Jiaping Wang

List of Publications by Year in descending order

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115 papers	7,335 citations	46918 47 h-index	54797 84 g-index
119 all docs	119 docs citations	119 times ranked	9356 citing authors

#	Article	IF	Citations
1	Superaligned Carbon Nanotube Arrays, Films, and Yarns: A Road to Applications. Advanced Materials, 2011, 23, 1154-1161.	11.1	391
2	Ultrathin MnO₂/Graphene Oxide/Carbon Nanotube Interlayer as Efficient Polysulfideâ€Trapping Shield for Highâ€Performance Liâ€“S Batteries. Advanced Functional Materials, 2017, 27, 1606663.	7.8	306
3	Conformal Fe₃O₄ Sheath on Aligned Carbon Nanotube Scaffolds as High-Performance Anodes for Lithium Ion Batteries. Nano Letters, 2013, 13, 818-823.	4.5	289
4	Binderâ€Free LiCoO₂/Carbon Nanotube Cathodes for Highâ€Performance Lithium Ion Batteries. Advanced Materials, 2012, 24, 2294-2298.	11.1	271
5	Sulfur Nanocrystals Confined in Carbon Nanotube Network As a Binder-Free Electrode for High-Performance Lithium Sulfur Batteries. Nano Letters, 2014, 14, 4044-4049.	4.5	262
6	Superâ€Aligned Carbon Nanotube Films as Current Collectors for Lightweight and Flexible Lithium Ion Batteries. Advanced Functional Materials, 2013, 23, 846-853.	7.8	258
7	Scratch-Resistant, Highly Conductive, and High-Strength Carbon Nanotube-Based Composite Yarns. ACS Nano, 2010, 4, 5827-5834.	7.3	243
8	Carbon nanotube yarns with high tensile strength made by a twisting and shrinking method. Nanotechnology, 2010, 21, 045708.	1.3	219
9	Sulfur Embedded in a Mesoporous Carbon Nanotube Network as a Binder-Free Electrode for High-Performance Lithiumâ€“Sulfur Batteries. ACS Nano, 2016, 10, 1300-1308.	7.3	196
10	Carbon nanotube/epoxy composites fabricated by resin transfer molding. Carbon, 2010, 48, 260-266.	5.4	195
11	Joining of stainless-steel specimens with nanostructured Al/Ni foils. Journal of Applied Physics, 2004, 95, 248-256.	1.1	193
12	Room-temperature soldering with nanostructured foils. Applied Physics Letters, 2003, 83, 3987-3989.	1.5	192
13	High-Performance, Low-Voltage, and Easy-Operable Bending Actuator Based on Aligned Carbon Nanotube/Polymer Composites. ACS Nano, 2011, 5, 1588-1593.	7.3	191
14	Reactive nanostructured foil used as a heat source for joining titanium. Journal of Applied Physics, 2004, 96, 2336-2342.	1.1	175
15	Reversibility of Noble Metal-Catalyzed Aprotic Li-O₂ Batteries. Nano Letters, 2015, 15, 8084-8090.	4.5	165
16	Multifunctional Interlayer Based on Molybdenum Diphosphide Catalyst and Carbon Nanotube Film for Lithiumâ€“Sulfur Batteries. Small, 2018, 14, 1702853.	5.2	142
17	Super-aligned carbon nanotube/graphene hybrid materials as a framework for sulfur cathodes in high performance lithium sulfur batteries. Journal of Materials Chemistry A, 2015, 3, 5305-5312.	5.2	112
18	Flexible and transparent strain sensors based on super-aligned carbon nanotube films. Nanoscale, 2017, 9, 6716-6723.	2.8	108

