

Michael S Strano

List of Publications by Citations

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190
papers

38,041
citations

65
h-index

195
g-index

204
ext. papers

42,694
ext. citations

14.2
avg, IF

7.4
L-index

#	Paper	IF	Citations
190	Electronics and optoelectronics of two-dimensional transition metal dichalcogenides. <i>Nature Nanotechnology</i> , 2012 , 7, 699-712	28.7	10871
189	Band gap fluorescence from individual single-walled carbon nanotubes. <i>Science</i> , 2002 , 297, 593-6	33.3	3262
188	Liquid Exfoliation of Layered Materials. <i>Science</i> , 2013 , 340, 1226419-1226419	33.3	2604
187	Structure-assigned optical spectra of single-walled carbon nanotubes. <i>Science</i> , 2002 , 298, 2361-6	33.3	2547
186	Recent Advances in Two-Dimensional Materials beyond Graphene. <i>ACS Nano</i> , 2015 , 9, 11509-39	16.7	1581
185	Individually Suspended Single-Walled Carbon Nanotubes in Various Surfactants. <i>Nano Letters</i> , 2003 , 3, 1379-1382	11.5	1425
184	Structure-based carbon nanotube sorting by sequence-dependent DNA assembly. <i>Science</i> , 2003 , 302, 1545-8	33.3	1399
183	High-resolution electrohydrodynamic jet printing. <i>Nature Materials</i> , 2007 , 6, 782-9	27	1011
182	Near-infrared optical sensors based on single-walled carbon nanotubes. <i>Nature Materials</i> , 2005 , 4, 86-92	27	771
181	Plant nanobionics approach to augment photosynthesis and biochemical sensing. <i>Nature Materials</i> , 2014 , 13, 400-8	27	612
180	Anomalously large reactivity of single graphene layers and edges toward electron transfer chemistries. <i>Nano Letters</i> , 2010 , 10, 398-405	11.5	433
179	The role of surfactant adsorption during ultrasonication in the dispersion of single-walled carbon nanotubes. <i>Journal of Nanoscience and Nanotechnology</i> , 2003 , 3, 81-6	1.3	418
178	Understanding and controlling the substrate effect on graphene electron-transfer chemistry via reactivity imprint lithography. <i>Nature Chemistry</i> , 2012 , 4, 724-32	17.6	407
177	Reversible, Band-Gap-Selective Protonation of Single-Walled Carbon Nanotubes in Solution. <i>Journal of Physical Chemistry B</i> , 2003 , 107, 6979-6985	3.4	321
176	Enhanced charge carrier mobility in two-dimensional high dielectric molybdenum oxide. <i>Advanced Materials</i> , 2013 , 25, 109-14	24	296
175	Breakdown in the wetting transparency of graphene. <i>Physical Review Letters</i> , 2012 , 109, 176101	7.4	268
174	In vivo biosensing via tissue-localizable near-infrared-fluorescent single-walled carbon nanotubes. <i>Nature Nanotechnology</i> , 2013 , 8, 873-80	28.7	257

