Yuhuang Wang

List of Publications by Year
in descending order

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Version: 2024-02-01

141 papers	9,140 citations	81434 41 h-index	45040 94 g-index
150 all docs	150 docs citations	150 times ranked	12781 citing authors

#	Article	IF	Citations
1	Reconfiguring Organic Color Centers on the sp² Carbon Lattice of Single-Walled Carbon Nanotubes. ACS Nano, 2022, 16, 2077-2087.	7.3	9
2	Detection of ovarian cancer via the spectral fingerprinting of quantum-defect-modified carbon nanotubes in serum by machine learning. Nature Biomedical Engineering, 2022, 6, 267-275.	11.6	65
3	Formation of organic color centers in air-suspended carbon nanotubes using vapor-phase reaction. Nature Communications, 2022, 13, .	5.8	3
4	Quantum Defects: What Pairs with the Aryl Group When Bonding to the sp²Carbon Lattice of Single-Wall Carbon Nanotubes?. Journal of the American Chemical Society, 2022, 144, 13234-13241.	6.6	11
5	Selective filling of n-hexane in a tight nanopore. Nature Communications, 2021, 12, 310.	5.8	21
6	Massively parallel cantilever-free atomic force microscopy. Nature Communications, 2021, 12, 393.	5.8	17
7	Electroluminescence from 4-nitroaryl organic color centers in semiconducting single-wall carbon nanotubes. Journal of Applied Physics, 2021, 129, .	1.1	12
8	Beyond Color: The New Carbon Ink. Advanced Materials, 2021, 33, e2005890.	11.1	17
9	Cleanly Removable Surfactant for Carbon Nanotubes. Chemistry of Materials, 2021, 33, 4551-4557.	3.2	14
10	Tunable photo-patterning of organic color-centers. Materials and Design, 2021, 212, 110252.	3.3	1
11	Dry Drawability of Few-Walled Carbon Nanotubes Grown by Alcohol Chemical Vapor Deposition. Journal of Physical Chemistry C, 2020, 124, 17331-17339.	1.5	3
12	Applications of Cellulose Nanomaterials in Stimuli-Responsive Optics. Journal of Agricultural and Food Chemistry, 2020, 68, 12940-12955.	2.4	29
13	Probing the electrical double layer by operando Xâ€ray photoelectron spectroscopy through a <scp>grapheneâ€carbon</scp> nanotube composite window. EcoMat, 2020, 2, e12023.	6.8	10
14	A flexible mesofiber-based fast current collector. Journal of Materials Science, 2020, 55, 11391-11402.	1.7	2
15	Banning carbon nanotubes would be scientifically unjustified and damaging to innovation. Nature Nanotechnology, 2020, 15, 164-166.	15.6	69
16	Fluorescent sp3 Defect-Tailored Carbon Nanotubes Enable NIR-II Single Particle Imaging in Live Brain Slices at Ultra-Low Excitation Doses. Scientific Reports, 2020, 10, 5286.	1.6	46
17	Photolithographic Patterning of Organic Colorâ€Centers. Advanced Materials, 2020, 32, e1906517.	11.1	14
18	Hidden Fine Structure of Quantum Defects Revealed by Single Carbon Nanotube Magneto-Photoluminescence. ACS Nano, 2020, 14, 3451-3460.	7.3	14