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19	Enhanced performance of lithium-sulfur batteries with an ultrathin and lightweight MoS2/carbon nanotube interlayer. Journal of Power Sources, 2018, 389, 169-177.	4.0	107
20	New Insight in Understanding Oxygen Reduction and Evolution in Solid-State Lithiumâ€“Oxygen Batteries Using an in Situ Environmental Scanning Electron Microscope. Nano Letters, 2014, 14, 4245-4249.	4.5	104
21	Investigating the effect of applied pressure on reactive multilayer foil joining. Acta Materialia, 2004, 52, 5265-5274.	3.8	97
22	Highly Nitridated Grapheneâ€“Li₂S Cathodes with Stable Modulated Cycles. Advanced Energy Materials, 2015, 5, 1501369.	10.2	97
23	Progress and challenges of flexible lithium ion batteries. Journal of Power Sources, 2020, 454, 227932.	4.0	89
24	Fabrication and properties of aligned multiwalled carbon nanotube-reinforced epoxy composites. Journal of Materials Research, 2008, 23, 2975-2983.	1.2	86
25	Multifunctional super-aligned carbon nanotube/polyimide composite film heaters and actuators. Carbon, 2018, 139, 1136-1143.	5.4	78
26	MnO2 nanoparticles anchored on carbon nanotubes with hybrid supercapacitor-battery behavior for ultrafast lithium storage. Carbon, 2018, 139, 145-155.	5.4	77
27	Self-assembly of mesoporous ZnCo₂O₄nanomaterials: density functional theory calculation and flexible all-solid-state energy storage. Journal of Materials Chemistry A, 2016, 4, 568-577.	5.2	73
28	Development of an ultra-thin film comprised of a graphene membrane and carbon nanotube vein support. Nature Communications, 2013, 4, 2920.	5.8	71
29	Selfâ€assembly of 3D Carbon Nanotube Sponges: A Simple and Controllable Way to Build Macroscopic and Ultralight Porous Architectures. Advanced Materials, 2017, 29, 1603549.	11.1	69
30	Mn3O4 nanoparticles anchored on continuous carbon nanotube network as superior anodes for lithium ion batteries. Journal of Power Sources, 2014, 249, 463-469.	4.0	68
31	Effects of physical properties of components on reactive nanolayer joining. Journal of Applied Physics, 2005, 97, 114307.	1.1	66
32	Hybrid super-aligned carbon nanotube/carbon black conductive networks: AÂstrategy to improve both electrical conductivity and capacity for lithium ionÂbatteries. Journal of Power Sources, 2013, 233, 209-215.	4.0	66
33	Three-Dimensional Flexible Complementary Metalâ€“Oxideâ€“Semiconductor Logic Circuits Based On Two-Layer Stacks of Single-Walled Carbon Nanotube Networks. ACS Nano, 2016, 10, 2193-2202.	7.3	66
34	Bonding silicon wafers with reactive multilayer foils. Sensors and Actuators A: Physical, 2008, 141, 476-481.	2.0	65
35	Amorphous MoS₂ Photodetector with Ultra-Broadband Response. ACS Applied Electronic Materials, 2019, 1, 1314-1321.	2.0	65
36	Binder-free polymer encapsulated sulfurâ€“carbon nanotube composite cathodes for high performance lithium batteries. Carbon, 2016, 96, 1053-1059.	5.4	64

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37	Auxetic materials with large negative Poissonâ€™s ratios based on highly oriented carbon nanotube structures. Applied Physics Letters, 2009, 94, .	1.5	62
38	Direct Identification of Metallic and Semiconducting Single-Walled Carbon Nanotubes in Scanning Electron Microscopy. Nano Letters, 2012, 12, 4095-4101.	4.5	61
39	Mesoporous Li4Ti5O12 nanoclusters as high performance negative electrodes for lithium ion batteries. Journal of Power Sources, 2014, 248, 265-272.	4.0	61
40	Growing highly pure semiconducting carbon nanotubes by electrotwisting the helicity. Nature Catalysis, 2018, 1, 326-331.	16.1	61
41	Flexible, transparent and highly sensitive SERS substrates with cross-nanoporous structures for fast on-site detection. Nanoscale, 2018, 10, 15195-15204.	2.8	60
42	Carbon-nanotube sponges enabling highly efficient and reliable cell inactivation by low-voltage electroporation. Environmental Science: Nano, 2017, 4, 2010-2017.	2.2	56
43	Ultra-stretchable conductors based on buckled super-aligned carbon nanotube films. Nanoscale, 2015, 7, 10178-10185.	2.8	55
44	Applications of carbon nanotubes in high performance lithium ion batteries. Frontiers of Physics, 2014, 9, 351-369.	2.4	54
45	Experimental evidence of two-stage formation of Al3Ni in reactive Ni/Al multilayer foils. Scripta Materialia, 2007, 56, 1055-1058.	2.6	52
46	Enhanced rate capabilities of Co3O4/carbon nanotube anodes for lithium ion battery applications. Journal of Materials Chemistry A, 2013, 1, 11121.	5.2	50
47	Heating graphene to incandescence and the measurement of its work function by the thermionic emission method. Nano Research, 2014, 7, 553-560.	5.8	50
48	CO2 oxidation of carbon nanotubes for lithium-sulfur batteries with improved electrochemical performance. Carbon, 2018, 132, 370-379.	5.4	48
49	Microstructural study of an oscillatory formation reaction in nanostructured reactive multilayer foils. Applied Physics Letters, 2005, 87, 153108.	1.5	47
50	Mesoporous Li₄Ti₅O₁₂ nanoclusters anchored on super-aligned carbon nanotubes as high performance electrodes for lithium ion batteries. Nanoscale, 2016, 8, 617-625.	2.8	46
51	Ultrastretchable carbon nanotube composite electrodes for flexible lithium-ion batteries. Nanoscale, 2018, 10, 19972-19978.	2.8	46
52	Entrapping electrode materials within ultrathin carbon nanotube network for flexible thin film lithium ion batteries. RSC Advances, 2014, 4, 20010-20016.	1.7	39
53	Load Characteristics of a Suspended Carbon Nanotube Film Heater and the Fabrication of a Fast-Response Thermochromic Display Prototype. ACS Nano, 2015, 9, 3753-3759.	7.3	39
54	Boosting the Oxidative Potential of Polyethylene Glycolâ€Based Polymer Electrolyte to 4.36ÂV by Spatially Restricting Hydroxyl Groups for Highâ€Voltage Flexible Lithiumâ€Ion Battery Applications. Advanced Science, 2021, 8, e2100736.	5.6	39

