

# Rufan Zhang

## List of Publications by Citations

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109  
papers

9,495  
citations

43  
h-index

97  
g-index

115  
ext. papers

11,039  
ext. citations

12.4  
avg, IF

6.15  
L-index

#	Paper	IF	Citations
109	Advanced Asymmetric Supercapacitors Based on Ni(OH) <sub>2</sub> /Graphene and Porous Graphene Electrodes with High Energy Density. <i>Advanced Functional Materials</i> , <b>2012</b> , 22, 2632-2641	15.6	1668
108	Catalytic oxidation of Li <sub>2</sub> S on the surface of metal sulfides for Li-S batteries. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, 840-845	11.5	742
107	The road for nanomaterials industry: a review of carbon nanotube production, post-treatment, and bulk applications for composites and energy storage. <i>Small</i> , <b>2013</b> , 9, 1237-65	11	543
106	Nanofiber Air Filters with High-Temperature Stability for Efficient PM <sub>2.5</sub> Removal from the Pollution Sources. <i>Nano Letters</i> , <b>2016</b> , 16, 3642-9	11.5	344
105	Self-healing SEI enables full-cell cycling of a silicon-majority anode with a coulombic efficiency exceeding 99.9%. <i>Energy and Environmental Science</i> , <b>2017</b> , 10, 580-592	35.4	335
104	Aligned carbon nanotube/sulfur composite cathodes with high sulfur content for lithium-sulfur batteries. <i>Nano Energy</i> , <b>2014</b> , 4, 65-72	17.1	328
103	Carbon nanotube mass production: principles and processes. <i>ChemSusChem</i> , <b>2011</b> , 4, 864-89	8.3	288
102	Efficient solar-driven water splitting by nanocone BiVO <sub>4</sub> -perovskite tandem cells. <i>Science Advances</i> , <b>2016</b> , 2, e1501764	14.3	281
101	Growth of half-meter long carbon nanotubes based on Schulz-Flory distribution. <i>ACS Nano</i> , <b>2013</b> , 7, 6156-61	16.7	255
100	Superlubricity in centimetres-long double-walled carbon nanotubes under ambient conditions. <i>Nature Nanotechnology</i> , <b>2013</b> , 8, 912-6	28.7	243
99	The large-scale production of carbon nanotubes in a nano-agglomerate fluidized-bed reactor. <i>Chemical Physics Letters</i> , <b>2002</b> , 364, 568-572	2.5	243
98	Roll-to-Roll Transfer of Electrospun Nanofiber Film for High-Efficiency Transparent Air Filter. <i>Nano Letters</i> , <b>2016</b> , 16, 1270-5	11.5	241
97	Carbon Nanotubes and Related Nanomaterials: Critical Advances and Challenges for Synthesis toward Mainstream Commercial Applications. <i>ACS Nano</i> , <b>2018</b> , 12, 11756-11784	16.7	239
96	Stitching h-BN by atomic layer deposition of LiF as a stable interface for lithium metal anode. <i>Science Advances</i> , <b>2017</b> , 3, eaao3170	14.3	191
95	Air filtration in the free molecular flow regime: a review of high-efficiency particulate air filters based on carbon nanotubes. <i>Small</i> , <b>2014</b> , 10, 4543-61	11	189
94	Carbon nanotube bundles with tensile strength over 80 GPa. <i>Nature Nanotechnology</i> , <b>2018</b> , 13, 589-595	28.7	185
93	Embedded high density metal nanoparticles with extraordinary thermal stability derived from guest-host mediated layered double hydroxides. <i>Journal of the American Chemical Society</i> , <b>2010</b> , 132, 14739-41	16.4	161