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19	(Invited) Perfecting Defects. ECS Meeting Abstracts, 2020, MA2020-01, 691-691.	0.0	0
20	(Invited) Development of Single-Walled Carbon Nanotube-Based Optical Sensors Via Data Analytics. ECS Meeting Abstracts, 2020, MA2020-01, 694-694.	0.0	0
21	Organic Color Center Photoluminescence Modulation for Biomedical Applications. ECS Meeting Abstracts, 2020, MA2020-01, 647-647.	0.0	0
22	Real-Time, In Vivo Monitoring of Pharmacodynamics in Solid Tumors Using Organic Color Centers. ECS Meeting Abstracts, 2020, MA2020-02, 3421-3421.	0.0	0
23	Carbon Nanotube and Organic Color Center Solvatochromism in Biomedicine. ECS Meeting Abstracts, 2020, MA2020-02, 3409-3409.	0.0	0
24	Nanosensor Array Platform to Capture Whole Disease Fingerprints. ECS Meeting Abstracts, 2020, MA2020-02, 3398-3398.	0.0	0
25	Designing Textile Architectures for High Energy-Efficiency Human Body Sweat- and Cooling-Management. Advanced Fiber Materials, 2019, 1, 61-70.	7.9	56
26	One-Pot, Large-Scale Synthesis of Organic Color Center-Tailored Semiconducting Carbon Nanotubes. ACS Nano, 2019, 13, 8417-8424.	7.3	22
27	Probing Trions at Chemically Tailored Trapping Defects. ACS Central Science, 2019, 5, 1786-1794.	5.3	16
28	Ultrafast Exciton Trapping at sp³ Quantum Defects in Carbon Nanotubes. ACS Nano, 2019, 13, 13264-13270.	7.3	17
29	Photon Correlation Spectroscopy of Luminescent Quantum Defects in Carbon Nanotubes. Nano Letters, 2019, 19, 7078-7084.	4.5	16
30	Fluorescent Ultrashort Nanotubes from Defect-Induced Chemical Cutting. Chemistry of Materials, 2019, 31, 4536-4544.	3.2	15
31	Single-defect spectroscopy in the shortwave infrared. Nature Communications, 2019, 10, 2672.	5.8	26
32	Selfâ€Sorting of 10â€Âµmâ€Ł Long Singleâ€Walled Carbon Nanotubes in Aqueous Solution. Advanced Materials, 2019, 31, e1901641.	11.1	15
33	Design of Elastomer-CNT Film Photoactuators for Nanolithography. Polymers, 2019, 11, 314.	2.0	8
34	Controlling the optical properties of carbon nanotubes with organic colour-centre quantum defects. Nature Reviews Chemistry, 2019, 3, 375-392.	13.8	124
35	Critical Knowledge Gaps in Mass Transport through Single-Digit Nanopores: A Review and Perspective. Journal of Physical Chemistry C, 2019, 123, 21309-21326.	1.5	234
36	Optical Effects of Divalent Functionalization of Carbon Nanotubes. Chemistry of Materials, 2019, 31, 6950-6961.	3.2	33

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37	Dynamic gating of infrared radiation in a textile. Science, 2019, 363, 619-623.	6.0	301
38	Plasmonicâ€Enhanced Cholesteric Films: Coassembling Anisotropic Gold Nanorods with Cellulose Nanocrystals. Advanced Optical Materials, 2019, 7, 1801816.	3.6	44
39	Quantitative infrared spectroscopy of environmentally sensitive and rough materials. Review of Scientific Instruments, 2019, 90, 113102.	0.6	1
40	Stimulus-Responsive Interfacial Chemistry in CNT/Polymer Nanocomposites. Conference Proceedings of the Society for Experimental Mechanics, 2019, , 1-8.	0.3	0
41	Photochemical Patterning of Fluorescent sp3 Quantum Defects on Carbon Nanotube Thin Films. ECS Meeting Abstracts, 2019, , .	0.0	0
42	(Invited) Superacid-Surfactant Exchange. ECS Meeting Abstracts, 2019, , .	0.0	0
43	Fluorescent Ultrashort Nanotubes from Defect-Induced Chemical Cutting. ECS Meeting Abstracts, 2019, , .	0.0	0
44	Chemically tailored carbon nanotubes as a new toolbox for biomedicine and beyond. Biochemist, 2019, 41, 10-13.	0.2	0
45	Phosphine-free synthesis and shape evolution of MoSe₂ nanoflowers for electrocatalytic hydrogen evolution reactions. CrystEngComm, 2018, 20, 2491-2498.	1.3	21
46	Lightâ€Responsive Chemistry to Enable Tunable Interfaceâ€Dependent Mechanical Properties in Composites. Advanced Materials Interfaces, 2018, 5, 1800038.	1.9	3
47	Self-assembly and photoactivation of blue luminescent CsPbBr₃ mesocrystals synthesized at ambient temperature. Journal of Materials Chemistry C, 2018, 6, 1701-1708.	2.7	17
48	Photoactuated Pens for Molecular Printing. Advanced Materials, 2018, 30, 1705303.	11.1	27
49	Frontispiece: Photochemical Creation of Fluorescent Quantum Defects in Semiconducting Carbon Nanotube Hosts. Angewandte Chemie - International Edition, 2018, 57, .	7.2	0
50	Photochemical Creation of Fluorescent Quantum Defects in Semiconducting Carbon Nanotube Hosts. Angewandte Chemie, 2018, 130, 656-661.	1.6	8
51	Controlled synthesis of brightly fluorescent CH₃NH₃PbBr₃perovskite nanocrystals employing Pb(C₁₇H₃₃COO)₂as the sole lead source. RSC Advances, 2018, 8, 1132-1139.	1.7	6
52	Phosphine-free synthesis and optical stabilities of composition-tuneable monodisperse ternary PbSe_{1â^'x}S_x alloyed nanocrystals via cation exchange. CrystEngComm, 2018, 20, 2519-2527.	1.3	3
53	Photochemical Creation of Fluorescent Quantum Defects in Semiconducting Carbon Nanotube Hosts. Angewandte Chemie - International Edition, 2018, 57, 648-653.	7.2	29
54	Frontispiz: Photochemical Creation of Fluorescent Quantum Defects in Semiconducting Carbon Nanotube Hosts. Angewandte Chemie, 2018, 130, .	1.6	0

