Han Gi Chae

List of Publications by Year
in descending order

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81 papers	4,367 citations	109137 35 h-index	110170 64 g-index
84 all docs	84 docs citations	84 times ranked	4299 citing authors

#	Article	IF	Citations
1	Pyro-polymerization of organic pigments for superior lithium storage. Carbon, 2022, 188, 187-196.	5.4	4
2	Radial microstructure development of polyacrylonitrile (PAN)-based carbon fibers. Carbon, 2022, 191, 515-524.	5.4	28
3	Microstructural evolution of polyacrylonitrile fibers during industry-mimicking continuous stabilization. Carbon, 2022, 195, 165-173.	5.4	13
4	Longitudinal alignment effect of graphene oxide nanoribbon on properties of polyimide-based carbon fibers. Carbon, 2022, 198, 219-229.	5.4	4
5	Mild acid-based surfactant-free solutions of single-walled carbon nanotubes: Highly viscous, less toxic, and humidity-insensitive solutions. Chemical Engineering Journal, 2022, 450, 137983.	6.6	5
6	Preparation of sustainable fibers from isosorbide: Merits over bisphenol-A based polysulfone. Materials and Design, 2021, 198, 109284.	3.3	2
7	Synthesis of high quality 2D carbide MXene flakes using a highly purified MAX precursor for ink applications. Nanoscale Advances, 2021, 3, 517-527.	2.2	15
8	Composition-segmented BiSbTe thermoelectric generator fabricated by multimaterial 3D printing. Nano Energy, 2021, 81, 105638.	8.2	43
9	Dopingâ€Induced Viscoelasticity in PbTe Thermoelectric Inks for 3D Printing of Powerâ€Generating Tubes. Advanced Energy Materials, 2021, 11, 2100190.	10.2	25
10	Cu2Se-based thermoelectric cellular architectures for efficient and durable power generation. Nature Communications, 2021, 12, 3550.	5.8	41
11	Multilayered Composites with Modulus Gradient for Enhanced Pressureâ€"Temperature Sensing Performance. Sensors, 2021, 21, 4752.	2.1	5
12	Direct ink writing of three-dimensional thermoelectric microarchitectures. Nature Electronics, 2021, 4, 579-587.	13.1	56
13	Polyvinylidene fluoride (PVDF)/cellulose nanocrystal (CNC) nanocomposite fiber and triboelectric textile sensors. Composites Part B: Engineering, 2021, 223, 109098.	5.9	34
14	Preparation of High-Performance Polyethersulfone/Cellulose Nanocrystal Nanocomposite Fibers via Dry-Jet Wet Spinning. Macromolecular Research, 2021, 29, 33-39.	1.0	9
15	The effect of cellulose nanocrystals (CNCs) on the microstructure of amorphous polyetherimide (PEI)-based nanocomposite fibers and its correlation with the mechanical properties. Composites Science and Technology, 2020, 200, 108452.	3.8	17
16	Defect structure evolution of polyacrylonitrile and single wall carbon nanotube nanocomposites: a molecular dynamics simulation approach. Scientific Reports, 2020, 10, 11816.	1.6	7
17	Structure-dependent sodium ion storage mechanism of cellulose nanocrystal-based carbon anodes for highly efficient and stable batteries. Journal of Power Sources, 2020, 468, 228371.	4.0	24
18	Octa-viologen substituted polyhedral oligomeric silsesquioxane exhibiting outstanding electrochromic performances. Chemical Engineering Journal, 2020, 393, 124690.	6.6	35

