Albert Tianxiang Liu

List of Publications by Year
in descending order

203 papers	39,671 citations	14655 66 h-index	2509 196 g-index
207 all docs	207 docs citations	207 times ranked	42783 citing authors

#	Article	IF	Citations
1	Electronics and optoelectronics of two-dimensional transition metal dichalcogenides. Nature Nanotechnology, 2012, 7, 699-712.	31.5	13,346
2	Band Gap Fluorescence from Individual Single-Walled Carbon Nanotubes. Science, 2002, 297, 593-596.	12.6	3,582
3	Liquid Exfoliation of Layered Materials. Science, 2013, 340, .	12.6	3,109
4	Recent Advances in Two-Dimensional Materials beyond Graphene. ACS Nano, 2015, 9, 11509-11539.	14.6	2,069
5	Structure-Based Carbon Nanotube Sorting by Sequence-Dependent DNA Assembly. Science, 2003, 302, 1545-1548.	12.6	1,547
6	Nanostructured Tungsten Oxide â€“ Properties, Synthesis, and Applications. Advanced Functional Materials, 2011, 21, 2175-2196.	14.9	1,198
7	Near-infrared optical sensors based on single-walled carbon nanotubes. Nature Materials, 2004, 4, 86-92.	27.5	889
8	Plant nanobionics approach to augment photosynthesis and biochemical sensing. Nature Materials, 2014, 13, 400-408.	27.5	841
9	The Role of Surfactant Adsorption during Ultrasonication in the Dispersion of Single-Walled Carbon Nanotubes. Journal of Nanoscience and Nanotechnology, 2003, 3, 81-86.	0.9	466
10	Solution Casting and Transfer Printing Single-Walled Carbon Nanotube Films. Nano Letters, 2004, 4, 1643-1647.	9.1	447
11	Chloroplast-selective gene delivery and expression in planta using chitosan-complexed single-walled carbon nanotube carriers. Nature Nanotechnology, 2019, 14, 447-455.	31.5	364
12	Reversible, Band-Gap-Selective Protonation of Single-Walled Carbon Nanotubes in Solution. Journal of Physical Chemistry B, 2003, 107, 6979-6985.	2.6	345
13	Carbon nanotubes as optical biomedical sensors. Advanced Drug Delivery Reviews, 2013, 65, 1933-1950.	13.7	324
14	Twoâ€Ðimensional Transition Metal Dichalcogenides in Biosystems. Advanced Functional Materials, 2015, 25, 5086-5099.	14.9	306
15	Molecular recognition using corona phase complexes made of synthetic polymers adsorbed on carbon nanotubes. Nature Nanotechnology, 2013, 8, 959-968.	31.5	282
16	Chemically driven carbon-nanotube-guided thermopower waves. Nature Materials, 2010, 9, 423-429.	27.5	276
17	M13 Phage-Functionalized Single-Walled Carbon Nanotubes As Nanoprobes for Second Near-Infrared Window Fluorescence Imaging of Targeted Tumors. Nano Letters, 2012, 12, 1176-1183.	9.1	256
18	Assignment of (n, m) Raman and Optical Features of Metallic Single-Walled Carbon Nanotubes. Nano Letters, 2003, 3, 1091-1096.	9.1	250

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19	In Vivo Fluorescence Detection of Glucose Using a Single-Walled Carbon Nanotube Optical Sensor:Â Design, Fluorophore Properties, Advantages, and Disadvantages. Analytical Chemistry, 2005, 77, 7556-7562.	6.5	250
20	Observation of extreme phase transition temperatures of water confined inside isolated carbon nanotubes. Nature Nanotechnology, 2017, 12, 267-273.	31.5	249
21	Coherence Resonance in a Single-Walled Carbon Nanotube Ion Channel. Science, 2010, 329, 1320-1324.	12.6	241
22	Tuning Onâ€“Off Current Ratio and Field-Effect Mobility in a MoS₂â€“Graphene Heterostructure via Schottky Barrier Modulation. ACS Nano, 2014, 8, 5790-5798.	14.6	240
