

Tao Liu

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

75
papers

4,109
citations

30
h-index

63
g-index

79
ext. papers

4,445
ext. citations

6.4
avg, IF

5.51
L-index

#	Paper	IF	Citations
75	Crystallization and orientation studies in polypropylene/single wall carbon nanotube composite. <i>Polymer</i> , 2003 , 44, 2373-2377	3.9	638
74	Poly(vinyl alcohol)/SWNT Composite Film. <i>Nano Letters</i> , 2003 , 3, 1285-1288	11.5	421
73	Polyacrylonitrile Single-Walled Carbon Nanotube Composite Fibers. <i>Advanced Materials</i> , 2004 , 16, 58-61	24	304
72	Single-Wall Carbon Nanotube Films. <i>Chemistry of Materials</i> , 2003 , 15, 175-178	9.6	235
71	Properties and Structure of Nitric Acid Oxidized Single Wall Carbon Nanotube Films. <i>Journal of Physical Chemistry B</i> , 2004 , 108, 16435-16440	3.4	224
70	A Review: Carbon Nanotube-Based Piezoresistive Strain Sensors. <i>Journal of Sensors</i> , 2012 , 2012, 1-15	2	186
69	Direct laser writing for creating porous graphitic structures and their use for flexible and highly sensitive sensor and sensor arrays. <i>Carbon</i> , 2016 , 96, 522-531	10.4	157
68	SWCNT/graphite nanoplatelet hybrid thin films for self-temperature-compensated, highly sensitive, and extensible piezoresistive sensors. <i>Advanced Materials</i> , 2013 , 25, 5650-7	24	136
67	Gel spinning of PVA/SWNT composite fiber. <i>Polymer</i> , 2004 , 45, 8801-8807	3.9	135
66	Structure and properties of polyacrylonitrile/single wall carbon nanotube composite films. <i>Polymer</i> , 2005 , 46, 3001-3005	3.9	101
65	Quantitative characterization of SWNT orientation by polarized Raman spectroscopy. <i>Chemical Physics Letters</i> , 2003 , 378, 257-262	2.5	92
64	Effect of Orientation on the Modulus of SWNT Films and Fibers. <i>Nano Letters</i> , 2003 , 3, 647-650	11.5	92
63	Structure-property-processing relationships of single-wall carbon nanotube thin film piezoresistive sensors. <i>Carbon</i> , 2013 , 59, 315-324	10.4	85
62	Reversible and Rapid Laser Actuation of Liquid Crystalline Elastomer Micropillars with Inclusion of Gold Nanoparticles. <i>Advanced Functional Materials</i> , 2015 , 25, 3022-3032	15.6	83
61	Conductivity enhancement of aerosol-jet printed electronics by using silver nanoparticles ink with carbon nanotubes. <i>Microelectronic Engineering</i> , 2012 , 96, 71-75	2.5	79
60	SWNT/PAN composite film-based supercapacitors. <i>Carbon</i> , 2003 , 41, 2440-2442	10.4	70
59	SWCNT-thin-film-enabled fiber sensors for lifelong structural health monitoring of polymeric composites - From manufacturing to utilization to failure. <i>Carbon</i> , 2014 , 76, 321-329	10.4	68

58	Effect of solvent solubility parameter on SWNT dispersion in PMMA. <i>Polymer</i> , 2005 , 46, 3419-3424	3.9	56
57	Enhancing proliferation and migration of fibroblast cells by electric stimulation based on triboelectric nanogenerator. <i>Nano Energy</i> , 2019 , 57, 600-607	17.1	56
56	Shape Matters: A Gold Nanoparticle Enabled Shape Memory Polymer Triggered by Laser Irradiation. <i>Particle and Particle Systems Characterization</i> , 2013 , 30, 338-345	3.1	53
55	Graphite nanoplatelet enabled embeddable fiber sensor for in situ curing monitoring and structural health monitoring of polymeric composites. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 9314-20	9.5	51
54	In situ characterization of structural changes and the fraction of aligned carbon nanotube networks produced by stretching. <i>Carbon</i> , 2012 , 50, 3859-3867	10.4	49
53	Preparative Ultracentrifuge Method for Characterization of Carbon Nanotube Dispersions. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 19193-19202	3.8	47
52	Force and humidity dual sensors fabricated by laser writing on polyimide/paper bilayer structure for pulse and respiration monitoring. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 4727-4736	7.1	43
51	Carbon nanotube buckypaper to improve fire retardancy of high-temperature/high-performance polymer composites. <i>Nanotechnology</i> , 2010 , 21, 235701	3.4	42
50	Experimental and modeling study of CO ₂ laser writing induced polyimide carbonization process. <i>Materials and Design</i> , 2018 , 160, 1168-1177	8.1	41
49	Fabrication and characterization of aerosol-jet printed strain sensors for multifunctional composite structures. <i>Smart Materials and Structures</i> , 2012 , 21, 115008	3.4	38
48	Variable range hopping in single-wall carbon nanotube thin films: a processing-structure-property relationship study. <i>Langmuir</i> , 2013 , 29, 8694-702	4	36
47	The exfoliation of SWCNT bundles examined by simultaneous Raman scattering and photoluminescence spectroscopy. <i>Carbon</i> , 2009 , 47, 3529-3537	10.4	33
46	PAN/SAN/SWNT ternary composite: Pore size control and electrochemical supercapacitor behavior. <i>Polymer</i> , 2006 , 47, 5831-5837	3.9	31
45	Engineering Crack Formation in Carbon Nanotube-Silver Nanoparticle Composite Films for Sensitive and Durable Piezoresistive Sensors. <i>Nanoscale Research Letters</i> , 2016 , 11, 422	5	26
44	CNT Enabled Co-braided Smart Fabrics: A New Route for Non-invasive, Highly Sensitive & Large-area Monitoring of Composites. <i>Scientific Reports</i> , 2017 , 7, 44056	4.9	23
43	A Route toward Ultrasensitive Layered Carbon Based Piezoresistive Sensors through Hierarchical Contact Design. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 43133-43142	9.5	23
42	Pore size control and electrochemical capacitor behavior of chemically activated polyacrylonitrile □ Carbon nanotube composite films. <i>Composites Science and Technology</i> , 2010 , 70, 593-598	8.6	23
41	Comparison of ultrasonication and microfluidization for high throughput and large-scale processing of SWCNT dispersions. <i>Carbon</i> , 2010 , 48, 2992-2994	10.4	22