173	Two-Dimensional Transition Metal Dichalcogenides in Biosystems. <i>Advanced Functional Materials</i> , 2015 , 25, 5086-5099	15.6	256
172	Chemically driven carbon-nanotube-guided thermopower waves. <i>Nature Materials</i> , 2010 , 9, 423-9	27	256
171	Multimodal optical sensing and analyte specificity using single-walled carbon nanotubes. <i>Nature Nanotechnology</i> , 2009 , 4, 114-20	28.7	255
170	Carbon nanotubes as optical biomedical sensors. <i>Advanced Drug Delivery Reviews</i> , 2013 , 65, 1933-50	18.5	245
169	Covalent electron transfer chemistry of graphene with diazonium salts. <i>Accounts of Chemical Research</i> , 2013 , 46, 160-70	24.3	231
168	In vivo fluorescence detection of glucose using a single-walled carbon nanotube optical sensor: design, fluorophore properties, advantages, and disadvantages. <i>Analytical Chemistry</i> , 2005 , 77, 7556-62	7.8	219
167	M13 phage-functionalized single-walled carbon nanotubes as nanoprobe for second near-infrared window fluorescence imaging of targeted tumors. <i>Nano Letters</i> , 2012 , 12, 1176-1183	11.5	217
166	Chloroplast-selective gene delivery and expression in planta using chitosan-complexed single-walled carbon nanotube carriers. <i>Nature Nanotechnology</i> , 2019 , 14, 447-455	28.7	214
165	The rational design of nitric oxide selectivity in single-walled carbon nanotube near-infrared fluorescence sensors for biological detection. <i>Nature Chemistry</i> , 2009 , 1, 473-81	17.6	212
164	Coherence resonance in a single-walled carbon nanotube ion channel. <i>Science</i> , 2010 , 329, 1320-4	33.3	208
163	Neurotransmitter detection using corona phase molecular recognition on fluorescent single-walled carbon nanotube sensors. <i>Journal of the American Chemical Society</i> , 2014 , 136, 713-24	16.4	205
162	Molecular recognition using corona phase complexes made of synthetic polymers adsorbed on carbon nanotubes. <i>Nature Nanotechnology</i> , 2013 , 8, 959-68	28.7	205
161	Detection of single-molecule H ₂ O ₂ signalling from epidermal growth factor receptor using fluorescent single-walled carbon nanotubes. <i>Nature Nanotechnology</i> , 2010 , 5, 302-9	28.7	205
160	Wetting translucency of graphene. <i>Nature Materials</i> , 2013 , 12, 866-9	27	198
159	Observation of extreme phase transition temperatures of water confined inside isolated carbon nanotubes. <i>Nature Nanotechnology</i> , 2017 , 12, 267-273	28.7	181
158	Solvatochromism in single-walled carbon nanotubes. <i>Applied Physics Letters</i> , 2007 , 90, 223114	3.4	173
157	Nitroaromatic detection and infrared communication from wild-type plants using plant nanobionics. <i>Nature Materials</i> , 2017 , 16, 264-272	27	162
156	Protein functionalized carbon nanomaterials for biomedical applications. <i>Carbon</i> , 2015 , 95, 767-779	10.4	147

155	Generalized Mechanistic Model for the Chemical Vapor Deposition of 2D Transition Metal Dichalcogenide Monolayers. <i>ACS Nano</i> , 2016 , 10, 4330-44	16.7	147
154	Single molecule detection of nitric oxide enabled by d(AT) ₁₅ DNA adsorbed to near infrared fluorescent single-walled carbon nanotubes. <i>Journal of the American Chemical Society</i> , 2011 , 133, 567-81	16.4	140
153	High-Performance Field Effect Transistors Using Electronic Inks of 2D Molybdenum Oxide Nanoflakes. <i>Advanced Functional Materials</i> , 2016 , 26, 91-100	15.6	140
152	Lipid Exchange Envelope Penetration (LEEP) of Nanoparticles for Plant Engineering: A Universal Localization Mechanism. <i>Nano Letters</i> , 2016 , 16, 1161-72	11.5	139
151	Protein-targeted corona phase molecular recognition. <i>Nature Communications</i> , 2016 , 7, 10241	17.4	137
150	Mechanisms of gas permeation through single layer graphene membranes. <i>Langmuir</i> , 2012 , 28, 16671-84	4	132
149	Single-molecule detection of protein efflux from microorganisms using fluorescent single-walled carbon nanotube sensor arrays. <i>Nature Nanotechnology</i> , 2017 , 12, 368-377	28.7	127
148	Reversible control of carbon nanotube aggregation for a glucose affinity sensor. <i>Angewandte Chemie - International Edition</i> , 2006 , 45, 8138-41	16.4	125
147	Critical Knowledge Gaps in Mass Transport through Single-Digit Nanopores: A Review and Perspective. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 21309-21326	3.8	121
146	Dynamics of surfactant-suspended single-walled carbon nanotubes in a centrifugal field. <i>Langmuir</i> , 2008 , 24, 1790-5	4	115
145	Single-layer graphene membranes by crack-free transfer for gas mixture separation. <i>Nature Communications</i> , 2018 , 9, 2632	17.4	111
144	A Ratiometric Sensor Using Single Chirality Near-Infrared Fluorescent Carbon Nanotubes: Application to In Vivo Monitoring. <i>Small</i> , 2015 , 11, 3973-84	11	103
143	Nanosensor Technology Applied to Living Plant Systems. <i>Annual Review of Analytical Chemistry</i> , 2017 , 10, 113-140	12.5	102
142	Near-infrared fluorescent sensors based on single-walled carbon nanotubes for life sciences applications. <i>ChemSusChem</i> , 2011 , 4, 848-63	8.3	102
141	Current and future directions in electron transfer chemistry of graphene. <i>Chemical Society Reviews</i> , 2017 , 46, 4530-4571	58.5	101
140	High-resolution imaging of cellular dopamine efflux using a fluorescent nanosensor array. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 1789-1794	11.5	100
139	Molecular valves for controlling gas phase transport made from discrete 8-10 Å-sized pores in graphene. <i>Nature Nanotechnology</i> , 2015 , 10, 785-90	28.7	100
138	Diameter-dependent ion transport through the interior of isolated single-walled carbon nanotubes. <i>Nature Communications</i> , 2013 , 4, 2397	17.4	100

