

Jin Zhang

List of Publications by Year in descending order

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101
papers

5,634
citations

71102

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82547

72
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102
all docs

102
docs citations

102
times ranked

6488
citing authors

#	ARTICLE	IF	CITATIONS
1	Current status of carbon fibre and carbon fibre composites recycling. <i>Composites Part B: Engineering</i> , 2020, 193, 108053.	12.0	374
2	Hybrid composite laminates reinforced with glass/carbon woven fabrics for lightweight load bearing structures. <i>Materials & Design</i> , 2012, 36, 75-80.	5.1	360
3	Aligning multilayer graphene flakes with an external electric field to improve multifunctional properties of epoxy nanocomposites. <i>Carbon</i> , 2015, 94, 607-618.	10.3	288
4	Carbon science in 2016: Status, challenges and perspectives. <i>Carbon</i> , 2016, 98, 708-732.	10.3	261
5	Novel Electrically Conductive Porous PDMS/Carbon Nanofiber Composites for Deformable Strain Sensors and Conductors. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 14207-14215.	8.0	239
6	Preparation, structure and supercapacitance of bonded carbon nanofiber electrode materials. <i>Carbon</i> , 2011, 49, 2380-2388.	10.3	202
7	Strain Sensors with Adjustable Sensitivity by Tailoring the Microstructure of Graphene Aerogel/PDMS Nanocomposites. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 24853-24861.	8.0	195
8	Electrospun nanofibre toughened carbon/epoxy composites: Effects of polyetherketone cardo (PEK-C) nanofibre diameter and interlayer thickness. <i>Composites Science and Technology</i> , 2010, 70, 1660-1666.	7.8	151
9	Dual-layer Superamphiphobic/Superhydrophobic/Oleophilic Nanofibrous Membranes with Unidirectional Oil Transport Ability and Strengthened Oil-water Separation Performance. <i>Advanced Materials Interfaces</i> , 2015, 2, 1400506.	3.7	143
10	Improving the toughness and electrical conductivity of epoxy nanocomposites by using aligned carbon nanofibres. <i>Composites Science and Technology</i> , 2015, 117, 146-158.	7.8	135
11	Phase morphology of nanofibre interlayers: Critical factor for toughening carbon/epoxy composites. <i>Composites Science and Technology</i> , 2012, 72, 256-262.	7.8	120
12	Structural Comparison of Various Silkworm Silks: An Insight into the Structure-Property Relationship. <i>Biomacromolecules</i> , 2018, 19, 906-917.	5.4	116
13	Interlayer self-healing and toughening of carbon fibre/epoxy composites using copolymer films. <i>Composites Part A: Applied Science and Manufacturing</i> , 2012, 43, 512-518.	7.6	97
14	Epoxy nanocomposites simultaneously strengthened and toughened by hybridization with graphene oxide and block ionomer. <i>Composites Science and Technology</i> , 2018, 168, 363-370.	7.8	95
15	Epoxy nanocomposites containing magnetite-carbon nanofibers aligned using a weak magnetic field. <i>Polymer</i> , 2015, 68, 25-34.	3.8	89
16	Silkworm cocoon as natural material and structure for thermal insulation. <i>Materials & Design</i> , 2013, 49, 842-849.	5.1	85
17	Improving the bending strength and energy absorption of corrugated sandwich composite structure. <i>Materials & Design</i> , 2013, 52, 767-773.	5.1	85
18	Polyphenol-induced Adhesive Liquid Metal Inks for Substrate-independent Direct Pen Writing. <i>Advanced Functional Materials</i> , 2021, 31, 2007336.	14.9	84

