Michael S Strano

List of Publications by Year in Descending Order

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	Size Selective Corona Interactions from Self-Assembled Rosette and Single-Walled Carbon Nanotubes.. *Small*, **2022**, e2104951	11	0
189	Irreversible synthesis of an ultrastrong two-dimensional polymeric material.. *Nature*, **2022**, 602, 91-95	50.4	3
188	Thermally fluctuating, semiflexible sheets in simple shear flow.. *Soft Matter*, **2022**,	3.6	1
187	Gas Separations using Nanoporous Atomically Thin Membranes: Recent Theoretical, Simulation, and Experimental Advances.. *Advanced Materials*, **2022**, e2201472	24	3
186	Differential modulation of endothelial cytoplasmic protrusions after exposure to graphene-family nanomaterials.. *NanoImpact*, **2022**, 26, 100401	5.6	0
185	Impedance of Thermal Conduction from Nanoconfined Water in Carbon Nanotube Single-Digit Nanopores. *Journal of Physical Chemistry C*, **2021**, 125, 25717-25728	3.8	1
184	Antibody-Free Rapid Detection of SARS-CoV-2 Proteins Using Corona Phase Molecular Recognition to Accelerate Development Time. *Analytical Chemistry*, **2021**, 93, 14685-14693	7.8	8
183	A virucidal face mask based on the reverse-flow reactor concept for thermal inactivation of SARS-CoV-2. *AICHE Journal*, **2021**, 67, e17250	3.6	8
182	SynCells: A 60 □60 □m Electronic Platform with Remote Actuation for Sensing Applications in Constrained Environments. *ACS Nano*, **2021**, 15, 8803-8812	16.7	2
181	Cellular lensing and near infrared fluorescent nanosensor arrays to enable chemical efflux cytometry. *Nature Communications*, **2021**, 12, 3079	17.4	4
180	Chemical kinetic mechanisms and scaling of two-dimensional polymers via irreversible solution-phase reactions. *Journal of Chemical Physics*, **2021**, 154, 194901	3.9	4
179	Atomically Precise Control of Carbon Insertion into hBN Monolayer Point Vacancies using a Focused Electron Beam Guide. *Small*, **2021**, 17, e2100693	11	3
178	Transcutaneous Measurement of Essential Vitamins Using Near-Infrared Fluorescent Single-Walled Carbon Nanotube Sensors. *Small*, **2021**, 17, e2100540	11	2
177	Nanophotonic biosensors harnessing van der Waals materials. *Nature Communications*, **2021**, 12, 3824	17.4	31
176	Solvent-induced electrochemistry at an electrically asymmetric carbon Janus particle. *Nature Communications*, **2021**, 12, 3415	17.4	5
175	Autoperforation of two-dimensional materials to generate colloidal state machines capable of locomotion. *Faraday Discussions*, **2021**, 227, 213-232	3.6	3
174	Plant Nanobionic Sensors for Arsenic Detection. *Advanced Materials*, **2021**, 33, e2005683	24	29

173	A mathematical analysis of carbon fixing materials that grow, reinforce, and self-heal from atmospheric carbon dioxide. *Green Chemistry*, **2021**, 23, 5556-5570	10	0
172	Predicting Gas Separation through Graphene Nanopore Ensembles with Realistic Pore Size Distributions. *ACS Nano*, **2021**, 15, 1727-1740	16.7	10
171	Diameter Dependence of Water Filling in Lithographically Segmented Isolated Carbon Nanotubes. *ACS Nano*, **2021**, 15, 2778-2790	16.7	4
170	Nanosensor Detection of Synthetic Auxins using Corona Phase Molecular Recognition. *ACS Sensors*, **2021**, 6, 3032-3046	9.2	8
169	Augmenting the living plant mesophyll into a photonic capacitor. *Science Advances*, **2021**, 7, eabe9733	14.3	2
168	Direct Chemical Vapor Deposition Synthesis of Porous Single-Layer Graphene Membranes with High Gas Permeances and Selectivities. *Advanced Materials*, **2021**, 33, e2104308	24	8
167	Buckling, crumpling, and tumbling of semiflexible sheets in simple shear flow. *Soft Matter*, **2021**, 17, 4707-4718	3.6	10
166	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. *Small*, **2020**, 16, e1907640	11	13
165	Banning carbon nanotubes would be scientifically unjustified and damaging to innovation. *Nature Nanotechnology*, **2020**, 15, 164-166	28.7	40
164	Connecting Rodent and Human Pharmacokinetic Models for the Design and Translation of Glucose-Responsive Insulin. *Diabetes*, **2020**, 69, 1815-1826	0.9	6
163	Highly Ordered Two-Dimensional MoS Archimedean Scroll Bragg Reflectors as Chromatically Adaptive Fibers. *Nano Letters*, **2020**, 20, 3067-3078	11.5	3
162	Carbon science perspective in 2020: Current research and future challenges. *Carbon*, **2020**, 161, 373-391	10.4	35
161	Prediction of protein corona on nanomaterials by machine learning using novel descriptors. *NanoImpact*, **2020**, 17, 100207-100207	5.6	32
160	Characterization of Protein Aggregation Using Hydrogel-Encapsulated nIR Fluorescent Nanoparticle Sensors. *ACS Sensors*, **2020**, 5, 327-337	9.2	6
159	Hygroscopic Micro/Nanolenses along Carbon Nanotube Ion Channels. *Nano Letters*, **2020**, 20, 812-819	11.5	2
158	The Emergence of Plant Nanobionics and Living Plants as Technology. *Advanced Materials Technologies*, **2020**, 5, 1900657	6.8	39
157	Immobilization and Function of nIR-Fluorescent Carbon Nanotube Sensors on Paper Substrates for Fluidic Manipulation. *Analytical Chemistry*, **2020**, 92, 916-923	7.8	10
156	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	11.5	5

