Amit Kumar Naskar

List of Publications by Year
in descending order

106 papers	8,616 citations	94269 37 h-index	43802 91 g-index
111 all docs	111 docs citations	111 times ranked	10214 citing authors

#	Article	IF	Citations
1	Lignin Valorization: Improving Lignin Processing in the Biorefinery. Science, 2014, 344, 1246843.	6.0	2,994
2	Highly oriented carbon fiberâ€"polymer composites via additive manufacturing. Composites Science and Technology, 2014, 105, 144-150.	3.8	1,047
3	Characterization and analysis of the molecular weight of lignin for biorefining studies. Biofuels, Bioproducts and Biorefining, 2014, 8, 836-856.	1.9	343
4	Studies on Supercapacitor Electrode Material from Activated Lignin-Derived Mesoporous Carbon. Langmuir, 2014, 30, 900-910.	1.6	342
5	Turning renewable resources into value-added polymer: development of lignin-based thermoplastic. Green Chemistry, 2012, 14, 3295.	4.6	341
6	Polymer matrix nanocomposites for automotive structural components. Nature Nanotechnology, 2016, 11, 1026-1030.	15.6	214
7	Development of lignin-based polyurethane thermoplastics. RSC Advances, 2013, 3, 21832.	1.7	145
8	A general method to improve 3D-printability and inter-layer adhesion in lignin-based composites. Applied Materials Today, 2018, 12, 138-152.	2.3	145
9	Methanol Fractionation of Softwood Kraft Lignin: Impact on the Lignin Properties. ChemSusChem, 2014, 7, 221-228.	3.6	132
10	A path for lignin valorization via additive manufacturing of high-performance sustainable composites with enhanced 3D printability. Science Advances, 2018, 4, eaat4967.	4.7	131
11	Reactivity Differences between Carbon Nano Onions (CNOs) Prepared by Different Methods. Chemistry - an Asian Journal, 2007, 2, 625-633.	1.7	128
12	Thermoplastic elastomeric composition based on ground rubber tire. Polymer Engineering and Science, 2001, 41, 1087-1098.	1.5	104
13	Keratin-derived functional carbon with superior charge storage and transport for high-performance supercapacitors. Carbon, 2020, 168, 419-438.	5.4	103
14	High performance carbon fibers from very high molecular weight polyacrylonitrile precursors. Carbon, 2016, 101, 245-252.	5.4	96
15	Waste Tire Derived Carbonâ€"Polymer Composite Paper as Pseudocapacitive Electrode with Long Cycle Life. ChemSusChem, 2015, 8, 3576-3581.	3.6	94
16	Sustainable Potassium-Ion Battery Anodes Derived from Waste-Tire Rubber. Journal of the Electrochemical Society, 2017, 164, A1234-A1238.	1.3	88
17	A New Class of Renewable Thermoplastics with Extraordinary Performance from Nanostructured Ligninâ€Elastomers. Advanced Functional Materials, 2016, 26, 2677-2685.	7.8	87
18	Tire-derived carbon composite anodes for sodium-ion batteries. Journal of Power Sources, 2016, 316, 232-238.	4.0	85

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19	A study of poplar organosolv lignin after melt rheology treatment as carbon fiber precursors. Green Chemistry, 2016, 18, 5015-5024.	4.6	85
20	Soft-templated mesoporous carbons as potential materials for oral drug delivery. Carbon, 2014, 71, 47-57.	5.4	82
21	Patterned Functional Carbon Fibers from Polyethylene. Advanced Materials, 2012, 24, 2386-2389.	11.1	78
22	Sustainable Mesoporous Carbons as Storage and Controlled-Delivery Media for Functional Molecules. ACS Applied Materials & Interfaces, 2013, 5, 5868-5874.	4.0	75
23	Thermoplastic elastomeric composition based on maleic anhydride-grafted ground rubber tire. Journal of Applied Polymer Science, 2002, 84, 370-378.	1.3	74
24	Thermoplastic elastomers from reclaimed rubber and waste plastics. Journal of Applied Polymer Science, 2002, 83, 2035-2042.	1.3	70
25	Tailored recovery of carbons from waste tires for enhanced performance as anodes in lithium-ion batteries. RSC Advances, 2014, 4, 38213.	1.7	70
26	Pyrolysis Pathways of Sulfonated Polyethylene, an Alternative Carbon Fiber Precursor. Journal of the American Chemical Society, 2013, 135, 6130-6141.	6.6	60
27	UV assisted stabilization routes for carbon fiber precursors produced from melt-processible polyacrylonitrile terpolymer. Carbon, 2005, 43, 1065-1072.	5.4	57
28	Rigid Oligomer from Lignin in Designing of Tough, Self-Healing Elastomers. ACS Macro Letters, 2018, 7, 1328-1332.	2.3	54
29	Understanding the Impact of Poly(ethylene oxide) on the Assembly of Lignin in Solution toward Improved Carbon Fiber Production. ACS Applied Materials & Interfaces, 2016, 8, 3200-3207.	4.0	46
30	A photocrosslinkable melt processible acrylonitrile terpolymer as carbon fiber precursor. Polymer, 2006, 47, 4163-4171.	1.8	43
31	Poly(ethylene oxide)-Assisted Macromolecular Self-Assembly of Lignin in ABS Matrix for Sustainable Composite Applications. ACS Sustainable Chemistry and Engineering, 2015, 3, 3070-3076.	3.2	43
32	Characterization of Ground Rubber Tire and its Effect on Natural Rubber Compound. Rubber Chemistry and Technology, 2000, 73, 902-911.	0.6	42
33	The impact of lignin source on its self-assembly in solution. RSC Advances, 2015, 5, 67258-67266.	1.7	42
34	Nanocellulose in polymer composites and biomedical applications. Tappi Journal, 2014, 13, 47-54.	0.2	41
35	Melt-processable rubber: Chlorinated waste tire rubber-filled polyvinyl chloride. Journal of Applied Polymer Science, 2002, 84, 622-631.	1.3	40
36	Poly(l-lactic acid) with Segmented Perfluoropolyether Enchainment. Macromolecules, 2007, 40, 9354-9360.	2.2	40