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19	High temperature thermally conductive nanocomposite textile by “green” electrospinning. <i>Nanoscale</i> , 2018, 10, 16868-16872.	5.6	81
20	Multifunctional properties of epoxy nanocomposites reinforced by aligned nanoscale carbon. <i>Materials and Design</i> , 2016, 94, 554-564.	7.0	80
21	Magnetic and Conductive Liquid Metal Gels. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 20119-20128.	8.0	73
22	Mechanical properties and structure of silkworm cocoons: A comparative study of <i>Bombyx mori</i> , <i>Antheraea assamensis</i> , <i>Antheraea pernyi</i> and <i>Antheraea mylitta</i> silkworm cocoons. <i>Materials Science and Engineering C</i> , 2013, 33, 3206-3213.	7.3	68
23	Photoprotection by Silk Cocoons. <i>Biomacromolecules</i> , 2013, 14, 3660-3667.	5.4	68
24	Magnetic and mechanical properties of polyvinyl alcohol (PVA) nanocomposites with hybrid nanofillers “ Graphene oxide tethered with magnetic Fe ₃ O ₄ nanoparticles. <i>Chemical Engineering Journal</i> , 2014, 237, 462-468.	12.7	68
25	Kinetic investigation into pH-dependent color of anthocyanin and its sensing performance. <i>Dyes and Pigments</i> , 2019, 170, 107643.	3.7	68
26	Toughening and self-healing of epoxy matrix laminates using mendable polymer stitching. <i>Composites Science and Technology</i> , 2012, 72, 1396-1401.	7.8	66
27	Synergies of vertical graphene and manganese dioxide in enhancing the energy density of carbon fibre-based structural supercapacitors. <i>Composites Science and Technology</i> , 2021, 201, 108568.	7.8	62
28	Hierarchically structured electrodes for moldable supercapacitors by synergistically hybridizing vertical graphene nanosheets and MnO ₂ . <i>Carbon</i> , 2021, 172, 272-282.	10.3	59
29	Effect of natural fibre reinforcement on the sound and vibration damping properties of bio-composites compression moulded by nonwoven mats. <i>Composites Communications</i> , 2019, 13, 12-17.	6.3	58
30	Aligning carbon nanofibres in glass-fibre/epoxy composites to improve interlaminar toughness and crack-detection capability. <i>Composites Science and Technology</i> , 2017, 152, 46-56.	7.8	54
31	High-performance hierarchical MnO ₂ /CNT electrode for multifunctional supercapacitors. <i>Carbon</i> , 2021, 184, 504-513.	10.3	54
32	Comparative Study of Strain-Dependent Structural Changes of Silkworm Silks: Insight into the Structural Origin of Strain-Stiffening. <i>Small</i> , 2017, 13, 1702266.	10.0	53
33	Thermal and mechanical properties of a dendritic hydroxyl-functional hyperbranched polymer and tetrafunctional epoxy resin blends. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2010, 48, 417-424.	2.1	51
34	Healing of carbon fibre-epoxy composite T-joints using mendable polymer fibre stitching. <i>Composites Part B: Engineering</i> , 2013, 45, 1499-1507.	12.0	50
35	Study on thermoplastic-modified multifunctional epoxies: Influence of heating rate on cure behaviour and phase separation. <i>Composites Science and Technology</i> , 2009, 69, 1172-1179.	7.8	49
36	A Review on Lithium-Ion Battery Separators towards Enhanced Safety Performances and Modelling Approaches. <i>Molecules</i> , 2021, 26, 478.	3.8	49