40	Highly conductive PVA organogel electrolytes for applications of lithium batteries and electrochemical capacitors. <i>Solid State Ionics</i> , 2010 , 181, 531-535	3.3	21
39	Flexible, Highly Durable, and Thermally Stable SWCNT/Polyimide Transparent Electrodes. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 20865-74	9.5	20
38	Effect of orientation on the piezoresistivity of mechanically drawn single walled carbon nanotube (SWCNT) thin films. <i>Carbon</i> , 2015 , 85, 372-382	10.4	20
37	Effect of Growth Temperature on Tailoring the Size and Aspect Ratio of Gold Nanorods. <i>Langmuir</i> , 2017 , 33, 7479-7485	4	19
36	Dynamic Light Scattering of Rigid Rods – A Universal Relationship on the Apparent Diffusion Coefficient as Revealed by Numerical Studies and Its Use for Rod Length Determination. <i>Macromolecular Chemistry and Physics</i> , 2012 , 213, 1697-1705	2.6	19
35	One-step process for direct laser writing carbonization of NH ₄ H ₂ PO ₄ treated cellulose paper and its use for facile fabrication of multifunctional force sensors with corrugated structures. <i>Cellulose</i> , 2019 , 26, 7423-7435	5.5	14
34	Exact and Closed Form Solutions for the Quantum Yield, Exciton Diffusion Length, and Lifetime To Reveal the Universal Behaviors of the Photoluminescence of Defective Single-Walled Carbon Nanotubes. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 16920-16927	3.8	13
33	The influence of hydrogen chloride doping level on the complex refractive indices of anisotropic polyaniline film: Application of a new internal reflection waveguide coupling technique. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2001 , 39, 2481-2490	2.6	13
32	Influence of SWNTs on the Preferential Alignment of Molecular Moieties in PVA Fibers. <i>Macromolecular Chemistry and Physics</i> , 2012 , 213, 617-626	2.6	12
31	Laser Stimulated Shape Memory Polymer with Inclusion of Gold Nanorod Effect of Aspect Ratio and Critical Role of On-resonance Irradiation. <i>Journal of Materials Science and Technology</i> , 2017 , 33, 869-873	8.1	10
30	Two-probe versus van der Pauw method in studying the piezoresistivity of single-wall carbon nanotube thin films. <i>Nanotechnology</i> , 2017 , 28, 445501	3.4	10
29	Direct Laser Writing of Functional Strain Sensors in Polyimide Tubes. <i>ACS Applied Polymer Materials</i> , 2019 , 1, 2914-2923	4.3	9
28	Gold Nanoparticles Incorporated Nematic Gel Micropillars Capable of Laser Actuation at Room Temperature. <i>Macromolecules</i> , 2016 , 49, 8322-8331	5.5	9
27	Versatile surface micropatterning and functionalization enabled by microcontact printing of poly(4-aminostyrene). <i>Langmuir</i> , 2014 , 30, 13483-90	4	9
26	Multifunctional Green Sensor Prepared by Direct Laser Writing of Modified Wood Component. <i>Industrial & Engineering Chemistry Research</i> , 2019 , 58, 10364-10372	3.9	8
25	Determination of the Length, Diameter, Molecular Mass, Density and Surfactant Adsorption of SWCNTs in Dilute Dispersion by Intrinsic Viscosity, Sedimentation, and Diffusion Measurements. <i>Macromolecules</i> , 2014 , 47, 3093-3100	5.5	8
24	A paper indicator for triple-modality sensing of nitrite based on colorimetric assay, Raman spectroscopy, and electron paramagnetic resonance spectroscopy. <i>Analyst, The</i> , 2013 , 138, 7303-7	5	8
23	On the piezoresistive behavior of carbon fibers - Cantilever-based testing method and Maxwell-Garnett effective medium theory modeling. <i>Carbon</i> , 2019 , 141, 283-290	10.4	8