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55	Flexible Transparent Conductors: Stretchable Transparent Conductive Films from Long Carbon Nanotube Metals (Small 38/2018). Small, 2018, 14, 1870174.	5.2	0
56	Mapping Structure-Property Relationships of Organic Color Centers. CheM, 2018, 4, 2180-2191.	5.8	34
57	Channeling Excitons to Emissive Defect Sites in Carbon Nanotube Semiconductors beyond the Dilute Regime. Journal of Physical Chemistry Letters, 2018, 9, 2803-2807.	2.1	11
58	Stretchable Transparent Conductive Films from Long Carbon Nanotube Metals. Small, 2018, 14, e1802625.	5.2	39
59	Ultrashort Carbon Nanotubes That Fluoresce Brightly in the Near-Infrared. ACS Nano, 2018, 12, 6059-6065.	7.3	68
60	Concentrated electrolytes stabilize bismuthâ€“potassium batteries. Chemical Science, 2018, 9, 6193-6198.	3.7	139
61	(Invited) Light-Directed Creation of Quantum Defects. ECS Meeting Abstracts, 2018, , .	0.0	0
62	(Invited) Nanoscale Imaging of Luminescent Excitons in sp3-Doped Ultra-Short Carbon Nanotubes. ECS Meeting Abstracts, 2018, , .	0.0	0
63	Laser Lithography of a Tube-in-a-Tube Nanostructure. ACS Nano, 2017, 11, 3320-3327.	7.3	6
64	Chemical Gating of a Synthetic Tube-in-a-Tube Semiconductor. Journal of the American Chemical Society, 2017, 139, 3045-3051.	6.6	17
65	Capillary electrophoresis of covalently functionalized singleâ€chirality carbon nanotubes. Electrophoresis, 2017, 38, 1669-1677.	1.3	5
66	Optically Triggered Melting of DNA on Individual Semiconducting Carbon Nanotubes. Angewandte Chemie - International Edition, 2017, 56, 9326-9330.	7.2	8
67	Chirality-Selective Functionalization of Semiconducting Carbon Nanotubes with a Reactivity-Switchable Molecule. Journal of the American Chemical Society, 2017, 139, 12533-12540.	6.6	22
68	Graphene as a functional layer for semiconducting carbon nanotube transistor sensors. Carbon, 2017, 125, 49-55.	5.4	13
69	Optically Triggered Melting of DNA on Individual Semiconducting Carbon Nanotubes. Angewandte Chemie, 2017, 129, 9454-9458.	1.6	3
70	Superacid-Surfactant Exchange: Enabling Nondestructive Dispersion of Full-Length Carbon Nanotubes in Water. ACS Nano, 2017, 11, 9231-9238.	7.3	33
71	Mixed protein templated iron-nanoclusters exhibit photoluminescence in the visible and near-infrared region. , 2017, , .		3
72	Individually Dispersing Single-Walled Carbon Nanotubes in Water without Cutting. ECS Meeting Abstracts, 2017, , .	0.0	0