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55	Mesoporous carbon nanotube aerogel-sulfur cathodes: A strategy to achieve ultrahigh areal capacity for lithium-sulfur batteries via capillary action. Carbon, 2020, 166, 183-192.	5.4	38
56	Macroscopic Carbon Nanotube Structures for Lithium Batteries. Small, 2020, 16, e1902719.	5.2	35
57	Effects of porosity on the measured fracture energy of brittle materials. Philosophical Magazine, 2004, 84, 3689-3704.	0.7	34
58	Periodically striped films produced from super-aligned carbon nanotube arrays. Nanotechnology, 2009, 20, 335705.	1.3	34
59	True-color real-time imaging and spectroscopy of carbon nanotubes on substrates using enhanced Rayleigh scattering. Nano Research, 2015, 8, 2721-2732.	5.8	34
60	Free-Standing, Binder-Free Titania/Super-Aligned Carbon Nanotube Anodes for Flexible and Fast-Charging Li-Ion Batteries. ACS Sustainable Chemistry and Engineering, 2018, 6, 3426-3433.	3.2	34
61	Ultrathin HfO2-modified carbon nanotube films as efficient polysulfide barriers for Li-S batteries. Carbon, 2018, 139, 896-905.	5.4	33
62	Highly entangled carbon nanoflakes on Li₃V₂(PO₄)₃microrods for improved lithium storage performance. RSC Advances, 2013, 3, 1297-1301.	1.7	32
63	Exothermic reactions in cold-rolled Ni/Al reactive multilayer foils. Journal of Materials Research, 2008, 23, 367-375.	1.2	31
64	Cycle and rate performance of chemically modified super-aligned carbon nanotube electrodes for lithium ion batteries. Carbon, 2014, 69, 444-451.	5.4	31
65	Observation of Charge Generation and Transfer during CVD Growth of Carbon Nanotubes. Nano Letters, 2016, 16, 4102-4109.	4.5	30
66	Self-standing carbon nanotube aerogels with amorphous carbon coating as stable host for lithium anodes. Carbon, 2021, 177, 181-188.	5.4	30
67	Combustion Synthesis Reactions in Cold-Rolled Ni/Al and Ti/Al Multilayers. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 1541-1546.	1.1	29
68	Vapor-Condensation-Assisted Optical Microscopy for Ultralong Carbon Nanotubes and Other Nanostructures. Nano Letters, 2014, 14, 3527-3533.	4.5	29
69	Ultrasensitive, Lowâ€Voltage Operational, and Asymmetric Ionic Sensing Hydrogel for Multipurpose Applications. Advanced Functional Materials, 2020, 30, 1909616.	7.8	29
70	High areal capacity flexible sulfur cathode based on multi-functionalized super-aligned carbon nanotubes. Nano Research, 2019, 12, 1105-1113.	5.8	28
71	Sub-10 nm Monolayer MoS₂ Transistors Using Single-Walled Carbon Nanotubes as an Evaporating Mask. ACS Applied Materials & Interfaces, 2019, 11, 11612-11617.	4.0	27
72	Long-term stability of nanostructured systems with negative heats of mixing. Journal of Applied Physics, 2007, 101, 104315.	1.1	26

