Ming Zheng

List of Publications by Year in Descending Order

79 papers	8,849 citations	39 h-index	94 g-index
95 ext. papers	9,833 ext. citations	14 avg, IF	6.11 L-index

#	Paper	IF	Citations
79	Detection of ovarian cancer via the spectral fingerprinting of quantum-defect-modified carbon nanotubes in serum by machine learning.. *Nature Biomedical Engineering*, **2022**,	19	6
78	Optical Detection of Stereoselective Interactions with DNA-Wrapped Single-Wall Carbon Nanotubes. *Journal of the American Chemical Society*, **2021**,	16.4	1
77	A perception-based nanosensor platform to detect cancer biomarkers. *Science Advances*, **2021**, 7, eabj0852	14.3	10
76	Developing Ovarian Cancer Sensors Using Molecular Perceptron. *ECS Meeting Abstracts*, **2021**, MA2021-01, 538-538	0	
75	Beyond Color: The New Carbon Ink. *Advanced Materials*, **2021**, 33, e2005890	24	6
74	Single-Chirality Near-Infrared Carbon Nanotube Sub-Cellular Imaging and FRET Probes. *Nano Letters*, **2021**, 21, 6441-6448	11.5	4
73	Band structure dependent electronic localization in macroscopic films of single-chirality single-wall carbon nanotubes. *Carbon*, **2021**, 183, 774-779	10.4	2
72	DNA-directed nanofabrication of high-performance carbon nanotube field-effect transistors. *Science*, **2020**, 368, 878-881	33.3	56
71	Precise pitch-scaling of carbon nanotube arrays within three-dimensional DNA nanotrenches. *Science*, **2020**, 368, 874-877	33.3	46
70	Chirality Pure Carbon Nanotubes: Growth, Sorting, and Characterization. *Chemical Reviews*, **2020**, 120, 2693-2758	68.1	128
69	Hidden Fine Structure of Quantum Defects Revealed by Single Carbon Nanotube Magneto-Photoluminescence. *ACS Nano*, **2020**, 14, 3451-3460	16.7	8
68	Label-Free and Ultrasensitive Electrochemical DNA Biosensor Based on Urchinlike Carbon Nanotube-Gold Nanoparticle Nanoclusters. *Analytical Chemistry*, **2020**, 92, 4780-4787	7.8	52
67	Separation of Specific Single-Enantiomer Single-Wall Carbon Nanotubes in the Large-Diameter Regime. *ACS Nano*, **2020**, 14, 948-963	16.7	44
66	Pathway-Dependent Structures of DNA-Wrapped Carbon Nanotubes: Direct Sonication vs Surfactant/DNA Exchange. *Journal of Physical Chemistry C*, **2020**, 124, 9045-9055	3.8	12
65	Broadening of van Hove Singularities Measured by Photoemission Spectroscopy of Single- and Mixed-Chirality Single-Walled Carbon Nanotubes. *Journal of Physical Chemistry C*, **2019**, 123, 26683-26694	3.8	3
64	Learning to predict single-wall carbon nanotube-recognition DNA sequences. *Npj Computational Materials*, **2019**, 5,	10.9	18
63	Sorting Carbon Nanotubes. *Topics in Current Chemistry Collections*, **2019**, 129-164	1.8	2