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73	(Invited) Molecularly Tunable Quantum Emitters. ECS Meeting Abstracts, 2017, , .	0.0	0
74	(Invited) Tube^2. ECS Meeting Abstracts, 2017, , .	0.0	0
75	(Invited) Nanoscale Imaging of Exciton Localization in Carbon Nanotubes with Far-Field Microscopy. ECS Meeting Abstracts, 2017, , .	0.0	0
76	Blocking Oxidation Failures of Carbon Nanotubes through Selective Protection of Defects. Advanced Materials, 2016, 28, 6672-6679.	11.1	14
77	Chemical Control and Spectral Fingerprints of Electronic Coupling in Carbon Nanostructures. Journal of Physical Chemistry C, 2016, 120, 29476-29483.	1.5	2
78	Molecularly Tunable Fluorescent Quantum Defects. Journal of the American Chemical Society, 2016, 138, 6878-6885.	6.6	126
79	Optical Excitation of Carbon Nanotubes Drives Localized Diazonium Reactions. Journal of Physical Chemistry Letters, 2016, 7, 3690-3694.	2.1	42
80	A tube-in-a-tube semiconductor. , 2016, , .		0
81	Li₃PO₄ Matrix Enables a Long Cycle Life and High Energy Efficiency Bismuth-Based Battery. Nano Letters, 2016, 16, 5875-5882.	4.5	37
82	Photoluminescence Dynamics of Aryl sp³ Defect States in Single-Walled Carbon Nanotubes. ACS Nano, 2016, 10, 8355-8365.	7.3	80
83	Fluorescent Carbon Nanotube Defects Manifest Substantial Vibrational Reorganization. Journal of Physical Chemistry C, 2016, 120, 11268-11276.	1.5	68
84	Dual-template ordered mesoporous carbon/Fe₂O₃nanowires as lithium-ion battery anodes. Nanoscale, 2016, 8, 12958-12969.	2.8	72
85	Selective Breakdown of Metallic Pathways in Doubleâ€Walled Carbon Nanotube Networks. Small, 2015, 11, 96-102.	5.2	10
86	Optical Probing of Local pH and Temperature in Complex Fluids with Covalently Functionalized, Semiconducting Carbon Nanotubes. Journal of Physical Chemistry C, 2015, 119, 3733-3739.	1.5	79
87	Interfacial Oxygen Stabilizes Composite Silicon Anodes. Nano Letters, 2015, 15, 703-708.	4.5	57
88	Ammonium Laurate Surfactant for Cleaner Deposition of Carbon Nanotubes. Langmuir, 2015, 31, 6948-6955.	1.6	4
89	Signal conditioning of carbon nanotube thin film loudspeakers. , 2014, , .		1
90	Characteristics and Applications of Carbon Nanotubes with Different Numbers of Walls. , 2014, , 313-339.		5