92	Thermal Management in Nanofiber-Based Face Mask. <i>Nano Letters</i> , <b>2017</b> , 17, 3506-3510	11.5	158
91	Superstrong ultralong carbon nanotubes for mechanical energy storage. <i>Advanced Materials</i> , <b>2011</b> , 23, 3387-91	24	148
90	Sulfiphilic Nickel Phosphosulfide Enabled Li S Impregnation in 3D Graphene Cages for Li-S Batteries. <i>Advanced Materials</i> , <b>2017</b> , 29, 1603366	24	127
89	The mass production of carbon nanotubes using a nano-agglomerate fluidized bed reactor: A multiscale spacetime analysis. <i>Powder Technology</i> , <b>2008</b> , 183, 10-20	5.2	125
88	Energy-Absorbing Hybrid Composites Based on Alternate Carbon-Nanotube and Inorganic Layers. <i>Advanced Materials</i> , <b>2009</b> , 21, 2876-2880	24	106
87	Horizontally aligned carbon nanotube arrays: growth mechanism, controlled synthesis, characterization, properties and applications. <i>Chemical Society Reviews</i> , <b>2017</b> , 46, 3661-3715	58.5	97
86	Growth Deceleration of Vertically Aligned Carbon Nanotube Arrays: Catalyst Deactivation or Feedstock Diffusion Controlled?. <i>Journal of Physical Chemistry C</i> , <b>2008</b> , 112, 4892-4896	3.8	96
85	Building flexible Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> /CNT lithium-ion battery anodes with superior rate performance and ultralong cycling stability. <i>Nano Energy</i> , <b>2014</b> , 10, 344-352	17.1	92
84	Highly Nitridated Graphene  i>S Cathodes with Stable Modulated Cycles. <i>Advanced Energy Materials</i> , <b>2015</b> , 5, 1501369	21.8	87
83	Radial growth of vertically aligned carbon nanotube arrays from ethylene on ceramic spheres. <i>Carbon</i> , <b>2008</b> , 46, 1152-1158	10.4	87
82	100 mm long, semiconducting triple-walled carbon nanotubes. <i>Advanced Materials</i> , <b>2010</b> , 22, 1867-71	24	78
81	Growing 20 cm Long DWNTs/TWNTs at a Rapid Growth Rate of 8000 m/s. <i>Chemistry of Materials</i> , <b>2010</b> , 22, 1294-1296	9.6	77
80	Mass production of aligned carbon nanotube arrays by fluidized bed catalytic chemical vapor deposition. <i>Carbon</i> , <b>2010</b> , 48, 1196-1209	10.4	77
79	In situ fabrication of depth-type hierarchical CNT/quartz fiber filters for high efficiency filtration of sub-micron aerosols and high water repellency. <i>Nanoscale</i> , <b>2013</b> , 5, 3367-72	7.7	70
78	CO <sub>2</sub> -Assisted SWNT Growth on Porous Catalysts. <i>Chemistry of Materials</i> , <b>2007</b> , 19, 1226-1230	9.6	68
77	Centrifugation-free and high yield synthesis of nanosized H-ZSM-5 and its structure-guided aromatization of methanol to 1,2,4-trimethylbenzene. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 19797-19808	13	57
76	Dramatic enhancements in toughness of polyimide nanocomposite via long-CNT-induced long-range creep. <i>Journal of Materials Chemistry</i> , <b>2012</b> , 22, 7050		57
75	Controlled Synthesis of Ultralong Carbon Nanotubes with Perfect Structures and Extraordinary Properties. <i>Accounts of Chemical Research</i> , <b>2017</b> , 50, 179-189	24.3	56