23	Nitroaromatic detection and infrared communication from wild-type plants using plantÂnanobionics. Nature Materials, 2017, 16, 264-272.	27.5	234
24	Synthesis of Atomically Thin WO₃ Sheets from Hydrated Tungsten Trioxide. Chemistry of Materials, 2010, 22, 5660-5666.	6.7	215
25	Lipid Exchange Envelope Penetration (LEEP) of Nanoparticles for Plant Engineering: A Universal Localization Mechanism. Nano Letters, 2016, 16, 1161-1172.	9.1	213
26	A general, modular method for the catalytic asymmetric synthesis of alkylboronate esters. Science, 2016, 354, 1265-1269.	12.6	200
27	Solvatochromism in single-walled carbon nanotubes. Applied Physics Letters, 2007, 90, 223114.	3.3	193
28	Protein-targeted corona phase molecular recognition. Nature Communications, 2016, 7, 10241.	12.8	193
29	Generalized Mechanistic Model for the Chemical Vapor Deposition of 2D Transition Metal Dichalcogenide Monolayers. ACS Nano, 2016, 10, 4330-4344.	14.6	190
30	Single Molecule Detection of Nitric Oxide Enabled by d(AT)₁₅ DNA Adsorbed to Near Infrared Fluorescent Single-Walled Carbon Nanotubes. Journal of the American Chemical Society, 2011, 133, 567-581.	13.7	177
31	Single-molecule detection of protein efflux from microorganisms using fluorescent single-walled carbon nanotube sensor arrays. Nature Nanotechnology, 2017, 12, 368-377.	31.5	172
32	Polymerâ€Free Nearâ€Infrared Photovoltaics with Single Chirality (6,5) Semiconducting Carbon Nanotube Active Layers. Advanced Materials, 2012, 24, 4436-4439.	21.0	171
33	Highâ€Performance Field Effect Transistors Using Electronic Inks of 2D Molybdenum Oxide Nanoflakes. Advanced Functional Materials, 2016, 26, 91-100.	14.9	164
34	Single-layer graphene membranes by crack-free transfer for gas mixture separation. Nature Communications, 2018, 9, 2632.	12.8	160
35	High-resolution imaging of cellular dopamine efflux using a fluorescent nanosensor array. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 1789-1794.	7.1	158
36	Real-time detection of wound-induced H2O2 signalling waves in plants with optical nanosensors. Nature Plants, 2020, 6, 404-415.	9.3	157

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37	Estimates for energy expenditure in freeâ€living animals using acceleration proxies: A reappraisal. Journal of Animal Ecology, 2020, 89, 161-172.	2.8	148
38	Nearâ€Infrared Fluorescent Sensors based on Singleâ€Walled Carbon Nanotubes for Life Sciences Applications. ChemSusChem, 2011, 4, 848-863.	6.8	146
39	A Ratiometric Sensor Using Single Chirality Nearâ€Infrared Fluorescent Carbon Nanotubes: Application to In Vivo Monitoring. Small, 2015, 11, 3973-3984.	10.0	135
40	Nanosensor Technology Applied to Living Plant Systems. Annual Review of Analytical Chemistry, 2017, 10, 113-140.	5.4	133
41	Diameter-dependent ion transport through the interior of isolated single-walled carbon nanotubes. Nature Communications, 2013, 4, 2397.	12.8	131
42	Photoelectrochemical complexes for solar energy conversion that chemically and autonomously regenerate. Nature Chemistry, 2010, 2, 929-936.	13.6	126
43	Layered and scrolled nanocomposites with aligned semi-infinite graphene inclusions at the platelet limit. Science, 2016, 353, 364-367.	12.6	125
44	Molecular valves for controlling gas phase transport made from discrete Ã¥ngstrÃ¶m-sized pores in graphene. Nature Nanotechnology, 2015, 10, 785-790.	31.5	122