22	A laser-fabricated nanometer-thick carbon film and its strain-engineering for achieving ultrahigh piezoresistive sensitivity. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 11276-11284	7.1	7
21	Probe diffusion of single-walled carbon nanotubes in semidilute solutions of polyacrylonitrile homo- and copolymers: Effects of topological constraints and polymer/Nanorod interactions. <i>Polymer</i> , 2012 , 53, 5069-5077	3.9	7
20	Simulation-guided regression approach for estimating the size distribution of nanoparticles with dynamic light scattering data. <i>IISE Transactions</i> , 2017 , 49, 70-83	3.3	6
19	Effect of high-shear mixing by twin-screw extruder on the dispersion and homogeneity of polyacrylonitrile/carbon nanotube composite solution. <i>Polymer Composites</i> , 2017 , 38, 719-726	3	6
18	Quantitative characterization of the optical properties of absorbing polymer films: Comparative investigation of the internal reflection intensity analysis method. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2003 , 41, 842-855	2.6	6
17	Direct Laser Writing-Assisted Method for Template-Free Fabrication of Biomass-Based Porous Carbon Platelets with Uniform Size and Arbitrarily Designed Shapes. <i>ACS Omega</i> , 2019 , 4, 5870-5878	3.9	5
16	Processing-structure-property relationship in direct laser writing carbonization of polyimide. <i>Journal of Applied Polymer Science</i> , 2020 , 137, 48978	2.9	5
15	Combined microfluidization and ultrasonication: a synergistic protocol for high-efficient processing of SWCNT dispersions with high quality. <i>Journal of Nanoparticle Research</i> , 2016 , 18, 1	2.3	5
14	Fabrication of carbon nanotube-laden microdevices for Raman labeling of macrophages. <i>Biomedical Physics and Engineering Express</i> , 2017 , 3, 025012	1.5	4
13	Microcontact Printing with Laser Direct Writing Carbonization for Facile Fabrication of Carbon-Based Ultrathin Disk Arrays and Ordered Holey Films. <i>Small</i> , 2019 , 15, e1902819	11	4
12	Investigation of polyacrylonitrile solution inhomogeneity by dynamic light scattering. <i>Polymer Engineering and Science</i> , 2015 , 55, 1403-1407	2.3	4
11	Physically correct theoretical prism waveguide coupler model. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2004 , 21, 1322-33	1.8	4
10	Diazonium salt treated single-walled carbon nanotube thin films with high piezoresistive sensitivity. <i>Sensors and Actuators A: Physical</i> , 2016 , 250, 106-113	3.9	3
9	Gel electrophoresis and Raman mapping for determining the length distribution of SWCNTs. <i>RSC Advances</i> , 2014 , 4, 37070-37078	3.7	3
8	Effect of processing conditions on the dispersion of carbon nanotubes in polyacrylonitrile solutions. <i>Journal of Applied Polymer Science</i> , 2015 , 132, n/a-n/a	2.9	3
7	Direct laser writing carbonization based on internal-reflection setup for fabricating shape-tailorable and sealed in-situ carbon features. <i>Materials and Design</i> , 2021 , 211, 110162	8.1	2
6	Self-Sealing Carbon Patterns by One-Step Direct Laser Writing and Their Use in Multifunctional Wearable Sensors. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 50600-50609	9.5	2
5	In-Situ Structural Characterization of Single-Walled Carbon Nanotubes in Dispersion 2011 ,		1

4	Nanotube-Enhanced Aerosol-Jet Printed Electronics for Embedded Sensing of Composite Structural Health. <i>Materials Research Society Symposia Proceedings</i> , 2012 , 1407, 193		1
3	A Quantitative Optical Microscopy Method for Investigating the Laser-Induced Transient Melting Behavior of a Nanoparticle-Laden Polymer System in a Microenvironment. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 18784-18796	3.8	1
2	The combined use of wrinkling and cracking for the characterization of the mechanical properties of the laser-fabricated nanometer-thick amorphous carbon films. <i>Carbon</i> , 2021 , 184, 864-874	10.4	1
1	Improved Refractive Index from a Planar Leaky Wave-Guide Coupler. <i>Materials Research Society Symposia Proceedings</i> , 1999 , 597, 57		