74	Resilient aligned carbon nanotube/graphene sandwiches for robust mechanical energy storage. <i>Nano Energy</i> , <b>2014</b> , 7, 161-169	17.1	54
73	Optical visualization of individual ultralong carbon nanotubes by chemical vapour deposition of titanium dioxide nanoparticles. <i>Nature Communications</i> , <b>2013</b> , 4, 1727	17.4	54
72	Membrane-Free Zn/MnO <sub>2</sub> Flow Battery for Large-Scale Energy Storage. <i>Advanced Energy Materials</i> , <b>2020</b> , 10, 1902085	21.8	53
71	Silicon Carbide as a Protective Layer to Stabilize Si-Based Anodes by Inhibiting Chemical Reactions. <i>Nano Letters</i> , <b>2019</b> , 19, 5124-5132	11.5	48
70	Hierarchical agglomerates of carbon nanotubes as high-pressure cushions. <i>Nano Letters</i> , <b>2008</b> , 8, 1323-7	11.5	48
69	Advances in Production and Applications of Carbon Nanotubes. <i>Topics in Current Chemistry</i> , <b>2017</b> , 375, 18	7.2	46
68	Core-Shell Nanofibrous Materials with High Particulate Matter Removal Efficiencies and Thermally Triggered Flame Retardant Properties. <i>ACS Central Science</i> , <b>2018</b> , 4, 894-898	16.8	44
67	Confined growth of Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> nanoparticles in nitrogen-doped mesoporous graphene fibers for high-performance lithium-ion battery anodes. <i>Nano Research</i> , <b>2016</b> , 9, 230-239	10	43
66	Conductive Metal-Organic Frameworks: Design, Synthesis, and Applications. <i>Small Methods</i> , <b>2020</b> , 4, 2000396	12.8	43
65	Single-Step Conversion of H <sub>2</sub> -Deficient Syngas into High Yield of Tetramethylbenzene. <i>ACS Catalysis</i> , <b>2019</b> , 9, 2203-2212	13.1	42
64	Super-durable ultralong carbon nanotubes. <i>Science</i> , <b>2020</b> , 369, 1104-1106	33.3	42
63	In Situ Investigation on the Nanoscale Capture and Evolution of Aerosols on Nanofibers. <i>Nano Letters</i> , <b>2018</b> , 18, 1130-1138	11.5	41
62	Two-dimensional metal-organic framework nanosheets: synthetic methodologies and electrocatalytic applications. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 15271-15301	13	40
61	Structural design and environmental applications of electrospun nanofibers. <i>Composites Part A: Applied Science and Manufacturing</i> , <b>2020</b> , 137, 106009	8.4	38
60	Reactivation of dead sulfide species in lithium polysulfide flow battery for grid scale energy storage. <i>Nature Communications</i> , <b>2017</b> , 8, 462	17.4	38
59	Rate-selected growth of ultrapure semiconducting carbon nanotube arrays. <i>Nature Communications</i> , <b>2019</b> , 10, 4467	17.4	37
58	Agglomerated carbon nanotubes and its mass production in a fluidized-bed reactor. <i>Physica B: Condensed Matter</i> , <b>2002</b> , 323, 327-329	2.8	37
57	High-Performance Carbon Aerogel Air Cathodes for Microbial Fuel Cells. <i>ChemSusChem</i> , <b>2016</b> , 9, 2788-2795	8.5	37

56	The influence of straight pore blockage on the selectivity of methanol to aromatics in nanosized Zn/ZSM-5: an atomic Cs-corrected STEM analysis study. <i>RSC Advances</i> , <b>2016</b> , 6, 74797-74801	3.7	34
55	Morphology and property investigation of primary particulate matter particles from different sources. <i>Nano Research</i> , <b>2018</b> , 11, 3182-3192	10	33
54	Storage of Mechanical Energy Based on Carbon Nanotubes with High Energy Density and Power Density. <i>Advanced Materials</i> , <b>2019</b> , 31, e1800680	24	31
53	Acoustic-assisted assembly of an individual monochromatic ultralong carbon nanotube for high on-current transistors. <i>Science Advances</i> , <b>2016</b> , 2, e1601572	14.3	29
52	Interwall Friction and Sliding Behavior of Centimeters Long Double-Walled Carbon Nanotubes. <i>Nano Letters</i> , <b>2016</b> , 16, 1367-74	11.5	28
51	Carbon nanotube light sensors with linear dynamic range of over 120 dB. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 073107	3.4	25
50	The reason for the low density of horizontally aligned ultralong carbon nanotube arrays. <i>Carbon</i> , <b>2013</b> , 52, 232-238	10.4	25
49	Carbon nanotube-penetrated mesoporous V2O5 microspheres as high-performance cathode materials for lithium-ion batteries. <i>RSC Advances</i> , <b>2014</b> , 4, 21018-21022	3.7	23
48	Selective Conversion of Syngas into Tetramethylbenzene via an Aldol-Aromatic Mechanism. <i>ACS Catalysis</i> , <b>2020</b> , 10, 2477-2488	13.1	22
47	Designing hierarchical nanoporous membranes for highly efficient gas adsorption and storage. <i>Science Advances</i> , <b>2020</b> , 6,	14.3	21
46	Suppressing the Side Reaction by a Selective Blocking Layer to Enhance the Performance of Si-Based Anodes. <i>Nano Letters</i> , <b>2020</b> , 20, 5176-5184	11.5	20
45	Preloading catalysts in the reactor for repeated growth of horizontally aligned carbon nanotube arrays. <i>Carbon</i> , <b>2016</b> , 98, 157-161	10.4	18
44	Equilibrium analysis of methylbenzene intermediates for a methanol-to-olefins process. <i>Catalysis Science and Technology</i> , <b>2016</b> , 6, 1297-1301	5.5	17
43	Iron-based clusters embedded in nitrogen doped activated carbon catalysts with superior cathodic activity in microbial fuel cells. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 10772-10778	13	15
42	Growth of high-density parallel arrays of ultralong carbon nanotubes with catalysts pinned by silica nanospheres. <i>Carbon</i> , <b>2013</b> , 52, 535-540	10.4	15
41	Thermal Transport Across the Interface Between a Suspended Single-Walled Carbon Nanotube and Air. <i>Nanoscale and Microscale Thermophysical Engineering</i> , <b>2013</b> , 17, 349-365	3.7	14
40	Aerosol-Assisted Heteroassembly of Oxide Nanocrystals and Carbon Nanotubes into 3D Mesoporous Composites for High-Rate Electrochemical Energy Storage. <i>Small</i> , <b>2015</b> , 11, 3135-42	11	12
39	Graphene/graphite sheet assisted growth of high-area-density horizontally aligned carbon nanotubes. <i>Chemical Communications</i> , <b>2014</b> , 50, 11158-61	5.8	12