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19	Effect of dissolution pathways of polyacrylonitrile on the solution homogeneity: Thermodynamic- or kinetic-controlled dissolution. Polymer, 2020, 205, 122697.	1.8	13
20	Enhancement in mechanical properties of polyamide 66-carbon fiber composites containing graphene oxide-carbon nanotube hybrid nanofillers synthesized through in situ interfacial polymerization. Composites Part A: Applied Science and Manufacturing, 2020, 135, 105938.	3.8	58
21	Reply to commentary. Carbon, 2020, 160, 407-412.	5.4	0
22	Enthalpic effect of polyacrylonitrile on the concentrated solutions in dimethyl sulfoxide: Strong thixotropic behavior and formation of bound solvents. Journal of Polymer Science, Part B: Polymer Physics, 2019, 57, 1080-1089.	2.4	4
23	Structure evolution mechanism of highly ordered graphite during carbonization of cellulose nanocrystals. Carbon, 2019, 150, 142-152.	5.4	69
24	Effect of Interfacial Interaction on the Conformational Variation of Poly(vinylidene fluoride) (PVDF) Chains in PVDF/Graphene Oxide (GO) Nanocomposite Fibers and Corresponding Mechanical Properties. ACS Applied Materials & Interfaces, 2019, 11, 13665-13675.	4.0	49
25	Rheological design of 3D printable all-inorganic inks using BiSbTe-based thermoelectric materials. Journal of Rheology, 2019, 63, 291-304.	1.3	43
26	Correlation between inhomogeneity in polyacrylonitrile spinning dopes and carbon fiber tensile strength. Polymer Engineering and Science, 2019, 59, 478-482.	1.5	3
27	The effects of plasma surface treatment on the mechanical properties of polycarbonate/carbon nanotube/carbon fiber composites. Composites Part B: Engineering, 2019, 160, 436-445.	5.9	75
28	3D printing of shape-conformable thermoelectric materials using all-inorganic Bi2Te3-based inks. Nature Energy, 2018, 3, 301-309.	19.8	237
29	Sewing machine stitching of polyvinylidene fluoride fibers: programmable textile patterns for wearable triboelectric sensors. Journal of Materials Chemistry A, 2018, 6, 22879-22888.	5.2	80
30	Pt Nanoparticle-Decorated Reduced Graphene Oxide Hydrogel for High-Performance Strain Sensor: Tailoring Piezoresistive Property by Controlled Microstructure of Hydrogel. ACS Applied Nano Materials, 2018, 1, 2836-2843.	2.4	17
31	The properties of carbon fibers. , 2018, , 841-871.		13
32	Influence of hybrid graphene oxide-carbon nanotube as a nano-filler on the interfacial interaction in nylon composites prepared by in situ interfacial polymerization. Carbon, 2018, 140, 324-337.	5.4	36
33	Effect of highâ€shear mixing by twinâ€screw extruder on the dispersion and homogeneity of polyacrylonitrile/carbon nanotube composite solution. Polymer Composites, 2017, 38, 719-726.	2.3	11
34	Reinforcement efficiency of carbon nanotubes and their effect on crystal-crystal slip in poly(ether) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	3.8	12
35	Polyacrylonitrile solution homogeneity study by dynamic shear rheology and the effect on the carbon fiber tensile strength. Polymer Engineering and Science, 2016, 56, 361-370.	1.5	25
36	High surface area carbon from polyacrylonitrile for high-performance electrochemical capacitive energy storage. Journal of Materials Chemistry A, 2016, 4, 18294-18299.	5.2	27

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37	Effect of processing conditions on the dispersion of carbon nanotubes in polyacrylonitrile solutions. Journal of Applied Polymer Science, 2015, 132, .	1.3	3
38	Processing, structure, and properties of gel spun PAN and PAN/CNT fibers and gel spun PAN based carbon fibers. Polymer Engineering and Science, 2015, 55, 2603-2614.	1.5	48
39	Investigation of polyacrylonitrile solution inhomogeneity by dynamic light scattering. Polymer Engineering and Science, 2015, 55, 1403-1407.	1.5	4
40	High strength and high modulus carbon fibers. Carbon, 2015, 93, 81-87.	5.4	176
41	High resolution transmission electron microscopy study on polyacrylonitrile/carbon nanotube based carbon fibers and the effect of structure development on the thermal and electrical conductivities. Carbon, 2015, 93, 502-514.	5.4	85
42	Development of single filament testing procedure for polyacrylonitrile precursor and polyacrylonitrile-based carbon fibers. Journal of Composite Materials, 2015, 49, 2231-2240.	1.2	20
43	Preparation of low density hollow carbon fibers by bi-component gel-spinning method. Journal of Materials Science, 2015, 50, 3614-3621.	1.7	15
44	Low-density and high-modulus carbon fibers from polyacrylonitrile with honeycomb structure. Carbon, 2015, 95, 710-714.	5.4	53
45	Solidâ€state NMR study of spin finish of thermally treated PAN and PAN/CNT precursor fibers. Journal of Applied Polymer Science, 2014, 131, .	1.3	1
46	Effect of carbon nanotubes on sintering behavior of alumina prepared by solâ€“gel method. Ceramics International, 2014, 40, 6579-6587.	2.3	12
47	Stress transfer in polyacrylonitrile/carbon nanotube composite fibers. Polymer, 2014, 55, 2734-2743.	1.8	56
48	High strength micron size carbon fibers from polyacrylonitrileâ€“carbon nanotube precursors. Carbon, 2014, 77, 442-453.	5.4	50
49	Functional polymerâ€“polymer/carbon nanotube bi-component fibers. Polymer, 2013, 54, 6210-6217.	1.8	27
50	Polyacrylonitrile/carbon nanofiber nanocomposite fibers. Composites Science and Technology, 2013, 88, 134-141.	3.8	19
51	Temperature dependent tensile behavior of gel-spun polyacrylonitrile and polyacrylonitrile/carbon nanotube composite fibers. Polymer, 2013, 54, 4003-4009.	1.8	27
52	Graphene Nanoribbons as an Advanced Precursor for Making Carbon Fiber. ACS Nano, 2013, 7, 1628-1637.	7.3	117
53	Note: Thermal conductivity measurement of individual poly(ether ketone)/carbon nanotube fibers using a steady-state dc thermal bridge method. Review of Scientific Instruments, 2012, 83, 016103.	0.6	29
54	Polyethylene Crystallization Nucleated by Carbon Nanotubes under Shear. ACS Applied Materials & Interfaces, 2012, 4, 326-330.	4.0	63