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37	An approach towards tailoring interfacial structures and properties of multiphase renewable thermoplastics from ligninâ€"nitrile rubber. Green Chemistry, 2016, 18, 5423-5437.	4.6	38
38	An Acrylonitrileâ€"Butadieneâ€"Lignin Renewable Skin with Programmable and Switchable Electrical Conductivity for Stress/Strain-Sensing Applications. Macromolecules, 2018, 51, 115-127.	2.2	38
39	Tire-derived carbon for catalytic preparation of biofuels from feedstocks containing free fatty acids. Carbon Resources Conversion, 2018, 1, 165-173.	3.2	38
40	Studies on tyre cords: degradation of polyester due to fatigue. Polymer Degradation and Stability, 2004, 83, 173-180.	2.7	35
41	A Solventâ€Free Synthesis of Ligninâ€Derived Renewable Carbon with Tunable Porosity for Supercapacitor Electrodes. ChemSusChem, 2018, 11, 2953-2959.	3.6	32
42	Carbon polyaniline capacitive deionization electrodes with stable cycle life. Desalination, 2019, 464, 25-32.	4.0	32
43	4D Printing of Stretchable Supercapacitors via Hybrid Composite Materials. Advanced Materials Technologies, 2021, 6, .	3.0	30
44	Enhancing functionalities in carbon fiber composites by titanium dioxide nanoparticles. Composites Science and Technology, 2021, 201, 108491.	3.8	30
45	Sustainable Energyâ€Storage Materials from Ligninâ€"Graphene Nanocompositeâ€Derived Porous Carbon Film. Energy Technology, 2017, 5, 1927-1935.	1.8	29
46	Controlled release of antipyrine from mesoporous carbons. Microporous and Mesoporous Materials, 2014, 196, 327-334.	2.2	28
47	Tunable Electromechanical Liquid Crystal Elastomer Actuators. Advanced Intelligent Systems, 2020, 2, 2000022.	3.3	27
48	Sustainable Waste Tire Derived Carbon Material as a Potential Anode for Lithium-Ion Batteries. Sustainability, 2018, 10, 2840.	1.6	26
49	Consolidation of Reactive UltemÂ®Powder-coated Carbon Fiber Tow for Space Structure Composites by Resistive Heating. Journal of Composite Materials, 2006, 40, 1871-1883.	1.2	25
50	Improving mechanical properties of carbon nanotube fibers through simultaneous solid-state cycloaddition and crosslinking. Nanotechnology, 2017, 28, 145603.	1.3	25
51	Dielectric properties of blends of silicone rubber and tetraflouroethylene/propylene/vinylidene fluoride terpolymer. Polymer, 2001, 42, 9849-9853.	1.8	24
52	Surface Chlorination of Ground Rubber Tire and its Characterization. Rubber Chemistry and Technology, 2001, 74, 645-661.	0.6	24
53	Controlled Assembly of Lignocellulosic Biomass Components and Properties of Reformed Materials. ACS Sustainable Chemistry and Engineering, 2017, 5, 8044-8052.	3.2	22
54	A fundamental understanding of whole biomass dissolution in ionic liquid for regeneration of fiber by solution-spinning. Green Chemistry, 2019, 21, 4354-4367.	4.6	22