137	Layered and scrolled nanocomposites with aligned semi-infinite graphene inclusions at the platelet limit. <i>Science</i> , 2016 , 353, 364-7	33.3	94
136	A structure-reactivity relationship for single walled carbon nanotubes reacting with 4-hydroxybenzene diazonium salt. <i>Journal of the American Chemical Society</i> , 2007 , 129, 3946-54	16.4	91
135	Application of Nanoparticle Antioxidants to Enable Hyperstable Chloroplasts for Solar Energy Harvesting. <i>Advanced Energy Materials</i> , 2013 , 3, 881-893	21.8	80
134	Label-free, single protein detection on a near-infrared fluorescent single-walled carbon nanotube/protein microarray fabricated by cell-free synthesis. <i>Nano Letters</i> , 2011 , 11, 2743-52	11.5	79
133	Emerging Trends in Micro- and Nanoscale Technologies in Medicine: From Basic Discoveries to Translation. <i>ACS Nano</i> , 2017 , 11, 5195-5214	16.7	78
132	Mechanism and Prediction of Gas Permeation through Sub-Nanometer Graphene Pores: Comparison of Theory and Simulation. <i>ACS Nano</i> , 2017 , 11, 7974-7987	16.7	78
131	Real-time detection of wound-induced HO signalling waves in plants with optical nanosensors. <i>Nature Plants</i> , 2020 , 6, 404-415	11.5	78
130	Stochastic analysis of stepwise fluorescence quenching reactions on single-walled carbon nanotubes: single molecule sensors. <i>Nano Letters</i> , 2008 , 8, 4299-304	11.5	76
129	Glucose-responsive insulin by molecular and physical design. <i>Nature Chemistry</i> , 2017 , 9, 937-943	17.6	72
128	Modulation of single-walled carbon nanotube photoluminescence by hydrogel swelling. <i>ACS Nano</i> , 2009 , 3, 3869-77	16.7	72
127	Spatiotemporal intracellular nitric oxide signaling captured using internalized, near-infrared fluorescent carbon nanotube nanosensors. <i>Nano Letters</i> , 2014 , 14, 4887-94	11.5	67
126	A Nanobionic Light-Emitting Plant. <i>Nano Letters</i> , 2017 , 17, 7951-7961	11.5	66
125	A kinetic model for the deterministic prediction of gel-based single-chirality single-walled carbon nanotube separation. <i>ACS Nano</i> , 2013 , 7, 1779-89	16.7	65
124	Boronic acid library for selective, reversible near-infrared fluorescence quenching of surfactant suspended single-walled carbon nanotubes in response to glucose. <i>ACS Nano</i> , 2012 , 6, 819-30	16.7	63
123	Comparative Dynamics and Sequence Dependence of DNA and RNA Binding to Single Walled Carbon Nanotubes. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 10048-10058	3.8	61
122	A rapid, direct, quantitative, and label-free detector of cardiac biomarker troponin T using near-infrared fluorescent single-walled carbon nanotube sensors. <i>Advanced Healthcare Materials</i> , 2014 , 3, 412-23	10.1	61
121	Recent advances in molecular recognition based on nanoengineered platforms. <i>Accounts of Chemical Research</i> , 2014 , 47, 979-88	24.3	59
120	Single-molecule detection of HD \square mediating angiogenic redox signaling on fluorescent single-walled carbon nanotube array. <i>ACS Nano</i> , 2011 , 5, 7848-57	16.7	59