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73	Highly catalytic cross-stacked superaligned carbon nanotube sheets for iodine-free dye-sensitized solar cells. Journal of Materials Chemistry, 2012, 22, 22756.	6.7	26
74	Fabrication of air-stable n-type carbon nanotube thin-film transistors on flexible substrates using bilayer dielectrics. Nanoscale, 2015, 7, 17693-17701.	2.8	26
75	Highly Sensitive, Uniform, and Reproducible Surface-Enhanced Raman Spectroscopy Substrate with Nanometer-Scale Quasi-periodic Nanostructures. ACS Applied Materials & Interfaces, 2017, 9, 32369-32376.	4.0	25
76	Flexible and free-standing hetero-electrocatalyst of high-valence-cation doped MoS₂/MoO₂/CNT foam with synergistically enhanced hydrogen evolution reaction catalytic activity. Journal of Materials Chemistry A, 2020, 8, 14944-14954.	5.2	25
77	Evaluating Bandgap Distributions of Carbon Nanotubes via Scanning Electron Microscopy Imaging of the Schottky Barriers. Nano Letters, 2013, 13, 5556-5562.	4.5	24
78	Epitaxial Growth of Aligned and Continuous Carbon Nanofibers from Carbon Nanotubes. ACS Nano, 2017, 11, 1257-1263.	7.3	23
79	TiO₂-Nanocoated Black Phosphorus Electrodes with Improved Electrochemical Performance. ACS Applied Materials & Interfaces, 2018, 10, 36058-36066.	4.0	23
80	Aligned carbon nanotube coating on polyethylene surface formed by microwave radiation. Composites Science and Technology, 2011, 72, 85-90.	3.8	22
81	Super-aligned carbon nanotube films with a thin metal coating as highly conductive and ultralight current collectors for lithium-ion batteries. Journal of Power Sources, 2017, 351, 160-168.	4.0	22
82	Spray coating of a perfect absorber based on carbon nanotube multiscale composites. Carbon, 2021, 178, 616-624.	5.4	22
83	Radiation effects and radiation hardness solutions for single-walled carbon nanotube-based thin film transistors and logic devices. Carbon, 2016, 108, 363-371.	5.4	21
84	Stable 4 V-class bicontinuous cathodes by hierarchically porous carbon coating on Li₃V₂(PO₄)₃nanospheres. Nanoscale, 2014, 6, 12426-12433.	2.8	20
85	Cross-stacked carbon nanotube film as an additional built-in current collector and adsorption layer for high-performance lithium sulfur batteries. Nanotechnology, 2016, 27, 075401.	1.3	20
86	Influence of Asymmetric Contact Form on Contact Resistance and Schottky Barrier, and Corresponding Applications of Diode. ACS Applied Materials & Interfaces, 2017, 9, 18945-18955.	4.0	20
87	Three-Dimensional Carbon Nanotube/Transition-Metal Oxide Sponges as Composite Electrodes with Enhanced Electrochemical Performance. ACS Applied Nano Materials, 2018, 1, 2997-3005.	2.4	20
88	Continuous, Ultra-lightweight, and Multipurpose Super-aligned Carbon Nanotube Tapes Viable over a Wide Range of Temperatures. Nano Letters, 2019, 19, 6756-6764.	4.5	17
89	Interfacial Gated Graphene Photodetector with Broadband Response. ACS Applied Materials & Interfaces, 2021, 13, 22796-22805.	4.0	16
90	Metal-film-assisted ultra-clean transfer of single-walled carbon nanotubes. Nano Research, 2014, 7, 981-989.	5.8	15