45	Ultra-high thermal effusivity materials for resonant ambient thermal energy harvesting. Nature Communications, 2018, 9, 664.	12.8	118
46	Capillary Electrophoresis Separations of Bundled and Individual Carbon Nanotubes. Journal of Physical Chemistry B, 2003, 107, 6063-6069.	2.6	107
47	Glucose-responsive insulin by molecular and physical design. Nature Chemistry, 2017, 9, 937-944.	13.6	106
48	Mechanism and Prediction of Gas Permeation through Sub-Nanometer Graphene Pores: Comparison of Theory and Simulation. ACS Nano, 2017, 11, 7974-7987.	14.6	103
49	A Structureâ^'Reactivity Relationship for Single Walled Carbon Nanotubes Reacting with 4-Hydroxybenzene Diazonium Salt. Journal of the American Chemical Society, 2007, 129, 3946-3954.	13.7	99
50	Application of Nanoparticle Antioxidants to Enable Hyperstable Chloroplasts for Solar Energy Harvesting. Advanced Energy Materials, 2013, 3, 881-893.	19.5	99
51	A Nanobionic Light-Emitting Plant. Nano Letters, 2017, 17, 7951-7961.	9.1	93
52	Spatiotemporal Intracellular Nitric Oxide Signaling Captured Using Internalized, Near-Infrared Fluorescent Carbon Nanotube Nanosensors. Nano Letters, 2014, 14, 4887-4894.	9.1	91
53	Rational Design Principles for the Transport and Subcellular Distribution of Nanomaterials into Plant Protoplasts. Small, 2018, 14, e1802086.	10.0	89
54	Nanophotonic biosensors harnessing van der Waals materials. Nature Communications, 2021, 12, 3824.	12.8	88

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55	Observation of Switchable Photoresponse of a Monolayer WSe₂â€“MoS₂ Lateral Heterostructure via Photocurrent Spectral Atomic Force Microscopic Imaging. Nano Letters, 2016, 16, 3571-3577.	9.1	86
56	Layer Number Dependence of MoS₂ Photoconductivity Using Photocurrent Spectral Atomic Force Microscopic Imaging. ACS Nano, 2015, 9, 2843-2855.	14.6	84
57	Stochastic Analysis of Stepwise Fluorescence Quenching Reactions on Single-Walled Carbon Nanotubes: Single Molecule Sensors. Nano Letters, 2008, 8, 4299-4304.	9.1	82
58	Modulation of Single-Walled Carbon Nanotube Photoluminescence by Hydrogel Swelling. ACS Nano, 2009, 3, 3869-3877.	14.6	79
59	A Rapid, Direct, Quantitative, and Labelâ€Free Detector of Cardiac Biomarker Troponin T Using Nearâ€Infrared Fluorescent Singleâ€Walled Carbon Nanotube Sensors. Advanced Healthcare Materials, 2014, 3, 412-423.	7.6	76
60	ZnO based thermopower wave sources. Chemical Communications, 2012, 48, 7462.	4.1	75
61	Comparative Dynamics and Sequence Dependence of DNA and RNA Binding to Single Walled Carbon Nanotubes. Journal of Physical Chemistry C, 2015, 119, 10048-10058.	3.1	75
62	Plant Nanobionic Sensors for Arsenic Detection. Advanced Materials, 2021, 33, e2005683.	21.0	75
63	Ionic Strength-Mediated Phase Transitions of Surface-Adsorbed DNA on Single-Walled Carbon Nanotubes. Journal of the American Chemical Society, 2017, 139, 16791-16802.	13.7	74
64	A Kinetic Model for the Deterministic Prediction of Gel-Based Single-Chirality Single-Walled Carbon Nanotube Separation. ACS Nano, 2013, 7, 1779-1789.	14.6	73
65	Excess Thermopower and the Theory of Thermopower Waves. ACS Nano, 2013, 7, 6533-6544.	14.6	72
66	Computationally Guided Synthesis of SSZ-52: A Zeolite for Engine Exhaust Clean-up. Chemistry of Materials, 2016, 28, 708-711.	6.7	72
67	MnO₂-Based Thermopower Wave Sources with Exceptionally Large Output Voltages. Journal of Physical Chemistry C, 2013, 117, 9137-9142.	3.1	71