119	Quantitative Modeling of MoS ₂ /Solvent Interfaces: Predicting Contact Angles and Exfoliation Performance using Molecular Dynamics. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 9022-9031	3.8	58
118	Excess thermopower and the theory of thermopower waves. <i>ACS Nano</i> , 2013 , 7, 6533-44	16.7	58
117	Chirality dependent corona phase molecular recognition of DNA-wrapped carbon nanotubes. <i>Carbon</i> , 2016 , 97, 147-153	10.4	57
116	Disorder imposed limits of mono- and bilayer graphene electronic modification using covalent chemistry. <i>Nano Letters</i> , 2013 , 13, 809-17	11.5	55
115	Rational Design Principles for the Transport and Subcellular Distribution of Nanomaterials into Plant Protoplasts. <i>Small</i> , 2018 , 14, e1802086	11	52
114	Dominance of Dispersion Interactions and Entropy over Electrostatics in Determining the Wettability and Friction of Two-Dimensional MoS Surfaces. <i>ACS Nano</i> , 2016 , 10, 9145-9155	16.7	50
113	Insulin Detection Using a Corona Phase Molecular Recognition Site on Single-Walled Carbon Nanotubes. <i>ACS Sensors</i> , 2018 , 3, 367-377	9.2	47
112	Transduction of glycan-lectin binding using near-infrared fluorescent single-walled carbon nanotubes for glycan profiling. <i>Journal of the American Chemical Society</i> , 2011 , 133, 17923-33	16.4	47
111	Emerging trends in 2D nanotechnology that are redefining our understanding of Nanocomposites. <i>Nano Today</i> , 2018 , 21, 18-40	17.9	47
110	Understanding surfactant/graphene interactions using a graphene field effect transistor: relating molecular structure to hysteresis and carrier mobility. <i>Langmuir</i> , 2012 , 28, 8579-86	4	46
109	Ionic Strength-Mediated Phase Transitions of Surface-Adsorbed DNA on Single-Walled Carbon Nanotubes. <i>Journal of the American Chemical Society</i> , 2017 , 139, 16791-16802	16.4	45
108	Observation of oscillatory surface reactions of riboflavin, trolox, and singlet oxygen using single carbon nanotube fluorescence spectroscopy. <i>ACS Nano</i> , 2012 , 6, 10632-45	16.7	45
107	Autoperforation of 2D materials for generating two-terminal memristive Janus particles. <i>Nature Materials</i> , 2018 , 17, 1005-1012	27	45
106	Stable, Temperature-Dependent Gas Mixture Permeation and Separation through Suspended Nanoporous Single-Layer Graphene Membranes. <i>Nano Letters</i> , 2018 , 18, 5057-5069	11.5	42
105	Mechanism of immobilized protein A binding to immunoglobulin G on nanosensor array surfaces. <i>Analytical Chemistry</i> , 2015 , 87, 8186-93	7.8	41
104	Banning carbon nanotubes would be scientifically unjustified and damaging to innovation. <i>Nature Nanotechnology</i> , 2020 , 15, 164-166	28.7	40
103	Evolution of physical and electronic structures of bilayer graphene upon chemical functionalization. <i>Journal of the American Chemical Society</i> , 2013 , 135, 18866-75	16.4	39
102	The Emergence of Plant Nanobionics and Living Plants as Technology. <i>Advanced Materials Technologies</i> , 2020 , 5, 1900657	6.8	39