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91	Controlled Defects in Semiconducting Carbon Nanotubes Promote Efficient Generation and Luminescence of Trions. ACS Nano, 2014, 8, 4239-4247.	7.3	52
92	Brightening of carbon nanotube photoluminescence through the incorporation of sp3 defects. Nature Chemistry, 2013, 5, 840-845.	6.6	372
93	Hoop-Strong Nanotubes for Battery Electrodes. ACS Nano, 2013, 7, 8295-8302.	7.3	52
94	Propagative Exfoliation of High Quality Graphene. Chemistry of Materials, 2013, 25, 4487-4496.	3.2	26
95	A Beaded-String Silicon Anode. ACS Nano, 2013, 7, 2717-2724.	7.3	68
96	CuO Necklace: Controlled Synthesis of a Metal Oxide and Carbon Nanotube Heterostructure for Enhanced Lithium Storage Performance. Journal of Physical Chemistry C, 2013, 117, 12346-12351.	1.5	42
97	Weavable high-capacity electrodes. Nano Energy, 2013, 2, 987-994.	8.2	39
98	Propagative Sidewall Alkylcarboxylation that Induces Red-Shifted Near-IR Photoluminescence in Single-Walled Carbon Nanotubes. Journal of Physical Chemistry Letters, 2013, 4, 826-830.	2.1	46
99	Covalently Functionalized Double-Walled Carbon Nanotubes Combine High Sensitivity and Selectivity in the Electrical Detection of Small Molecules. Journal of the American Chemical Society, 2013, 135, 2306-2312.	6.6	67
100	Achieving Ultrahigh Concentrations of Fluorescent Singleâ€Walled Carbon Nanotubes Using Smallâ€Molecule Viscosity Modifiers. Small, 2013, 9, 241-247.	5.2	7
101	Acyclic Cucurbit[n]uril Molecular Containers Selectively Solubilize Single-Walled Carbon Nanotubes in Water. Journal of the American Chemical Society, 2012, 134, 7254-7257.	6.6	54
102	Chemical defect generation and propagation on carbon nanotubes. , 2011, , .		0
103	Optical and Electrical Properties of Inner Tubes in Outer Wall-Selectively Functionalized Double-Wall Carbon Nanotubes. Journal of Physical Chemistry Letters, 2011, 2, 1577-1582.	2.1	37
104	Confined propagation of covalent chemical reactions on single-walled carbon nanotubes. Nature Communications, 2011, 2, 382.	5.8	67
105	Diameter-dependent, progressive alkylcarboxylation of single-walled carbon nanotubes. Chemical Communications, 2011, 47, 758-760.	2.2	24
106	Outerwall selective alkylcarboxylation and enrichment of double-walled carbon nanotubes. Journal of Materials Chemistry, 2011, 21, 18568.	6.7	7
107	Gold-Substrate-Enhanced Scanning Electron Microscopy of Functionalized Single-Wall Carbon Nanotubes. Journal of Physical Chemistry Letters, 2011, 2, 885-888.	2.1	11
108	Double-walled carbon nanotubes: Challenges and opportunities. Nanoscale, 2011, 3, 503-518.	2.8	169

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109	Interfacial Mechanics of Carbon Nanotube@Amorphousâ€Si Coaxial Nanostructures. Advanced Materials, 2011, 23, 4318-4322.	11.1	26
110	Applications of Carbon Nanotubes in Biomedical Studies. Methods in Molecular Biology, 2011, 726, 223-241.	0.4	16
111	Outer Wall Selectively Oxidized, Water-Soluble Double-Walled Carbon Nanotubes. Journal of the American Chemical Society, 2010, 132, 3932-3938.	6.6	74
112	Assembly of Nanorods into Designer Superstructures: The Role of Templating, Capillary Forces, Adhesion, and Polymer Hydration. ACS Nano, 2010, 4, 259-266.	7.3	40
113	Nanoscale Molecular Transport: The Case of Dip-Pen Nanolithography. Journal of Physical Chemistry A, 2009, 113, 3779-3782.	1.1	46
114	Observation of nicotinic acid in nicorandil samples and simultaneous determination of nicorandil and its three degradation products in raw drug and tablet form by high performance liquid chromatography. Journal of Analytical Chemistry, 2009, 64, 1059-1065.	0.4	2
115	Nanofabrication beyond Electronics. ACS Nano, 2009, 3, 1049-1056.	7.3	59
116	Applications of dip-pen nanolithography. , 2009, , 297-307.		2
117	Kinetically Controlled, Shapeâ€Directed Assembly of Nanorods. Small, 2008, 4, 206-210.	5.2	38
118	A Selfâ€Correcting Inking Strategy for Cantilever Arrays Addressed by an Inkjet Printer and Used for Dipâ€Pen Nanolithography. Small, 2008, 4, 1666-1670.	5.2	35
119	Superparamagnetic Sub-5 nm Fe@C Nanoparticles: Isolation, Structure, Magnetic Properties, and Directed Assembly. Nano Letters, 2008, 8, 3761-3765.	4.5	38
120	Nanoscopically Flat Open-Ended Single-Walled Carbon Nanotube Substrates for Continued Growth. Nano Letters, 2007, 7, 15-21.	4.5	10
121	A Highly Selective, One-Pot Purification Method for Single-Walled Carbon Nanotubes. Journal of Physical Chemistry B, 2007, 111, 1249-1252.	1.2	99
122	Rings of Single-Walled Carbon Nanotubes:Â Molecular-Template Directed Assembly and Monte Carlo Modeling. Nano Letters, 2007, 7, 276-280.	4.5	43
123	Massively Parallel Dip-Pen Nanolithography of Heterogeneous Supported Phospholipid Multilayer Patterns. Small, 2007, 3, 71-75.	5.2	218
124	Applications of dip-pen nanolithography. Nature Nanotechnology, 2007, 2, 145-155.	15.6	801
125	Asymmetric Functionalization of Gold Nanoparticles with Oligonucleotides. Journal of the American Chemical Society, 2006, 128, 9286-9287.	6.6	326
126	Massively Parallel Dipâ€“Pen Nanolithography with 55â€‰000-Pen Two-Dimensional Arrays. Angewandte Chemie - International Edition, 2006, 45, 7220-7223.	7.2	289