68	The Emergence of Plant Nanobionics and Living Plants as Technology. Advanced Materials Technologies, 2020, 5, 1900657.	5.8	70
69	Biomimetic strategies for solar energy conversion: a technical perspective. Energy and Environmental Science, 2011, 4, 3834.	30.8	69
70	Banning carbon nanotubes would be scientifically unjustified and damaging to innovation. Nature Nanotechnology, 2020, 15, 164-166.	31.5	69
71	Carbon nanotube-guided thermopower waves. Materials Today, 2010, 13, 22-33.	14.2	66
72	Dominance of Dispersion Interactions and Entropy over Electrostatics in Determining the Wettability and Friction of Two-Dimensional MoS₂ Surfaces. ACS Nano, 2016, 10, 9145-9155.	14.6	63

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73	Species-independent analytical tools for next-generation agriculture. Nature Plants, 2020, 6, 1408-1417.	9.3	63
74	Emerging trends in 2D nanotechnology that are redefining our understanding of â€œNanocompositesâ€• Nano Today, 2018, 21, 18-40.	11.9	59
75	Oscillatory Thermopower Waves Based on Bi₂Te₃ Films. Advanced Functional Materials, 2011, 21, 2072-2079.	14.9	58
76	Surface Water Dependent Properties of Sulfur-Rich Molybdenum Sulfides: Electrolyteless Gas Phase Water Splitting. ACS Nano, 2017, 11, 6782-6794.	14.6	57
77	Addressing the isomer cataloguing problem for nanopores in two-dimensional materials. Nature Materials, 2019, 18, 129-135.	27.5	57
78	Mechanism of Immobilized Protein A Binding to Immunoglobulin G on Nanosensor Array Surfaces. Analytical Chemistry, 2015, 87, 8186-8193.	6.5	56
79	Autoperforation of 2D materials for generating two-terminal memristive Janus particles. Nature Materials, 2018, 17, 1005-1012.	27.5	56
80	Stable, Temperature-Dependent Gas Mixture Permeation and Separation through Suspended Nanoporous Single-Layer Graphene Membranes. Nano Letters, 2018, 18, 5057-5069.	9.1	56
81	Persistent drought monitoring using a microfluidic-printed electro-mechanical sensor of stomata in planta. Lab on A Chip, 2017, 17, 4015-4024.	6.0	55
82	Ab Initio Molecular Dynamics and Lattice Dynamics-Based Force Field for Modeling Hexagonal Boron Nitride in Mechanical and Interfacial Applications. Journal of Physical Chemistry Letters, 2018, 9, 1584-1591.	4.6	55
83	Structureâ^'Reactivity Relationships for Graphene Nanoribbons. Journal of Physical Chemistry C, 2009, 113, 14771-14777.	3.1	54
84	Determining the Optimized Interlayer Separation Distance in Vertical Stacked 2D WS₂:hBN:MoS₂ Heterostructures for Exciton Energy Transfer. Small, 2018, 14, e1703727.	10.0	54
85	Synthesis of Nickelâ^'Nitrilotriacetic Acid Coupled Single-Walled Carbon Nanotubes for Directed Self-Assembly with Polyhistidine-Tagged Proteins. Chemistry of Materials, 2008, 20, 1824-1829.	6.7	50
86	Colloidal nanoelectronic state machines based on 2D materials for aerosolizable electronics. Nature Nanotechnology, 2018, 13, 819-827.	31.5	50
87	Experimental Tools to Study Molecular Recognition within the Nanoparticle Corona. Sensors, 2014, 14, 16196-16211.	3.8	49
88	Large-area synthesis of 2D MoO _{3â^' x} for enhanced optoelectronic applications. 2D Materials, 2019, 6, 035031.	4.4	48
89	Direct Electricity Generation Mediated by Molecular Interactions with Low Dimensional Carbon Materialsâ€”A Mechanistic Perspective. Advanced Energy Materials, 2018, 8, 1802212.	19.5	47