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91	Broadband omnidirectional perfect absorber based on carbon nanotube films. Carbon, 2020, 161, 510-516.	5.4	15
92	Interface dipole enhancement effect and enhanced Rayleigh scattering. Nano Research, 2015, 8, 303-319.	5.8	12
93	Scanning electron microscopy imaging of single-walled carbon nanotubes on substrates. Nano Research, 2017, 10, 1804-1818.	5.8	12
94	Sandwich-structured cathodes with cross-stacked carbon nanotube films as conductive layers for high-performance lithium-ion batteries. Journal of Materials Chemistry A, 2017, 5, 4047-4057.	5.2	11
95	Self-Expansion Construction of Ultralight Carbon Nanotube Aerogels with a 3D and Hierarchical Cellular Structure. Small, 2017, 13, 1700966.	5.2	10
96	Inverse Hysteresis and Ultrasmall Hysteresis Thinâ€Film Transistors Fabricated Using Sputtered Dielectrics. Advanced Electronic Materials, 2017, 3, 1600483.	2.6	9
97	Emission Enhancement from CdSe/ZnS Quantum Dots Induced by Strong Localized Surface Plasmonic Resonances without Damping. Journal of Physical Chemistry Letters, 2019, 10, 2113-2120.	2.1	9
98	Ultra-stretchable supercapacitors based on biaxially pre-strained super-aligned carbon nanotube films. Nanoscale, 2020, 12, 24259-24265.	2.8	9
99	Study of Carbon Nanotubes as Etching Masks and Related Applications in the Surface Modification of GaAsâ€based Lightâ€Emitting Diodes. Small, 2015, 11, 4111-4116.	5.2	8
100	Large area nanoscale metal meshes for use as transparent conductive layers. Nanoscale, 2015, 7, 16508-16515.	2.8	7
101	Preparation and enhanced photoelectrocatalytic properties of a three-dimensional TiO2-Au porous structure fabricated using superaligned carbon nanotube films. International Journal of Hydrogen Energy, 2020, 45, 31963-31975.	3.8	7
102	Lithium Storage Mechanism and Application of Micronâ€Sized Latticeâ€Reversible Binary Intermetallic Compounds as Highâ€Performance Flexible Lithiumâ€Ion Battery Anodes. Small, 2022, 18, e2105172.	5.2	6
103	Freestanding macroscopic metal-oxide nanotube films derived from carbon nanotube film templates. Nano Research, 2015, 8, 2024-2032.	5.8	4
104	Efficient polysulfide trapping in lithiumâ€“sulfur batteries using ultrathin and flexible BaTiO₃/graphene oxide/carbon nanotube layers. Nanoscale, 2021, 13, 6863-6870.	2.8	3
105	Superaligned arrays, films, and yarns of carbon nanotubes: a road toward applications. Scientia Sinica: Physica, Mechanica Et Astronomica, 2011, 41, 390-403.	0.2	3
106	Enhanced Visible-Light Absorption and Photocurrent Generation of Three-Dimensional Metalâ€“Dielectric Hybrid-Structured Films. ACS Applied Energy Materials, 2021, 4, 10542-10552.	2.5	3
107	Substrate Engineering-Tailored Fabrication of Aligned Graphene Nanoribbon Arrays: Implications for Graphene Electronic Devices. ACS Applied Nano Materials, 2021, 4, 13838-13847.	2.4	3
108	Demonstration of nonvolatile multilevel memory in ambipolar carbon nanotube thin-film transistors. Applied Physics Express, 2015, 8, 065101.	1.1	2

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109	Synergistic effect of manganese oxide nanoparticles and graphene nanosheets in composite anodes for lithium ion batteries. Materials Research Express, 2015, 2, 015503.	0.8	2
110	High-temperature epitaxial graphite deposition on macroscopic superaligned carbon nanotube structures by a one-step self-heating method. Carbon, 2021, 171, 837-844.	5.4	2
111	Liâ€S Batteries: Ultrathin MnO₂/Graphene Oxide/Carbon Nanotube Interlayer as Efficient Polysulfideâ€Trapping Shield for Highâ€Performance Liâ€“S Batteries (Adv. Funct. Mater. 18/2017). Advanced Functional Materials, 2017, 27, .	7.8	1
112	Ionic Sensing Hydrogels: Ultrasensitive, Lowâ€Voltage Operational, and Asymmetric Ionic Sensing Hydrogel for Multipurpose Applications (Adv. Funct. Mater. 12/2020). Advanced Functional Materials, 2020, 30, 2070080.	7.8	1
113	Iodide-substitution-induced phase transition of chemical-vapor-deposited MoS2. Journal of Materials Chemistry C, 2022, 10, 1638-1644.	2.7	1
114	Systematic study and effective improvement of voltammetry for accurate electrochemical window measurement of solid electrolytes. Electrochimica Acta, 2022, 414, 140210.	2.6	1
115	Lithium Batteries: Highly Nitridated Graphene-Li2S Cathodes with Stable Modulated Cycles (Adv.) Tj ETQq1 1 0.784314 rgBT /Overloc	10.2	0