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127	Cover Picture: Massively Parallel Dipâ€“Pen Nanolithography with 55â€‰000-Pen Two-Dimensional Arrays (Angew. Chem. Int. Ed. 43/2006). Angewandte Chemie - International Edition, 2006, 45, 7099-7099.	7.2	2
128	Controlling the shape, orientation, and linkage of carbon nanotube features with nano affinity templates. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 2026-2031.	3.3	204
129	Revealing the Substructure of Single-Walled Carbon Nanotube Fibers. Chemistry of Materials, 2005, 17, 6361-6368.	3.2	12
130	Continued Growth of Single-Walled Carbon Nanotubes. Nano Letters, 2005, 5, 997-1002.	4.5	121
131	Phase Behavior and Rheology of SWNTs in Superacids. Macromolecules, 2004, 37, 154-160.	2.2	337
132	Ultrathin â€œBed-of-Nailsâ€•Membranes of Single-Wall Carbon Nanotubes. Journal of the American Chemical Society, 2004, 126, 9502-9503.	6.6	11
133	Macroscopic, Neat, Single-Walled Carbon Nanotube Fibers. Science, 2004, 305, 1447-1450.	6.0	785
134	Comparison of Electron Transfer Dynamics in Molecule-to-Nanoparticle and Intramolecular Charge Transfer Complexes. Journal of Physical Chemistry B, 2003, 107, 9434-9440.	1.2	186
135	Comment on "Single Crystals of Single-Walled Carbon Nanotubes Formed by Self-Assembly". Science, 2003, 300, 1236b-1236.	6.0	8
136	Reversible water-solubilization of single-walled carbon nanotubes by polymer wrapping. Chemical Physics Letters, 2001, 342, 265-271.	1.2	1,659
137	Theoretical Study of Decachlorocorannulene and its Congeners C20X10 and C20Z5. Fullerenes, Nanotubes, and Carbon Nanostructures, 1998, 6, 1111-1122.	0.6	3
138	Preparation of Decachlorocorannulene and Other Perchlorinated Fragments of Fullerenes by Electrical Discharge in Liquid Chloroform. Journal of the American Chemical Society, 1997, 119, 5954-5955.	6.6	31
139	Diamond nanospherulite: A novel material produced at carbon-water interface by pulsed-laser ablation. Science in China Series B: Chemistry, 1997, 40, 608-615.	0.8	2
140	A Highly Selective, One-Pot Purification Method for Single-Walled Carbon Nanotubes. , 0, , .		8
141	Parallel Field-Effect Nanosensors Detect Trace Biomarkers Rapidly at Physiological High-Ionic-Strength Conditions. ACS Sensors, 0, , .	4.0	3