90	Quantitative Tissue Spectroscopy of Near Infrared Fluorescent Nanosensor Implants. Journal of Biomedical Nanotechnology, 2016, 12, 1035-1047.	1.1	46

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91	Analytical Prediction of Gas Permeation through Graphene Nanopores of Varying Sizes: Understanding Transitions across Multiple Transport Regimes. ACS Nano, 2019, 13, 11809-11824.	14.6	46
92	Dual Phase Change Thermal Diodes for Enhanced Rectification Ratios: Theory and Experiment. Advanced Energy Materials, 2018, 8, 1702692.	19.5	45
93	Implantable Nanosensors for Human Steroid Hormone Sensing In Vivo Using a Selfâ€Templating Corona Phase Molecular Recognition. Advanced Healthcare Materials, 2020, 9, e2000429.	7.6	45
94	Dynamics of Simultaneous, Single Ion Transport through Two Single-Walled Carbon Nanotubes: Observation of a Three-State System. Journal of the American Chemical Society, 2011, 133, 203-205.	13.7	43
95	Analysis of Thermal Diodes Enabled by Junctions of Phase Change Materials. Advanced Energy Materials, 2015, 5, 1500921.	19.5	43
96	Competitive Binding in Mixed Surfactant Systems for Single-Walled Carbon Nanotube Separation. Journal of Physical Chemistry C, 2015, 119, 22737-22745.	3.1	43
97	A study of bilayer phosphorene stability under MoS ₂ -passivation. 2D Materials, 2017, 4, 025091.	4.4	42
98	Irreversible synthesis of an ultrastrong two-dimensional polymeric material. Nature, 2022, 602, 91-95.	27.8	42
99	Wavefront Velocity Oscillations of Carbon-Nanotube-Guided Thermopower Waves: Nanoscale Alternating Current Sources. ACS Nano, 2011, 5, 367-375.	14.6	40
100	Effect of Reductive Dithiothreitol and Trolox on Nitric Oxide Quenching of Single-Walled Carbon Nanotubes. Journal of Physical Chemistry C, 2013, 117, 593-602.	3.1	39
101	Liquids with Lower Wettability Can Exhibit Higher Friction on Hexagonal Boron Nitride: The Intriguing Role of Solidâ€“Liquid Electrostatic Interactions. Nano Letters, 2019, 19, 1539-1551.	9.1	39
102	Understanding the colloidal dispersion stability of 1D and 2D materials: Perspectives from molecular simulations and theoretical modeling. Advances in Colloid and Interface Science, 2017, 244, 36-53.	14.7	37
103	A graphene-based physiometer array for the analysis of single biological cells. Scientific Reports, 2014, 4, 6865.	3.3	36
104	Microscale solid-state thermal diodes enabling ambient temperature thermal circuits for energy applications. Physical Chemistry Chemical Physics, 2017, 19, 13172-13181.	2.8	35
105	Nanocarriers for Transgene Expression in Pollen as a Plant Biotechnology Tool. , 2020, 2, 1057-1066.		33
106	Analysis of Multiplexed Nanosensor Arrays Based on Near-Infrared Fluorescent Single-Walled Carbon Nanotubes. ACS Nano, 2018, 12, 3769-3779.	14.6	32
107	High-Resolution Nanoparticle Sizing with Maximum A Posteriori Nanoparticle Tracking Analysis. ACS Nano, 2019, 13, 3940-3952.	14.6	30
108	Synthesis and Energy Release of Nitrobenzene-Functionalized Single-Walled Carbon Nanotubes. Chemistry of Materials, 2011, 23, 4557-4562.	6.7	29

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109	Predicting Gas Separation through Graphene Nanopore Ensembles with Realistic Pore Size Distributions. ACS Nano, 2021, 15, 1727-1740.	14.6	28
110	Direct Chemical Vapor Deposition Synthesis of Porous Singleâ€Layer Graphene Membranes with High Gas Permeances and Selectivities. Advanced Materials, 2021, 33, e2104308.	21.0	28