38	Facile and low-cost ceramic fiber-based carbon-carbon composite for solar evaporation. <i>Science of the Total Environment</i> , <b>2021</b> , 759, 143546	10.2	12
37	Approaching Theoretical Capacities in Thick Lithium Vanadium Phosphate Electrodes at High Charge/Discharge Rates. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2018</b> , 6, 15608-15617	8.3	12
36	Facile manipulation of individual carbon nanotubes assisted by inorganic nanoparticles. <i>Nanoscale</i> , <b>2013</b> , 5, 6584-8	7.7	11
35	Catalysts for single-wall carbon nanotube synthesis from surface growth to bulk preparation. <i>MRS Bulletin</i> , <b>2017</b> , 42, 809-818	3.2	10
34	Bio-inspired structural colors and their applications. <i>Chemical Communications</i> , <b>2021</b> ,	5.8	10
33	RuCoO Nanofoam as a High-Performance Trifunctional Electrocatalyst for Rechargeable Zinc-Air Batteries and Water Splitting. <i>Nano Letters</i> , <b>2021</b> , 21, 9633-9641	11.5	10
32	Superdurable Bifunctional Oxygen Electrocatalyst for High-Performance Zinc-Air Batteries.. <i>Journal of the American Chemical Society</i> , <b>2022</b> ,	16.4	9
31	Wafer-Scale Growth of Pristine and Doped Monolayer MoS Films for Electronic Device Applications. <i>Inorganic Chemistry</i> , <b>2020</b> , 59, 17356-17363	5.1	8
30	Capacitive Sodium-Ion Storage Based on Double-Layered Mesoporous Graphene with High Capacity and Charging/Discharging Rate. <i>ChemSusChem</i> , <b>2019</b> , 12, 4323-4331	8.3	7
29	Raman Measurement of Heat Transfer in Suspended Individual Carbon Nanotube. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2015</b> , 15, 2939-43	1.3	7
28	Multi-scale analysis of the interaction in ultra-long carbon nanotubes and bundles. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2020</b> , 142, 104032	5	7
27	Two-Dimensional Metal-Organic Framework Nanosheet Supported Noble Metal Nanocrystals for High-Efficiency Water Oxidation. <i>Advanced Materials Interfaces</i> , <b>2021</b> , 8, 2002034	4.6	7
26	Controlled growth of crossed ultralong carbon nanotubes by gas flow. <i>Nano Research</i> , <b>2020</b> , 13, 1988-1995	1.5	6
25	Stabilizing Cobalt Single Atoms via Flexible Carbon Membranes as Bifunctional Electrocatalysts for Binder-Free Zinc-Air Batteries.. <i>Nano Letters</i> , <b>2022</b> ,	11.5	6
24	Mechanical Behavior of Single and Bundled Defect-Free Carbon Nanotubes. <i>Accounts of Materials Research</i> ,	7.5	5
23	Two-way desorption coupling to enhance the conversion of syngas into aromatics by MnO/H-ZSM-5. <i>Catalysis Science and Technology</i> , <b>2020</b> , 10, 3366-3375	5.5	5
22	Bandgap-Coupled Template Autocatalysis toward the Growth of High-Purity sp Nanocarbons. <i>Advanced Science</i> , <b>2021</b> , 8, 2003078	13.6	5
21	3D Pine-Needle-Like W <sub>18</sub> O <sub>49</sub> /TiO <sub>2</sub> Heterostructures as Dual-Band Electrochromic Materials with Ultrafast Response and Excellent Stability. <i>Advanced Optical Materials</i> , <b>2022</b> , 10, 2102399	8.1	5