62	Organizing End-Site-Specific SWCNTs in Specific Loci Using DNA. *Journal of the American Chemical Society*, **2019**, 141, 11923-11928	16.4	27
61	Mod(n-m,3) Dependence of Defect-State Emission Bands in Aryl-Functionalized Carbon Nanotubes. *Nano Letters*, **2019**, 19, 8503-8509	11.5	12
60	Toward Complete Resolution of DNA/Carbon Nanotube Hybrids by Aqueous Two-Phase Systems. *Journal of the American Chemical Society*, **2019**, 141, 20177-20186	16.4	21
59	Quantification of DNA/SWCNT Solvation Differences by Aqueous Two-Phase Separation. *Langmuir*, **2018**, 34, 1834-1843	4	11
58	Alkane Encapsulation Induces Strain in Small-Diameter Single-Wall Carbon Nanotubes. *Journal of Physical Chemistry C*, **2018**, 122, 11577-11585	3.8	9
57	Mapping Structure-Property Relationships of Organic Color Centers. *CheM*, **2018**, 4, 2180-2191	16.2	26
56	Structure-Defined DNA-Carbon Nanotube Hybrids and Their Applications. *ECS Transactions*, **2018**, 85, 511-517	1	5
55	An optical nanoreporter of endolysosomal lipid accumulation reveals enduring effects of diet on hepatic macrophages in vivo. *Science Translational Medicine*, **2018**, 10,	17.5	47
54	Narrow-band single-photon emission through selective aryl functionalization of zigzag carbon nanotubes. *Nature Chemistry*, **2018**, 10, 1089-1095	17.6	47
53	Sorting Carbon Nanotubes. *Topics in Current Chemistry*, **2017**, 375, 13	7.2	48
52	Chirality-Controlled Synthesis and Applications of Single-Wall Carbon Nanotubes. *ACS Nano*, **2017**, 11, 31-53	16.7	120
51	Carbon Nanotube-Quantum Dot Nanohybrids: Coupling with Single-Particle Control in Aqueous Solution. *Small*, **2017**, 13, 1603042	11	16
50	A Low Energy Route to DNA-Wrapped Carbon Nanotubes via Replacement of Bile Salt Surfactants. *Analytical Chemistry*, **2017**, 89, 10496-10503	7.8	30
49	Energetic Basis of Single-Wall Carbon Nanotube Enantiomer Recognition by Single-Stranded DNA. *Journal of Physical Chemistry C*, **2017**, 121, 17479-17487	3.8	9
48	Site-Specific One-to-One Click Coupling of Single Proteins to Individual Carbon Nanotubes: A Single-Molecule Approach. *Journal of the American Chemical Society*, **2017**, 139, 17834-17840	16.4	18
47	Two-color spectroscopy of UV excited ssDNA complex with a single-wall nanotube photoluminescence probe: Fast relaxation by nucleobase autoionization mechanism. *Nano Research* , **2016**, 9, 571-583	10	7
46	A facile and low-cost length sorting of single-wall carbon nanotubes by precipitation and applications for thin-film transistors. *Nanoscale*, **2016**, 8, 3467-73	7.7	29
45	Solution-Processable Carbon Nanoelectrodes for Single-Molecule Investigations. *Journal of the American Chemical Society*, **2016**, 138, 2905-8	16.4	22

44	Directed Assembly of Single Wall Carbon Nanotube Field Effect Transistors. *ACS Nano*, **2016**, 10, 2975-81	16.7	34
43	Differentiating Left- and Right-Handed Carbon Nanotubes by DNA. *Journal of the American Chemical Society*, **2016**, 138, 16677-16685	16.4	120
42	Characterizing the Effect of Salt and Surfactant Concentration on the Counterion Atmosphere around Surfactant Stabilized SWCNTs Using Analytical Ultracentrifugation. *Langmuir*, **2016**, 32, 3926-36	4	16
41	Intensity Ratio of Resonant Raman Modes for (n,m) Enriched Semiconducting Carbon Nanotubes. *ACS Nano*, **2016**, 10, 5252-9	16.7	35
40	Isolation of >1 nm Diameter Single-Wall Carbon Nanotube Species Using Aqueous Two-Phase Extraction. *ACS Nano*, **2015**, 9, 5377-90	16.7	104
39	Redox sorting of carbon nanotubes. *Nano Letters*, **2015**, 15, 1642-6	11.5	73
38	Directed Assembly of End-Functionalized Single Wall Carbon Nanotube Segments. *Nano Letters*, **2015**, 15, 6547-52	11.5	29
37	Re-growth of single-walled carbon nanotube by hot-wall and cold-wall chemical vapor deposition. *Carbon*, **2015**, 95, 497-502	10.4	10
36	Asymmetric excitation profiles in the resonance Raman response of armchair carbon nanotubes. *Physical Review B*, **2015**, 91,	3.3	20
35	Preparation and separation of DNA-wrapped carbon nanotubes. *Current Protocols in Chemical Biology*, **2015**, 7, 43-51	1.8	14
34	Single-step total fractionation of single-wall carbon nanotubes by countercurrent chromatography. *Analytical Chemistry*, **2014**, 86, 3980-4	7.8	38
33	Isolation of specific small-diameter single-wall carbon nanotube species via aqueous two-phase extraction. *Advanced Materials*, **2014**, 26, 2800-4	24	174
32	DNA-controlled partition of carbon nanotubes in polymer aqueous two-phase systems. *Journal of the American Chemical Society*, **2014**, 136, 10383-92	16.4	124
31	Diameter dependence of TO phonon frequencies and the Kohn anomaly in armchair single-wall carbon nanotubes. *Physical Review B*, **2014**, 90,	3.3	4
30	High-resolution length fractionation of surfactant-dispersed carbon nanotubes. *Analytical Chemistry*, **2013**, 85, 1382-8	7.8	42
29	Chirality-dependent vapor-phase epitaxial growth and termination of single-wall carbon nanotubes. *Nano Letters*, **2013**, 13, 4416-21	11.5	67
28	Fundamental optical processes in armchair carbon nanotubes. *Nanoscale*, **2013**, 5, 1411-39	7.7	46
27	Analyzing surfactant structures on length and chirality resolved (6,5) single-wall carbon nanotubes by analytical ultracentrifugation. *ACS Nano*, **2013**, 7, 3373-87	16.7	68