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55	Effect of chlorination of ground rubber tire on its compatibility with poly(vinyl chloride): Dielectric studies. Journal of Applied Polymer Science, 2002, 84, 993-1000.	1.3	21
56	Mechanical, thermal, morphological, and rheological characteristics of high performance 3D-printing lignin-based composites for additive manufacturing applications. Data in Brief, 2018, 19, 936-950.	0.5	21
57	Effect of carbon nanofibers on the anisotropy of an aromatic thermotropic liquid crystalline polymer. Polymer, 2005, 46, 2663-2667.	1.8	17
58	Synthesis, characterization and surface properties of poly(lactic acid)â€“perfluoropolyether block copolymers. Polymer International, 2011, 60, 507-516.	1.6	17
59	Novel Acid Catalysts from Wasteâ€Tireâ€Derived Carbon: Application in Wasteâ€“toâ€Biofuel Conversion. ChemistrySelect, 2017, 2, 4975-4982.	0.7	17
60	Polyacrylonitrile nanocomposite fibers from acrylonitrile-grafted carbon nanofibers. Composites Part B: Engineering, 2017, 130, 64-69.	5.9	16
61	Conversion of Waste Tire Rubber into High-Value-Added Carbon Supports for Electrocatalysis. Journal of the Electrochemical Society, 2018, 165, H881-H888.	1.3	16
62	Responsive lignin for shape memory applications. Polymer, 2019, 160, 210-222.	1.8	16
63	Roll-to-Roll Processing of Silicon Carbide Nanoparticle-Deposited Carbon Fiber for Multifunctional Composites. ACS Applied Materials & Interfaces, 2018, 10, 26576-26585.	4.0	15
64	Temperature-dependent self-assembly and rheological behavior of a thermoreversible pmma-P<i>n</i> BA-PMMA triblock copolymer gel. Journal of Polymer Science, Part B: Polymer Physics, 2017, 55, 877-887.	2.4	14
65	Carbon/tin oxide composite electrodes for improved lithium-ion batteries. Journal of Applied Electrochemistry, 2018, 48, 811-817.	1.5	13
66	A Flexible, Redoxâ€Active, Aqueous Electrolyteâ€Based Asymmetric Supercapacitor with High Energy Density Based on Keratinâ€Derived Renewable Carbon. Advanced Materials Technologies, 2022, 7, .	3.0	13
67	Recycling Waste Polyester via Modification with a Renewable Fatty Acid for Enhanced Processability. ACS Omega, 2018, 3, 10709-10715.	1.6	12
68	Atoms to fibers: Identifying novel processing methods in the synthesis of pitch-based carbon fibers. Science Advances, 2022, 8, eabn1905.	4.7	12
69	Observations on a low-angle X-ray diffraction peak for AR-HP mesophase pitch. Carbon, 2008, 46, 1166-1169.	5.4	11
70	Effect of solvent/polymer infiltration and irradiation on microstructure and tensile properties of carbon nanotube yarns. Journal of Materials Science, 2016, 51, 10215-10228.	1.7	11
71	Enhanced thermoelectric performance of PbSe-graphene nanocomposite manufactured with acoustic cavitation induced defects. Nano Energy, 2022, 94, 106943.	8.2	11
72	Soft-Templated Mesoporous Carbons: Chemistry and Structural Characteristics. ACS Symposium Series, 2014, , 61-83.	0.5	10