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55	Probe diffusion of single-walled carbon nanotubes in semidilute solutions of polyacrylonitrile homo- and copolymers: Effects of topological constraints and polymer/Nanorod interactions. Polymer, 2012, 53, 5069-5077.	1.8	8
56	Gel-spun carbon nanotubes/polyacrylonitrile composite fibers. Part II: Stabilization reaction kinetics and effect of gas environment. Carbon, 2011, 49, 4477-4486.	5.4	66
57	Gel-spun carbon nanotubes/polyacrylonitrile composite fibers. Part I: Effect of carbon nanotubes on stabilization. Carbon, 2011, 49, 4466-4476.	5.4	90
58	Gel-spun carbon nanotubes/polyacrylonitrile composite fibers. Part III: Effect of stabilization conditions on carbon fiber properties. Carbon, 2011, 49, 4487-4496.	5.4	59
59	Processing, Structure, and Properties of PAN/MWNT Composite Fibers. Macromolecular Materials and Engineering, 2010, 295, 742-749.	1.7	38
60	Observations on Solution Crystallization of Poly(vinyl alcohol) in the Presence of Singleâ€Wall Carbon Nanotubes. Macromolecular Rapid Communications, 2010, 31, 310-316.	2.0	27
61	Processing, structure and properties of poly(ether ketone) grafted few wall carbon nanotube composite fibers. Polymer, 2010, 51, 3940-3947.	1.8	21
62	Sponge Behaviors of Functionalized Few-Walled Carbon Nanotubes. Journal of Physical Chemistry C, 2010, 114, 14868-14875.	1.5	10
63	Interfacial Crystallization in Gelâ€Spun Poly(vinyl alcohol)/Singleâ€Wall Carbon Nanotube Composite Fibers. Macromolecular Chemistry and Physics, 2009, 210, 1799-1808.	1.1	95
64	Carbon nanotube reinforced small diameter polyacrylonitrile based carbon fiber. Composites Science and Technology, 2009, 69, 406-413.	3.8	136
65	Smallâ€angle Xâ€ray scattering investigation of carbon nanotubeâ€reinforced polyacrylonitrile fibers during deformation. Journal of Polymer Science, Part B: Polymer Physics, 2009, 47, 2394-2409.	2.4	20
66	Solid-state spun fibers and yarns from 1-mm long carbon nanotube forests synthesized by water-assisted chemical vapor deposition. Journal of Materials Science, 2008, 43, 4356-4362.	1.7	96
67	Carbon nanotube dispersion and exfoliation in polypropylene and structure and properties of the resulting composites. Polymer, 2008, 49, 1831-1840.	1.8	138
68	Structural changes during deformation in carbon nanotube-reinforced polyacrylonitrile fibers. Polymer, 2008, 49, 2133-2145.	1.8	36
69	Structure and electrochemical properties of activated polyacrylonitrile based carbon fibers containing carbon nanotubes. Journal of Power Sources, 2008, 185, 676-684.	4.0	35
70	Making Strong Fibers. Science, 2008, 319, 908-909.	6.0	262
71	Stabilization and carbonization of gel spun polyacrylonitrile/single wall carbon nanotube composite fibers. Polymer, 2007, 48, 3781-3789.	1.8	200
72	Carbon nanotube-enabled materials. , 2006, , 213-274.		12

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73	Oriented and exfoliated single wall carbon nanotubes in polyacrylonitrile. Polymer, 2006, 47, 3494-3504.	1.8	197
74	Single wall carbon nanotube templated oriented crystallization of poly(vinyl alcohol). Polymer, 2006, 47, 3705-3710.	1.8	195
75	Polymer nanotube nanocomposites: Correlating intermolecular interaction to ultimate properties. Polymer, 2006, 47, 4734-4741.	1.8	52
76	Rigid-rod polymeric fibers. Journal of Applied Polymer Science, 2006, 100, 791-802.	1.3	300
77	A comparison of reinforcement efficiency of various types of carbon nanotubes in polyacrylonitrile fiber. Polymer, 2005, 46, 10925-10935.	1.8	238
78	Effect of methyl substitution of the ethylene unit on the physical properties of poly(butylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 542	2.4	38
79	Physical Properties of Lyocell Fibers Spun from Isotropic Cellulose Dope in NMMO Monohydrate. Textile Reseach Journal, 2002, 72, 335-340.	1.1	17
80	Enhancement of the dimensional stability of poly(ethylene-2,6-naphthalene dicarboxylate) filament by multistep zone annealing spinning. Journal of Applied Polymer Science, 2002, 83, 916-922.	1.3	4
81	Effect of molecular weight and branch structure on the crystallization and rheological properties of poly(butylene adipate). Polymer Engineering and Science, 2001, 41, 1133-1139.	1.5	32