111	Gas Separations using Nanoporous Atomically Thin Membranes: Recent Theoretical, Simulation, and Experimental Advances. Advanced Materials, 2022, 34, e2201472.	21.0	28
112	Where is it Heading? Single-Particle Tracking of Single-Walled Carbon Nanotubes. ACS Nano, 2008, 2, 1749-1752.	14.6	27
113	Controlling Single-Walled Carbon Nanotube Surface Adsorption with Covalent and Noncovalent Functionalization. Journal of Physical Chemistry C, 2009, 113, 12443-12453.	3.1	27
114	A wavelength-induced frequency filtering method for fluorescent nanosensors in vivo. Nature Nanotechnology, 2022, 17, 643-652.	31.5	27
115	Analytical Solution to Coupled Chemical Reaction and Thermally Diffusing Systems: Applicability to Self-Propagating Thermopower Waves. Journal of Physical Chemistry Letters, 2010, 1, 3514-3519.	4.6	26
116	Understanding and Analyzing Freezing-Point Transitions of Confined Fluids within Nanopores. Langmuir, 2015, 31, 10113-10118.	3.5	26
117	Controlling Photoluminescence Enhancement and Energy Transfer in WS₂:hBN:WS₂ Vertical Stacks by Precise Interlayer Distances. Small, 2020, 16, e1905985.	10.0	26
118	A Pharmacokinetic Model of a Tissue Implantable Cortisol Sensor. Advanced Healthcare Materials, 2016, 5, 3004-3015.	7.6	25
119	Polymethacrylamide and Carbon Composites that Grow, Strengthen, and Selfâ€Repair using Ambient Carbon Dioxide Fixation. Advanced Materials, 2018, 30, e1804037.	21.0	25
120	Lowâ€Temperature Growth of Carbon Nanotubes Catalyzed by Sodiumâ€Based Ingredients. Angewandte Chemie - International Edition, 2019, 58, 9204-9209.	13.8	25
121	Antibody-Free Rapid Detection of SARS-CoV-2 Proteins Using Corona Phase Molecular Recognition to Accelerate Development Time. Analytical Chemistry, 2021, 93, 14685-14693.	6.5	25
122	Oxidative Chemical Vapor Deposition of Neutral Hole Transporting Polymer for Enhanced Solar Cell Efficiency and Lifetime. Advanced Materials, 2016, 28, 6399-6404.	21.0	23
123	Observation of the Marcus Inverted Region of Electron Transfer from Asymmetric Chemical Doping of Pristine (n,m) Single-Walled Carbon Nanotubes. Journal of the American Chemical Society, 2017, 139, 15328-15336.	13.7	23
124	A Fiber Optic Interface Coupled to Nanosensors: Applications to Protein Aggregation and Organic Molecule Quantification. ACS Nano, 2020, 14, 10141-10152.	14.6	21
125	Sustainable power sources based on high efficiency thermopower wave devices. Energy and Environmental Science, 2016, 9, 1290-1298.	30.8	20
126	Measuring the Accessible Surface Area within the Nanoparticle Corona Using Molecular Probe Adsorption. Nano Letters, 2019, 19, 7712-7724.	9.1	20

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127	Immobilization and Function of nIR-Fluorescent Carbon Nanotube Sensors on Paper Substrates for Fluidic Manipulation. Analytical Chemistry, 2020, 92, 916-923.	6.5	20
128	Synthesis and Physicochemical Transformations of Sizeâ€Sorted Graphene Oxide during Simulated Digestion and Its Toxicological Assessment against an In Vitro Model of the Human Intestinal Epithelium. Small, 2020, 16, e1907640.	10.0	20
129	Diameter Dependence of Water Filling in Lithographically Segmented Isolated Carbon Nanotubes. ACS Nano, 2021, 15, 2778-2790.	14.6	20