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73	Amending the Structure of Renewable Carbon from Biorefinery Waste-Streams for Energy Storage Applications. Scientific Reports, 2018, 8, 8355.	1.6	10
74	Magnetic adsorbents for selective removal of selenite from contaminated water. Separation Science and Technology, 2019, 54, 2138-2146.	1.3	10
75	An Ionomeric Renewable Thermoplastic from Ligninâ€Reinforced Rubber. Macromolecular Rapid Communications, 2019, 40, e1900059.	2.0	10
76	Effects of graphene surface functionalities towards controlled reinforcement of a lignin based renewable thermoplastic rubber. Composites Science and Technology, 2020, 199, 108352.	3.8	10
77	Synthesis of High-Performance Lignin-Based Inverse Thermoplastic Vulcanizates with Tailored Morphology and Properties. ACS Applied Polymer Materials, 2021, 3, 2911-2920.	2.0	10
78	Effect of the Ionic Liquid Structure on the Melt Processability of Polyacrylonitrile Fibers. ACS Applied Materials & Interfaces, 2020, 12, 8663-8673.	4.0	9
79	Competitive adsorption within electrode slurries and impact on cell fabrication and performance. Journal of Power Sources, 2022, 520, 230914.	4.0	9
80	FUNCTIONALIZATION OF USED TIRE RUBBER BY HYDROSILYLATION. Rubber Chemistry and Technology, 2012, 85, 68-79.	0.6	8
81	Neutron vibrational spectroscopic studies of novel tire-derived carbon materials. Physical Chemistry Chemical Physics, 2017, 19, 22256-22262.	1.3	8
82	Emulsion polymerization of acrylonitrile in aqueous methanol. Green Chemistry, 2018, 20, 5299-5310.	4.6	8
83	Butanol-Based Organosolv Lignin and Reactive Modification of Poly(ethylene-glycidyl methacrylate). Industrial & Engineering Chemistry Research, 2019, 58, 20300-20308.	1.8	8
84	A tough and sustainable fiber-forming material from lignin and waste poly(ethylene terephthalate). RSC Advances, 2019, 9, 31202-31211.	1.7	8
85	Analyzing carbon fiber structures observed by helium ion microscopy and their mechanical properties. Carbon Trends, 2021, 4, 100055.	1.4	7
86	Method To Synthesize Micronized Spherical Carbon Particles from Lignin. Industrial & Engineering Chemistry Research, 2020, 59, 9-17.	1.8	6
87	An Engineered Multifunctional Composite for Passive Sensing, Power Harvesting, and In Situ Damage Identification with Enhanced Mechanical Performance. Advanced Materials Technologies, 2022, 7, .	3.0	6
88	Understanding the Solution Dynamics and Binding of a PVDF Binder with Silicon, Graphite, and NMC Materials and the Influence on Cycling Performance. ACS Applied Materials & Interfaces, 2022, 14, 23322-23331.	4.0	6
89	Thermal and shear flow effects on microstructure of a thermotropic liquid crystalline polymer. Polymer Engineering and Science, 2006, 46, 1215-1222.	1.5	4
90	Carbon Fibers: Patterned Functional Carbon Fibers from Polyethylene (Adv. Mater. 18/2012). Advanced Materials, 2012, 24, 2506-2506.	11.1	4

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91	Designing the Structure of Carbon Fibers for Optimal Mechanical Properties. ACS Symposium Series, 2014, , 215-232.	0.5	4
92	Terpolymers from lactide and bisphenol a derivatives: Scaleâ€up, properties, and blends. Journal of Applied Polymer Science, 2011, 122, 2520-2528.	1.3	3
93	Fractionation of Lignin for Selective Shape Memory Effects at Elevated Temperatures. Materials, 2020, 13, 1940.	1.3	3
94	Ionic-liquid-Assisted Fabrication of Lignocellulosic Thin Films with Tunable Hydrophobicity. ACS Sustainable Chemistry and Engineering, 2022, 10, 8835-8845.	3.2	3
95	Influence of Maleation of Ground Rubber Tyre (GRT) on the Thermorheological behaviour of Thermoplastic Elastomers Based on Ethylene Propylene Diene Rubber, GRT and Ethylene-co-acrylic acid. Polymers and Polymer Composites, 2002, 10, 427-432.	1.0	2
96	Carbon mats from melt spun polyacrylonitrile based precursors for automotive composites. Plastics, Rubber and Composites, 2006, 35, 242-246.	0.9	2
97	Development of nanoparticle embedded sizing for enhanced structural health monitoring of carbon fiber composites. Proceedings of SPIE, 2017, , .	0.8	2
98	Data of thermally active lignin-linkages and shape memory of lignin-rubber composites. Data in Brief, 2019, 22, 392-399.	0.5	1
99	Tunable Electromechanical Liquid Crystal Elastomer Actuators. Advanced Intelligent Systems, 2020, 2, 2070071.	3.3	1
100	A Cast Net Thrown onto an Interface: Wrapping 3D Objects with an Interfacially Jammed Amphiphilic Sheet. Advanced Materials Interfaces, 2020, 7, 1901751.	1.9	1
101	Tailoring compatibilization potential of maleic anhydrideâ€grafted polypropylene by sequential rheochemical processing of polypropylene and polyamide 66 blends. Polymer Engineering and Science, 0, , .	1.5	1
102	Recyclable Polymers: A New Class of Renewable Thermoplastics with Extraordinary Performance from Nanostructured Ligninâ€Elastomers (Adv. Funct. Mater. 16/2016). Advanced Functional Materials, 2016, 26, 2676-2676.	7.8	0
103	Interfacial Jamming: A Cast Net Thrown onto an Interface: Wrapping 3D Objects with an Interfacially Jammed Amphiphilic Sheet (Adv. Mater. Interfaces 7/2020). Advanced Materials Interfaces, 2020, 7, 2070039.	1.9	0
104	The effect of nanoparticle enhanced sizing on the structural health monitoring sensitivity and mechanical properties of carbon fiber composites. , 2018, , .		0
105	Enhanced piezoresistive sensing of fiber-reinforced composites via embedded nanoparticles. , 2019, , .		0
106	Multifunctional fiber-reinforced composites for passive sensing and energy harvesting with enhanced mechanical performance. , 2022, , .		0