101	Surface Water Dependent Properties of Sulfur-Rich Molybdenum Sulfides: Electrolyteless Gas Phase Water Splitting. <i>ACS Nano</i> , 2017 , 11, 6782-6794	16.7	38
100	Emergent properties of nanosensor arrays: applications for monitoring IgG affinity distributions, weakly affined hypermannosylation, and colony selection for biomanufacturing. <i>ACS Nano</i> , 2013 , 7, 7472-82	16.7	38
99	Competitive Binding in Mixed Surfactant Systems for Single-Walled Carbon Nanotube Separation. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 22737-22745	3.8	37
98	Experimental tools to study molecular recognition within the nanoparticle corona. <i>Sensors</i> , 2014 , 14, 16196-211	3.8	37
97	Addressing the isomer cataloguing problem for nanopores in two-dimensional materials. <i>Nature Materials</i> , 2019 , 18, 129-135	27	37
96	Colloidal nanoelectronic state machines based on 2D materials for aerosolizable electronics. <i>Nature Nanotechnology</i> , 2018 , 13, 819-827	28.7	36
95	Carbon science perspective in 2020: Current research and future challenges. <i>Carbon</i> , 2020 , 161, 373-391	10.4	35
94	Low Dimensional Carbon Materials for Applications in Mass and Energy Transport. <i>Chemistry of Materials</i> , 2014 , 26, 172-183	9.6	35
93	Dynamics of simultaneous, single ion transport through two single-walled carbon nanotubes: observation of a three-state system. <i>Journal of the American Chemical Society</i> , 2011 , 133, 203-5	16.4	35
92	A study of bilayer phosphorene stability under MoS ₂ -passivation. <i>2D Materials</i> , 2017 , 4, 025091	5.9	33
91	Ab Initio Molecular Dynamics and Lattice Dynamics-Based Force Field for Modeling Hexagonal Boron Nitride in Mechanical and Interfacial Applications. <i>Journal of Physical Chemistry Letters</i> , 2018 , 9, 1584-1591	6.4	33
90	Persistent drought monitoring using a microfluidic-printed electro-mechanical sensor of stomata in planta. <i>Lab on A Chip</i> , 2017 , 17, 4015-4024	7.2	33
89	Prediction of protein corona on nanomaterials by machine learning using novel descriptors. <i>NanoImpact</i> , 2020 , 17, 100207-100207	5.6	32
88	Quantitative Tissue Spectroscopy of Near Infrared Fluorescent Nanosensor Implants. <i>Journal of Biomedical Nanotechnology</i> , 2016 , 12, 1035-47	4	32
87	Analytical Prediction of Gas Permeation through Graphene Nanopores of Varying Sizes: Understanding Transitions across Multiple Transport Regimes. <i>ACS Nano</i> , 2019 , 13, 11809-11824	16.7	31
86	Large-area synthesis of 2D MoO ₃ for enhanced optoelectronic applications. <i>2D Materials</i> , 2019 , 6, 035031	5.9	31
85	A Mathematical Formulation and Solution of the CoPhMoRe Inverse Problem for Helically Wrapping Polymer Corona Phases on Cylindrical Substrates. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 13876-13886	3.8	31
84	Nanophotonic biosensors harnessing van der Waals materials. <i>Nature Communications</i> , 2021 , 12, 3824	17.4	31

83	A pharmacokinetic model of a tissue implantable insulin sensor. <i>Advanced Healthcare Materials</i> , 2015 , 4, 87-97	10.1	30
82	A graphene-based physiometer array for the analysis of single biological cells. <i>Scientific Reports</i> , 2014 , 4, 6865	4.9	29
81	Plant Nanobionic Sensors for Arsenic Detection. <i>Advanced Materials</i> , 2021 , 33, e2005683	24	29
80	Understanding the colloidal dispersion stability of 1D and 2D materials: Perspectives from molecular simulations and theoretical modeling. <i>Advances in Colloid and Interface Science</i> , 2017 , 244, 36-53	14.3	28
79	CVD growth of carbon nanostructures from zirconia: mechanisms and a method for enhancing yield. <i>Journal of the American Chemical Society</i> , 2014 , 136, 17808-17	16.4	27
78	Fabrication, Pressure Testing, and Nanopore Formation of Single-Layer Graphene Membranes. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 14312-14321	3.8	26
77	Direct Electricity Generation Mediated by Molecular Interactions with Low Dimensional Carbon Materials: A Mechanistic Perspective. <i>Advanced Energy Materials</i> , 2018 , 8, 1802212	21.8	26
76	Liquids with Lower Wettability Can Exhibit Higher Friction on Hexagonal Boron Nitride: The Intriguing Role of Solid-Liquid Electrostatic Interactions. <i>Nano Letters</i> , 2019 , 19, 1539-1551	11.5	25
75	Analysis of Multiplexed Nanosensor Arrays Based on Near-Infrared Fluorescent Single-Walled Carbon Nanotubes. <i>ACS Nano</i> , 2018 , 12, 3769-3779	16.7	25
74	Analysis of Time-Varying, Stochastic Gas Transport through Graphene Membranes. <i>ACS Nano</i> , 2016 , 10, 786-95	16.7	23
73	Understanding and Analyzing Freezing-Point Transitions of Confined Fluids within Nanopores. <i>Langmuir</i> , 2015 , 31, 10113-8	4	22
72	A Pharmacokinetic Model of a Tissue Implantable Cortisol Sensor. <i>Advanced Healthcare Materials</i> , 2016 , 5, 3004-3015	10.1	20
71	2D equation-of-state model for corona phase molecular recognition on single-walled carbon nanotube and graphene surfaces. <i>Langmuir</i> , 2015 , 31, 628-36	4	20
70	Implantable Nanosensors for Human Steroid Hormone Sensing In Vivo Using a Self-Templating Corona Phase Molecular Recognition. <i>Advanced Healthcare Materials</i> , 2020 , 9, e2000429	10.1	19
69	Observation of the Marcus Inverted Region of Electron Transfer from Asymmetric Chemical Doping of Pristine (n,m) Single-Walled Carbon Nanotubes. <i>Journal of the American Chemical Society</i> , 2017 , 139, 15328-15336	16.4	18
68	Carbon Nanotubes as Molecular Conduits: Advances and Challenges for Transport through Isolated Sub-2 nm Pores. <i>Journal of Physical Chemistry Letters</i> , 2011 , 2, 2892-2896	6.4	18
67	Sustainable power sources based on high efficiency thermopower wave devices. <i>Energy and Environmental Science</i> , 2016 , 9, 1290-1298	35.4	18
66	Implanted Nanosensors in Marine Organisms for Physiological Biologging: Design, Feasibility, and Species Variability. <i>ACS Sensors</i> , 2019 , 4, 32-43	9.2	18