26	Spontaneous partition of carbon nanotubes in polymer-modified aqueous phases. *Journal of the American Chemical Society*, **2013**, 135, 6822-5	16.4	244
25	Controlled formation of carbon nanotube junctions via linker-induced assembly in aqueous solution. *Journal of the American Chemical Society*, **2013**, 135, 8440-3	16.4	26
24	Protective roles of single-wall carbon nanotubes in ultrasonication-induced DNA base damage. *Small*, **2013**, 9, 205-8	11	30
23	Chirality-controlled synthesis of single-wall carbon nanotubes using vapour-phase epitaxy. *Nature Communications*, **2012**, 3, 1199	17.4	137
22	Concentration measurement of length-fractionated colloidal single-wall carbon nanotubes. *Analytical Chemistry*, **2012**, 84, 8733-9	7.8	19
21	Chiral index dependence of the G+ and G- Raman modes in semiconducting carbon nanotubes. *ACS Nano*, **2012**, 6, 904-11	16.7	66
20	Quantum interference between the third and fourth exciton states in semiconducting carbon nanotubes using resonance Raman spectroscopy. *Physical Review Letters*, **2012**, 108, 117404	7.4	19
19	Violation of the condon approximation in semiconducting carbon nanotubes. *ACS Nano*, **2011**, 5, 5233-41	16.7	45
18	Evolution of DNA sequences toward recognition of metallic armchair carbon nanotubes. *Journal of the American Chemical Society*, **2011**, 133, 12998-3001	16.4	71
17	Recognition ability of DNA for carbon nanotubes correlates with their binding affinity. *Langmuir*, **2011**, 27, 8282-93	4	74
16	Molecular-crowding-induced clustering of DNA-wrapped carbon nanotubes for facile length fractionation. *ACS Nano*, **2011**, 5, 8258-66	16.7	54
15	DNA sequence motifs for structure-specific recognition and separation of carbon nanotubes. *Nature*, **2009**, 460, 250-3	50.4	882
14	A scanning probe microscopy based assay for single-walled carbon nanotube metallicity. *Nano Letters*, **2009**, 9, 1668-72	11.5	49
13	Optical characterizations and electronic devices of nearly pure (10,5) single-walled carbon nanotubes. *Journal of the American Chemical Society*, **2009**, 131, 2454-5	16.4	56
12	Measurement of Electrostatic Properties of DNA-Carbon Nanotube Hybrids by Capillary Electrophoresis. *Journal of Physical Chemistry C*, **2009**, 113, 13616-13621	3.8	33
11	A DNA-based approach to the carbon nanotube sorting problem. *Nano Research*, **2008**, 1, 185-194	10	127
10	Fluorescence efficiency of individual carbon nanotubes. *Nano Letters*, **2007**, 7, 3698-703	11.5	111
9	Enrichment of single chirality carbon nanotubes. *Journal of the American Chemical Society*, **2007**, 129, 6084-5	16.4	205

8	Racemic single-walled carbon nanotubes exhibit circular dichroism when wrapped with DNA. *Journal of the American Chemical Society*, **2006**, 128, 9004-5	16.4	118
7	Photoinduced charge transfer mediated by DNA-wrapped carbon nanotubes. *Journal of the American Chemical Society*, **2006**, 128, 7702-3	16.4	43
6	Theory of structure-based carbon nanotube separations by ion-exchange chromatography of DNA/CNT hybrids. *Journal of Physical Chemistry B*, **2005**, 109, 2559-66	3.4	124
5	High-resolution length sorting and purification of DNA-wrapped carbon nanotubes by size-exclusion chromatography. *Analytical Chemistry*, **2005**, 77, 6225-8	7.8	215
4	Understanding the Nature of the DNA-Assisted Separation of Single-Walled Carbon Nanotubes Using Fluorescence and Raman Spectroscopy. *Nano Letters*, **2004**, 4, 543-550	11.5	175
3	Solution redox chemistry of carbon nanotubes. *Journal of the American Chemical Society*, **2004**, 126, 15490-4	16.4	276
2	DNA-assisted dispersion and separation of carbon nanotubes. *Nature Materials*, **2003**, 2, 338-42	27	2321
1	Structure-based carbon nanotube sorting by sequence-dependent DNA assembly. *Science*, **2003**, 302, 1545-8	33.3	1399