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37	Electrospun liquid metal/PVDF-HFP nanofiber membranes with exceptional triboelectric performance. <i>Nano Energy</i> , 2022, 92, 106713.	16.0	49
38	Recent developments of hybrid piezo-triboelectric nanogenerators for flexible sensors and energy harvesters. <i>Nanoscale Advances</i> , 2021, 3, 5465-5486.	4.6	47
39	Enhancing the thermal and mechanical properties of polyvinyl alcohol (PVA) with boron nitride nanosheets and cellulose nanocrystals. <i>Polymer</i> , 2018, 148, 101-108.	3.8	43
40	Mechanically stretchable piezoelectric polyvinylidene fluoride (PVDF)/Boron nitride nanosheets (BNNs) polymer nanocomposites. <i>Composites Part B: Engineering</i> , 2019, 175, 107157.	12.0	43
41	A novel route for tethering graphene with iron oxide and its magnetic field alignment in polymer nanocomposites. <i>Polymer</i> , 2016, 97, 273-284.	3.8	42
42	Nano- to macro-scale control of 3D printed materials via polymerization induced microphase separation. <i>Nature Communications</i> , 2022, 13, .	12.8	42
43	Environmentally Friendly Flexible Strain Sensor from Waste Cotton Fabrics and Natural Rubber Latex. <i>Polymers</i> , 2019, 11, 404.	4.5	41
44	Nanostructure Control in 3D Printed Materials. <i>Advanced Materials</i> , 2022, 34, e2107643.	21.0	40
45	Manufacturing Influence on the Delamination Fracture Behavior of the T800H/3900-2 Carbon Fiber Reinforced Polymer Composites. <i>Materials and Manufacturing Processes</i> , 2007, 22, 768-772.	4.7	37
46	Synergistic influence from the hybridization of boron nitride and graphene oxide nanosheets on the thermal conductivity and mechanical properties of polymer nanocomposites. <i>Composites Science and Technology</i> , 2017, 151, 252-257.	7.8	37
47	Fracture and fatigue behaviour of epoxy nanocomposites containing 1-D and 2-D nanoscale carbon fillers. <i>Engineering Fracture Mechanics</i> , 2018, 203, 102-114.	4.3	37
48	Enhancing output performance of PVDF-HFP fiber-based nanogenerator by hybridizing silver nanowires and perovskite oxide nanocrystals. <i>Nano Energy</i> , 2022, 98, 107343.	16.0	35
49	Synergistic effects of PEK-C/VGCNF composite nanofibres on a trifunctional epoxy resin. <i>Composites Science and Technology</i> , 2011, 71, 1060-1067.	7.8	34
50	Covalent/crystallite cross-linked co-network hydrogels: An efficient and simple strategy for mechanically strong and tough hydrogels. <i>Chemical Engineering Journal</i> , 2016, 301, 92-102.	12.7	34
51	Interactions between fibroin and sericin proteins from <i>Antheraea pernyi</i> and <i>Bombyx mori</i> silk fibers. <i>Journal of Colloid and Interface Science</i> , 2016, 478, 316-323.	9.4	33
52	Photocatalysis and self-cleaning from g-C ₃ N ₄ coated cotton fabrics under sunlight irradiation. <i>Chemical Physics Letters</i> , 2018, 699, 146-154.	2.6	33
53	PET-RAFT facilitated 3D printable resins with multifunctional RAFT agents. <i>Materials Chemistry Frontiers</i> , 2021, 5, 2271-2282.	5.9	32
54	Preparation and characterization of nanocomposite films based on gum arabic, maltodextrin and polyethylene glycol reinforced with turmeric nanofiber isolated from turmeric spent. <i>Materials Science and Engineering C</i> , 2019, 97, 723-729.	7.3	31