65	Nanocarriers for Transgene Expression in Pollen as a Plant Biotechnology Tool 2020 , 2, 1057-1066		17
64	Polymethacrylamide and Carbon Composites that Grow, Strengthen, and Self-Repair using Ambient Carbon Dioxide Fixation. <i>Advanced Materials</i> , 2018 , 30, e1804037	24	16
63	High-Resolution Nanoparticle Sizing with Maximum A Posteriori Nanoparticle Tracking Analysis. <i>ACS Nano</i> , 2019 , 13, 3940-3952	16.7	15
62	Electrical Energy Generation via Reversible Chemical Doping on Carbon Nanotube Fibers. <i>Advanced Materials</i> , 2016 , 28, 9752-9757	24	15
61	Stochastic Pore Blocking and Gating in PDMS Glass Nanopores from Vapor-Liquid Phase Transitions. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 9641-9651	3.8	15
60	Species-independent analytical tools for next-generation agriculture. <i>Nature Plants</i> , 2020 , 6, 1408-1417	11.5	15
59	Electrokinetic Transport of Methanol and Lithium Ions Through a 2.25-nm-Diameter Carbon Nanotube Nanopore. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 2005-2013	3.8	14
58	Carbon nanotubes: A bright future for defects. <i>Nature Chemistry</i> , 2013 , 5, 812-3	17.6	14
57	Persistent energy harvesting in the harsh desert environment using a thermal resonance device: Design, testing, and analysis. <i>Applied Energy</i> , 2019 , 235, 1514-1523	10.7	14
56	Synthesis and Physicochemical Transformations of Size-Sorted Graphene Oxide during Simulated Digestion and Its Toxicological Assessment against an In Vitro Model of the Human Intestinal Epithelium. <i>Small</i> , 2020 , 16, e1907640	11	13
55	Measuring the Accessible Surface Area within the Nanoparticle Corona Using Molecular Probe Adsorption. <i>Nano Letters</i> , 2019 , 19, 7712-7724	11.5	12
54	Persistently Auxetic Materials: Engineering the Poisson Ratio of 2D Self-Avoiding Membranes under Conditions of Non-Zero Anisotropic Strain. <i>ACS Nano</i> , 2016 , 10, 7542-9	16.7	12
53	Low-Temperature Growth of Carbon Nanotubes Catalyzed by Sodium-Based Ingredients. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 9204-9209	16.4	11
52	Selective assembly of DNA-conjugated single-walled carbon nanotubes from the vascular secretome. <i>ACS Nano</i> , 2014 , 8, 9126-36	16.7	11
51	Generating selective saccharide binding affinity of phenyl boronic acids by using single-walled carbon nanotube corona phases. <i>Chemistry - A European Journal</i> , 2015 , 21, 4523-8	4.8	11
50	The double-resonance Raman spectra in single-chirality (n, m) carbon nanotubes. <i>Carbon</i> , 2017 , 117, 41-45	15.4	10
49	Immobilization and Function of nIR-Fluorescent Carbon Nanotube Sensors on Paper Substrates for Fluidic Manipulation. <i>Analytical Chemistry</i> , 2020 , 92, 916-923	7.8	10
48	A Fiber Optic Interface Coupled to Nanosensors: Applications to Protein Aggregation and Organic Molecule Quantification. <i>ACS Nano</i> , 2020 , 14, 10141-10152	16.7	10