130	Genetic Manipulation of M13 Bacteriophage for Enhancing the Efficiency of Virusâ€Inoculated Perovskite Solar Cells with a Certified Efficiency of 22.3%. Advanced Energy Materials, 2021, 11, 2101221.	19.5	20
131	Electrical Energy Generation via Reversible Chemical Doping on Carbon Nanotube Fibers. Advanced Materials, 2016, 28, 9752-9757.	21.0	19
132	Selective Assembly of DNA-Conjugated Single-Walled Carbon Nanotubes from the Vascular Secretome. ACS Nano, 2014, 8, 9126-9136.	14.6	18
133	Toward Ambient Armor: Can New Materials Change Longstanding Concepts of Projectile Protection?. Advanced Functional Materials, 2016, 26, 943-954.	14.9	18
134	Persistent energy harvesting in the harsh desert environment using a thermal resonance device: Design, testing, and analysis. Applied Energy, 2019, 235, 1514-1523.	10.1	18
135	DNAâ€“SWCNT Biosensors Allow Real-Time Monitoring of Therapeutic Responses in Pancreatic Ductal Adenocarcinoma. Cancer Research, 2019, 79, 4515-4523.	0.9	17
136	Substituent Effects on Energetics of Peptide-Carboxylate Hydrogen Bonds as Studied by ¹H NMR Spectroscopy: Implications for Enzyme Catalysis. Journal of Organic Chemistry, 2013, 78, 11765-11771.	3.2	16
137	A synthetic mimic of phosphodiesterase type 5 based on corona phase molecular recognition of single-walled carbon nanotubes. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 26616-26625.	7.1	16
138	High Thermal Effusivity Nanocarbon Materials for Resonant Thermal Energy Harvesting. Small, 2021, 17, e2006752.	10.0	16
139	Cellular lensing and near infrared fluorescent nanosensor arrays to enable chemical efflux cytometry. Nature Communications, 2021, 12, 3079.	12.8	16
140	Solvent-induced electrochemistry at an electrically asymmetric carbon Janus particle. Nature Communications, 2021, 12, 3415.	12.8	14
141	Buckling, crumpling, and tumbling of semiflexible sheets in simple shear flow. Soft Matter, 2021, 17, 4707-4718.	2.7	14
142	Functional DNA Origami Devices. Science, 2012, 338, 890-891.	12.6	13
143	Persistently Auxetic Materials: Engineering the Poisson Ratio of 2D Self-Avoiding Membranes under Conditions of Non-Zero Anisotropic Strain. ACS Nano, 2016, 10, 7542-7549.	14.6	13
144	Singleâ€Particle Tracking for Understanding Polydisperse Nanoparticle Dispersions. Small, 2019, 15, 1901468.	10.0	13

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145	Augmenting the living plant mesophyll into a photonic capacitor. Science Advances, 2021, 7, eabe9733.	10.3	13
146	A conceptual advance that gives microrobots legs. Nature, 2020, 584, 530-531.	27.8	13
147	Semiconducting Singleâ€Walled Carbon Nanotubes as Radical Photoinitiators. Macromolecular Chemistry and Physics, 2011, 212, 1469-1473.	2.2	12
148	Molecular interactions of polyimides with single-walled carbon nanotubes. Polymer Chemistry, 2013, 4, 290-295.	3.9	12
149	Deterministic modelling of carbon nanotube near-infrared solar cells. Energy and Environmental Science, 2014, 7, 3769-3781.	30.8	12
150	Observation and analysis of the Coulter effect through carbon nanotube and graphene nanopores. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20150357.	3.4	12
151	Noble-gas-infused neoprene closed-cell foams achieving ultra-low thermal conductivity fabrics. RSC Advances, 2018, 8, 21389-21398.	3.6	12
152	Multiâ€source ambient energy harvester based on RF and thermal energy: Design, testing, and IoT application. Energy Science and Engineering, 2020, 8, 3883-3897.	4.0	12