20	High-Efficiency Particulate Air Filters Based on Carbon Nanotubes <b>2019</b> , 643-666		4
19	Directly correlating the strain-induced electronic property change to the chirality of individual single-walled and few-walled carbon nanotubes. <i>Nanoscale</i> , <b>2015</b> , 7, 13116-24	7.7	4
18	?????????????. <i>Scientia Sinica Chimica</i> , <b>2013</b> , 43, 641-666	1.6	4
17	Ultrasensitive Airflow Sensors Based on Suspended Carbon Nanotube Networks.. <i>Advanced Materials</i> , <b>2022</b> , e2107062	24	3
16	Electrochromic Materials Based on Ions Insertion and Extraction. <i>Advanced Optical Materials</i> , <b>2022</b> , 10, 2101783	8.1	3
15	Mechanical Energy: Storage of Mechanical Energy Based on Carbon Nanotubes with High Energy Density and Power Density (Adv. Mater. 9/2019). <i>Advanced Materials</i> , <b>2019</b> , 31, 1970064	24	2
14	Intrinsic blocking effect of SiOx on the side reaction with a LiPF6-based electrolyte. <i>Catalysis Today</i> , <b>2021</b> , 364, 61-66	5.3	2
13	Optical visualization and imaging of nanomaterials. <i>Nanoscale Advances</i> , <b>2021</b> , 3, 889-903	5.1	2
12	Monochromatic Carbon Nanotube Tangles Grown by Microfluidic Switching between Chaos and Fractals. <i>ACS Nano</i> , <b>2021</b> , 15, 5129-5137	16.7	2
11	The effect of localized strain on the electrical characteristics of curved carbon nanotubes. <i>Journal of Applied Physics</i> , <b>2021</b> , 129, 025107	2.5	2
10	Highly Selective Conversion of CO2 or CO into Precursors for Kerosene-Based Aviation Fuel via an Aldol-Aromatic Mechanism. <i>ACS Catalysis</i> , <b>2022</b> , 12, 2023-2033	13.1	1
9	Fast In-Situ Optical Visualization of Carbon Nanotubes Assisted by Smoke.. <i>Small Methods</i> , <b>2022</b> , 6, e2101333	13.3	1
8	Progress and perspective on high-strength and multifunctional carbon nanotube fibers. <i>Science Bulletin</i> , <b>2022</b> ,	10.6	0
7	Growth mechanism and kinetics of vertically aligned carbon nanotube arrays. <i>EcoMat</i> , <b>2021</b> , 3, e12118	9.4	0
6	Elucidation of the mechanism and structure-reactivity relationship in zeolite catalyzed alkylation of benzene with propylene. <i>Catalysis Science and Technology</i> , <b>2021</b> , 11, 2792-2804	5.5	0
5	Advances in Precise Structure Control and Assembly toward the Carbon Nanotube Industry. <i>Advanced Functional Materials</i> , <b>2022</b> , 32, 2109401	15.6	0
4	Hybridization of iron phthalocyanine and MoS2 for high-efficiency and durable oxygen reduction reaction. <i>Journal of Energy Chemistry</i> , <b>2022</b> , 71, 528-538	12	0
3	High-Performance Carbon Aerogel Air Cathodes for Microbial Fuel Cells. <i>ChemSusChem</i> , <b>2016</b> , 9, 2718-2718	7.8	0

- 2 Lithium diffusion through the TiN coating layer and formation of Li-Si alloy over Si@TiN anode. *Chemical Engineering Science*, **2022**, 254, 117615 4-4
- 1 Ultrasensitive Airflow Sensors Based on Suspended Carbon Nanotube Networks (Adv. Mater. 18/2022). *Advanced Materials*, **2022**, 34, 2270134 24