47	Predicting Gas Separation through Graphene Nanopore Ensembles with Realistic Pore Size Distributions. <i>ACS Nano</i> , 2021 , 15, 1727-1740	16.7	10
46	Buckling, crumpling, and tumbling of semiflexible sheets in simple shear flow. <i>Soft Matter</i> , 2021 , 17, 4707-4718	3.6	10
45	Endotoxin-Free Preparation of Graphene Oxide and Graphene-Based Materials for Biological Applications. <i>Current Protocols in Chemical Biology</i> , 2018 , 10, e51	1.8	9
44	Noble-gas-infused neoprene closed-cell foams achieving ultra-low thermal conductivity fabrics.. <i>RSC Advances</i> , 2018 , 8, 21389-21398	3.7	8
43	Antibody-Free Rapid Detection of SARS-CoV-2 Proteins Using Corona Phase Molecular Recognition to Accelerate Development Time. <i>Analytical Chemistry</i> , 2021 , 93, 14685-14693	7.8	8
42	A virucidal face mask based on the reverse-flow reactor concept for thermal inactivation of SARS-CoV-2. <i>AIChE Journal</i> , 2021 , 67, e17250	3.6	8
41	Nanosensor Detection of Synthetic Auxins using Corona Phase Molecular Recognition. <i>ACS Sensors</i> , 2021 , 6, 3032-3046	9.2	8
40	Direct Chemical Vapor Deposition Synthesis of Porous Single-Layer Graphene Membranes with High Gas Permeances and Selectivities. <i>Advanced Materials</i> , 2021 , 33, e2104308	24	8
39	Single-Particle Tracking for Understanding Polydisperse Nanoparticle Dispersions. <i>Small</i> , 2019 , 15, e1901468	14.68	7
38	Rational Design of Glucose-Responsive Insulin Using Pharmacokinetic Modeling. <i>Advanced Healthcare Materials</i> , 2017 , 6, 1700601	10.1	7
37	A Quantitative and Predictive Model of Electromigration-Induced Breakdown of Metal Nanowires. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 12373-12378	3.8	7
36	Connecting Rodent and Human Pharmacokinetic Models for the Design and Translation of Glucose-Responsive Insulin. <i>Diabetes</i> , 2020 , 69, 1815-1826	0.9	6
35	Characterization of Protein Aggregation Using Hydrogel-Encapsulated nIR Fluorescent Nanoparticle Sensors. <i>ACS Sensors</i> , 2020 , 5, 327-337	9.2	6
34	DNA-SWCNT Biosensors Allow Real-Time Monitoring of Therapeutic Responses in Pancreatic Ductal Adenocarcinoma. <i>Cancer Research</i> , 2019 , 79, 4515-4523	10.1	6
33	In Vivo Delivery of Nitric Oxide-Sensing, Single-Walled Carbon Nanotubes. <i>Current Protocols in Chemical Biology</i> , 2015 , 7, 93-102	1.8	6
32	Engineering Two-dimensional Nanomaterials to Enable Structure-Activity Relationship Studies in Nanosafety Research. <i>NanoImpact</i> , 2020 , 18, 100226-100226	5.6	6
31	The Exterior of Single-Walled Carbon Nanotubes as a Millimeter-Long Cation-Preferring Nanochannel. <i>Chemistry of Materials</i> , 2018 , 30, 5184-5193	9.6	5
30	Transport of Amino Acid Cations through a 2.25-nm-Diameter Carbon Nanotube Nanopore: Electrokinetic Motion and Trapping/Desorption. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 27709-27720 ^{3.8}	3.8	5

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