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55	The key structural features governing the free radicals and catalytic activity of graphite/graphene oxide. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 3112-3121.	2.8	30
56	Interphase study of thermoplastic modified epoxy matrix composites: Phase behaviour around a single fibre influenced by heating rate and surface treatment. <i>Composites Part A: Applied Science and Manufacturing</i> , 2010, 41, 787-794.	7.6	28
57	Transparent, stretchable and high-performance triboelectric nanogenerator based on dehydration-free ionically conductive solid polymer electrode. <i>Nano Energy</i> , 2021, 88, 106289.	16.0	28
58	Controlling mechanical properties of 3D printed polymer composites through photoinduced reversible addition-fragmentation chain transfer (RAFT) polymerization. <i>Polymer Chemistry</i> , 2021, 13, 44-57.	3.9	27
59	Characterisation of pyrolysis kinetics and detailed gas species formations of engineering polymers via reactive molecular dynamics (ReaxFF). <i>Journal of Analytical and Applied Pyrolysis</i> , 2021, 153, 104931.	5.5	26
60	The effect of carbon nanofibres on self-healing epoxy/poly(μ -caprolactone) blends. <i>Composites Science and Technology</i> , 2012, 72, 1952-1959.	7.8	25
61	Surface energy of silk fibroin and mechanical properties of silk cocoon composites. <i>RSC Advances</i> , 2015, 5, 1640-1647.	3.6	25
62	Designing Nanostructured 3D Printed Materials by Controlling Macromolecular Architecture. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	13.8	25
63	Experimental and numerical perspective on the fire performance of MXene/Chitosan/Phytic acid coated flexible polyurethane foam. <i>Scientific Reports</i> , 2021, 11, 4684.	3.3	24
64	Soft Liquid Metal Infused Conductive Sponges. <i>Advanced Materials Technologies</i> , 2022, 7, .	5.8	24
65	Characterization and Analysis of Delamination Fracture and Nanocreep Properties in Carbon Epoxy Composites Manufactured by Different Processes. <i>Journal of Composite Materials</i> , 2006, 40, 1287-1299.	2.4	23
66	Microstructure and mechanical properties of silk from different components of the <i>Antheraea pernyi</i> cocoon. <i>Materials & Design</i> , 2015, 65, 766-771.	5.1	23
67	Effects of mechanical deformation on electric performance of rechargeable batteries embedded in load carrying composite structures. <i>Plastics, Rubber and Composites</i> , 2014, 43, 98-104.	2.0	22
68	Enhancing the triboelectricity of stretchable electrospun piezoelectric polyvinylidene fluoride/boron nitride nanosheets composite nanofibers. <i>Composites Communications</i> , 2020, 22, 100535.	6.3	22
69	Strain stiffening and positive piezoconductive effect of liquid metal/elastomer soft composites. <i>Composites Science and Technology</i> , 2021, 201, 108497.	7.8	22
70	N-doped reduced graphene oxide (rGO) wrapped carbon microfibers as binder-free electrodes for flexible fibre supercapacitors and sodium-ion batteries. <i>Journal of Energy Storage</i> , 2021, 37, 102453.	8.1	22
71	Natural and highly protective composite structures " Wild silkworm cocoons. <i>Composites Communications</i> , 2017, 4, 1-4.	6.3	21
72	Functionalization of Silk with In-Situ Synthesized Platinum Nanoparticles. <i>Materials</i> , 2018, 11, 1929.	2.9	21