153	Connecting Rodent and Human Pharmacokinetic Models for the Design and Translation of Glucose-Responsive Insulin. Diabetes, 2020, 69, 1815-1826.	0.6	12
154	Characterization of Protein Aggregation Using Hydrogel-Encapsulated nIR Fluorescent Nanoparticle Sensors. ACS Sensors, 2020, 5, 327-337.	7.8	12
155	Applicability of Birthâ€“Death Markov Modeling for Single-Molecule Counting Using Single-Walled Carbon Nanotube Fluorescent Sensor Arrays. Journal of Physical Chemistry Letters, 2011, 2, 1690-1694.	4.6	11
156	Superadiabaticity in reaction waves as a mechanism for energy concentration. Energy and Environmental Science, 2014, 7, 3391-3402.	30.8	11
157	Biological Impacts of Reduced Graphene Oxide Affected by Protein Corona Formation. Chemical Research in Toxicology, 2022, 35, 1244-1256.	3.3	11
158	Rational Design of Glucoseâ€Responsive Insulin Using Pharmacokinetic Modeling. Advanced Healthcare Materials, 2017, 6, 1700601.	7.6	10
159	Transcutaneous Measurement of Essential Vitamins Using Nearâ€Infrared Fluorescent Singleâ€Walled Carbon Nanotube Sensors. Small, 2021, 17, e2100540.	10.0	10
160	Biotransformations and cytotoxicity of graphene and inorganic two-dimensional nanomaterials using simulated digestions coupled with a triculture in vitro model of the human gastrointestinal epithelium. Environmental Science: Nano, 2021, 8, 3233-3249.	4.3	10
161	New concepts in molecular and energy transport within carbon nanotubes: Thermopower waves and stochastically resonant ion channels. Physica Status Solidi (B): Basic Research, 2011, 248, 2445-2448.	1.5	9
162	A Quantitative and Predictive Model of Electromigration-Induced Breakdown of Metal Nanowires. Journal of Physical Chemistry C, 2013, 117, 12373-12378.	3.1	9

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163	Enhanced Charge Carrier Mobility in Twoâ€Dimensional High Dielectric Molybdenum Oxide (Adv. Mater.) Tj ETQq1 1 0.784314 rgBT /Ov	21.0	9
164	The chemical engineering of lowâ€dimensional materials. AICHE Journal, 2011, 57, 1104-1118.	3.6	8
165	Relaxation dynamics of carbon nanotubes of enriched chiralities. Physical Review B, 2014, 90, .	3.2	8
166	In Vivo Delivery of Nitric Oxideâ€Sensing, Singleâ€Walled Carbon Nanotubes. Current Protocols in Chemical Biology, 2015, 7, 93-102.	1.7	8
167	Persistent, single-polarity energy harvesting from ambient thermal fluctuations using a thermal resonance device with thermal diodes. Applied Energy, 2020, 280, 115881.	10.1	8
168	Memristor Circuits for Colloidal Robotics: Temporal Access to Memory, Sensing, and Actuation. Advanced Intelligent Systems, 2022, 4, .	6.1	8
169	A Compositional Window of Kinetic Stability for Amphiphilic Polymers and Colloidal Nanorods. Journal of Physical Chemistry C, 2011, 115, 7164-7170.	3.1	7
170	Analytical solution for transient partitioning and reaction of a condensing vapor species in a droplet. Atmospheric Environment, 2014, 89, 651-654.	4.1	7
171	An Analytical Solution for Exciton Generation, Reaction, and Diffusion in Nanotube and Nanowire-Based Solar Cells. Journal of Physical Chemistry Letters, 2016, 7, 2683-2688.	4.6	7
172	Autoperforation of two-dimensional materials to generate colloidal state machines capable of locomotion. Faraday Discussions, 2021, 227, 213-232.	3.2	7
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