.7	19
61	Sustainable Water Purification Using an Engineered Solvothermal Carbon Based Membrane Derived from a Eutectic System. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 10143-10153.	6.7	19
62	Boosting the electrochemical performance of polyaniline based all-solid-state flexible supercapacitor using NiFe <sub>2</sub> O <sub>4</sub> as adjuvant. <i>Journal of Electroanalytical Chemistry</i> , 2019, 851, 113482.	3.8	18
63	New prospects on solvothermal carbonisation assisted by organic solvents, ionic liquids and eutectic mixtures – A critical review. <i>Progress in Materials Science</i> , 2022, 126, 100932.	32.8	18
64	Engineering Quantum Dots with Ionic Liquid: A Multifunctional White Light Emitting Hydrogel for Enzyme Packaging. <i>Advanced Optical Materials</i> , 2020, 8, 1902022.	7.3	16
65	Thin, Flexible Supercapacitors Made from Carbon Nanofiber Electrodes Decorated at Room Temperature with Manganese Oxide Nanosheets. <i>Journal of Nanomaterials</i> , 2013, 2013, 1-6.	2.7	15
66	Fabrication of carbon and sulphur-doped nanocomposites with seaweed polymer carrageenan as an efficient catalyst for rapid degradation of dye pollutants using a solar concentrator. <i>RSC Advances</i> , 2016, 6, 61716-61724.	3.6	15
67	A potentiostatic approach of growing polyaniline nanofibers in fractal morphology by interfacial electropolymerization. <i>RSC Advances</i> , 2016, 6, 110416-110421.	3.6	14
68	Synthesis and photoluminescence properties of polycarbazole/tin oxide (PCz/SnO <sub>2</sub> ) polymer nanocomposites. <i>Polymer Bulletin</i> , 2021, 78, 6321-6336.	3.3	14
69	Functionalized seaweed-derived graphene/polyaniline nanocomposite as efficient energy storage electrode. <i>Journal of Applied Electrochemistry</i> , 2018, 48, 37-48.	2.9	12
70	Low intensity sonosynthesis of iron carbide@iron oxide core-shell nanoparticles. <i>Ultrasonics Sonochemistry</i> , 2018, 49, 303-309.	8.2	12
71	Self-Doped Interwoven Carbon Network Derived from <i>Ulva fasciata</i> for All-Solid Supercapacitor Devices: Solvent-Free Approach to a Scalable Synthetic Route. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 174-186.	6.7	12
72	DNA as a bioligand supported on magnetite for grafting palladium nanoparticles for cross-coupling reaction. <i>Applied Organometallic Chemistry</i> , 2020, 34, e5357.	3.5	12

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73	Engineering Cytochrome C with Quantum Dots and Ionic Liquids: A Win-Win Strategy for Protein Packaging against Multiple Stresses. ACS Sustainable Chemistry and Engineering, 2021, 9, 8327-8335.	6.7	11
74	<i>In situ</i> synthesis of Cu-doped ZIF-8 for efficient photocatalytic water splitting. Applied Organometallic Chemistry, 2022, 36, .	3.5	11
75	Synthesis, Characterization, and Photocatalytic Activity of TiO <sub>2</sub> /SiO <sub>2</sub> Nanoparticles Loaded on Carbon Nanofiber Web. Journal of Nanoscience and Nanotechnology, 2010, 10, 3331-3335.	0.9	8
76	Restructuring thin film composite membrane interfaces using biopolymer as a sustainable alternative to prevent organic fouling. Carbohydrate Polymers, 2021, 254, 117297.	10.2	8
77	Presenting B-DNA as macromolecular crowding agent to improve efficacy of cytochrome c under various stresses. International Journal of Biological Macromolecules, 2022, 215, 184-191.	7.5	8
78	The rational design of inorganic and organic material based nanocomposite hybrids as Na-ion battery electrodes. Materials Advances, 2021, 2, 5006-5046.	5.4	7
79	Photoluminescence properties of zirconium oxide (ZrO <sub>2</sub> ) nanoparticles. AIP Conference Proceedings, 2020, , .	0.4	6
80	Sorption based easy-to-use low-cost filters derived from invasive weed biomass for dye contaminated water cleanup. RSC Advances, 2022, 12, 9101-9111.	3.6	6
81	Nanocomposite-based high-performance adsorptive water filters: recent advances, limitations, nanotoxicity and environmental implications. Environmental Science: Nano, 2022, 9, 2320-2341.	4.3	6
82	<i>In-Situ</i> Deposition of Iron Oxide Nanoparticles on Polyacrylonitrile-Based Nanofibers by Chemico-Thermal Reduction Method. Journal of Nanoscience and Nanotechnology, 2010, 10, 3530-3533.	0.9	5
83	Photoluminescence properties of copper oxide nanoparticles: Effect of solvents. AIP Conference Proceedings, 2019, , .	0.4	5
84	Pore characteristics and electrochemical properties of the carbon nanofibres of polyacrylonitrile containing iron-oxide by electrospinning. International Journal of Nanotechnology, 2011, 8, 868.	0.2	3
85	Classification of human breathing task based on electromyography signal of respiratory muscles. , 2017, , .		3
86	Designing biopolymer-based artificial peroxidase for oxidative removal of dibenzothiophene from a model diesel fuel. International Journal of Biological Macromolecules, 2021, 183, 1784-1793.	7.5	3
87	A hyperaccumulation pathway to hierarchically porous carbon nanosheets from halophyte biomass for wastewater remediation. Sustainable Materials and Technologies, 2021, 29, e00292.	3.3	3
88	Sustainable Polymer-Based Materials for Energy and Environmental Applications. Energy, Environment, and Sustainability, 2022, , 9-30.	1.0	2