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73	Optimizing twisted yarn structure for natural fiber-reinforced polymeric composites. <i>Journal of Composite Materials</i> , 2018, 52, 373-381.	2.4	19
74	Carbon fibre electrodes for ultra long cycle life pseudocapacitors by engineering the nano-structure of vertical graphene and manganese dioxides. <i>Carbon</i> , 2021, 177, 260-270.	10.3	19
75	Photoinduced synthesis of gold nanoparticle-bacterial cellulose nanocomposite and its application for in-situ detection of trace concentration of dyes in textile and paper. <i>Cellulose</i> , 2018, 25, 3941-3953.	4.9	16
76	Creating ionic pathways in solid-state polymer electrolyte by using PVA-coated carbon nanofibers. <i>Composites Science and Technology</i> , 2021, 207, 108710.	7.8	16
77	Coloured powder from coloured textile waste for fabric printing application. <i>Cellulose</i> , 2021, 28, 1179-1189.	4.9	15
78	Improving the gas barrier, mechanical and thermal properties of poly(vinyl alcohol) with molybdenum disulfide nanosheets. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2019, 57, 406-414.	2.1	14
79	Cocoon of the silkworm <i>Antheraea pernyi</i> as an example of a thermally insulating biological interface. <i>Biointerphases</i> , 2014, 9, 031013.	1.6	12
80	Structure-property relationships of elementary bamboo fibers. <i>Cellulose</i> , 2016, 23, 3521-3534.	4.9	12
81	Enhanced through-thickness thermal conductivity of epoxy with cellulose-supported boron nitride nanosheets. <i>Polymer</i> , 2019, 179, 121653.	3.8	12
82	Post-transition metal/polymer composites for the separation and sensing of alkali metal ions. <i>Journal of Materials Chemistry A</i> , 2021, 9, 19854-19864.	10.3	12
83	An Investigation towards Coupling Molecular Dynamics with Computational Fluid Dynamics for Modelling Polymer Pyrolysis. <i>Molecules</i> , 2022, 27, 292.	3.8	12
84	Surface Functionalization of Electrodes and Synthesis of Dual-Phase Solid Electrolytes for Structural Supercapacitors. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 30857-30871.	8.0	12
85	Consistent model predictions for isothermal cure kinetics investigation of high performance epoxy prepreps. <i>Journal of Applied Polymer Science</i> , 2008, 107, 2231-2237.	2.6	10
86	Inspection of Drop-weight Impact Damage in Woven CFRP Laminates Fabricated by Different Processes. <i>Journal of Composite Materials</i> , 2009, 43, 1939-1946.	2.4	10
87	Structural and material properties of a rapidly cured thermoplastic-toughened epoxy system. <i>Journal of Applied Polymer Science</i> , 2009, 113, 485-491.	2.6	9
88	Palladium nanoparticle colored cotton fabric as a highly efficient catalyst for colorimetric sensing of H ₂ O ₂ . <i>Cellulose</i> , 2020, 27, 7791-7803.	4.9	9
89	Pyrolysis and combustion characterisation of HDPE/APP composites via molecular dynamics and CFD simulations. <i>Journal of Analytical and Applied Pyrolysis</i> , 2022, 163, 105499.	5.5	9
90	The effect of fibrous structural difference on thermal insulation properties of biological composites: Silkworm cocoons. <i>Textile Research Journal</i> , 2016, 86, 1935-1946.	2.2	7

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91	Using Carbon Nanofibre Sensors for In-situ Detection and Monitoring of Disbonds in Bonded Composite Joints. <i>Procedia Engineering</i> , 2017, 188, 362-368.	1.2	7
92	Induction heating for the removal of liquid metal-based implant mimics: A proof-of-concept. <i>Applied Materials Today</i> , 2022, 27, 101459.	4.3	7
93	Interfacial heat transfer through a natural protective fibrous architecture: a wild silkworm cocoon wall. <i>Textile Reseach Journal</i> , 2015, 85, 1035-1044.	2.2	6
94	Thermally mendable epoxy resin strengthened with carbon nanofibres. <i>Composites Part A: Applied Science and Manufacturing</i> , 2013, 55, 45-52.	7.6	5
95	Prestrained twistless flax yarn as reinforcement for polymer matrix composites. <i>Polymer Composites</i> , 2020, 41, 930-938.	4.6	5
96	Carbonization of low thermal stability polymers at the interface of liquid metals. <i>Carbon</i> , 2021, 171, 938-945.	10.3	5
97	Nanophase morphology and crystallization in poly(vinylidene fluoride)/polydimethylsiloxane. <i>Polymer</i> , 2019, 68, 418-427.	3.1	4
98	Bifunctional graphene oxide nanosheets for interfacially robust polymer actuators with instant solvent-induced self-folding. <i>Polymer</i> , 2020, 186, 122037.	3.8	4
99	Tuning the Mechanical Properties of Silkworm Silk Fibres by Thermally Induced Modification of Crystalline Nanostructure. <i>Fibers and Polymers</i> , 2021, 22, 373-381.	2.1	4
100	An experimental study of low velocity impact response in 2/2 twill weave composite laminates manufactured by a novel fabrication process. <i>Journal of Materials Science</i> , 2007, 42, 232-238.	3.7	3
101	Directional moisture transfer through a wild silkworm cocoon wall. <i>Biointerphases</i> , 2016, 11, 021008.	1.6	1