155	A Fiber Optic Interface Coupled to Nanosensors: Applications to Protein Aggregation and Organic Molecule Quantification. *ACS Nano*, **2020**, 14, 10141-10152	16.7	10
154	Species-independent analytical tools for next-generation agriculture. *Nature Plants*, **2020**, 6, 1408-1417	11.5	15
153	Nanocarriers for Transgene Expression in Pollen as a Plant Biotechnology Tool **2020**, 2, 1057-1066		17
152	Implantable Nanosensors for Human Steroid Hormone Sensing In Vivo Using a Self-Templating Corona Phase Molecular Recognition. *Advanced Healthcare Materials*, **2020**, 9, e2000429	10.1	19
151	Engineering Two-dimensional Nanomaterials to Enable Structure-Activity Relationship Studies in Nanosafety Research. *NanoImpact*, **2020**, 18, 100226-100226	5.6	6
150	Real-time detection of wound-induced HO signalling waves in plants with optical nanosensors. *Nature Plants*, **2020**, 6, 404-415	11.5	78
149	Analytical Prediction of Gas Permeation through Graphene Nanopores of Varying Sizes: Understanding Transitions across Multiple Transport Regimes. *ACS Nano*, **2019**, 13, 11809-11824	16.7	31
148	Measuring the Accessible Surface Area within the Nanoparticle Corona Using Molecular Probe Adsorption. *Nano Letters*, **2019**, 19, 7712-7724	11.5	12
147	Can Fish and Cell Phones Teach Us about Our Health?. *ACS Sensors*, **2019**, 4, 2566-2570	9.2	1
146	Liquids with Lower Wettability Can Exhibit Higher Friction on Hexagonal Boron Nitride: The Intriguing Role of Solid-Liquid Electrostatic Interactions. *Nano Letters*, **2019**, 19, 1539-1551	11.5	25
145	Low-Temperature Growth of Carbon Nanotubes Catalyzed by Sodium-Based Ingredients. *Angewandte Chemie*, **2019**, 131, 9302-9307	3.6	2
144	Low-Temperature Growth of Carbon Nanotubes Catalyzed by Sodium-Based Ingredients. *Angewandte Chemie - International Edition*, **2019**, 58, 9204-9209	16.4	11
143	Critical Knowledge Gaps in Mass Transport through Single-Digit Nanopores: A Review and Perspective. *Journal of Physical Chemistry C*, **2019**, 123, 21309-21326	3.8	121
142	Large-area synthesis of 2D MoO 3□x for enhanced optoelectronic applications. *2D Materials*, **2019**, 6, 035031	5.9	31
141	High-Resolution Nanoparticle Sizing with Maximum A Posteriori Nanoparticle Tracking Analysis. *ACS Nano*, **2019**, 13, 3940-3952	16.7	15
140	Chloroplast-selective gene delivery and expression in planta using chitosan-complexed single-walled carbon nanotube carriers. *Nature Nanotechnology*, **2019**, 14, 447-455	28.7	214
139	DNA-SWCNT Biosensors Allow Real-Time Monitoring of Therapeutic Responses in Pancreatic Ductal Adenocarcinoma. *Cancer Research*, **2019**, 79, 4515-4523	10.1	6
138	Single-Particle Tracking for Understanding Polydisperse Nanoparticle Dispersions. *Small*, **2019**, 15, e1901468	11	7

137	Addressing the isomer cataloguing problem for nanopores in two-dimensional materials. *Nature Materials*, **2019**, 18, 129-135	27	37
136	Energy harvesting techniques mediated by molecular interactions with nanostructured carbon materials **2019**, 389-424		1
135	Synthetic Cells: Colloidal-sized state machines **2019**, 361-386		0
134	Implanted Nanosensors in Marine Organisms for Physiological Biologging: Design, Feasibility, and Species Variability. *ACS Sensors*, **2019**, 4, 32-43	9.2	18
133	Persistent energy harvesting in the harsh desert environment using a thermal resonance device: Design, testing, and analysis. *Applied Energy*, **2019**, 235, 1514-1523	10.7	14
132	Analysis of Multiplexed Nanosensor Arrays Based on Near-Infrared Fluorescent Single-Walled Carbon Nanotubes. *ACS Nano*, **2018**, 12, 3769-3779	16.7	25
131	Insulin Detection Using a Corona Phase Molecular Recognition Site on Single-Walled Carbon Nanotubes. *ACS Sensors*, **2018**, 3, 367-377	9.2	47
130	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	6.4	33
129	Colloidal nanoelectronic state machines based on 2D materials for aerosolizable electronics. *Nature Nanotechnology*, **2018**, 13, 819-827	28.7	36
128	Stable, Temperature-Dependent Gas Mixture Permeation and Separation through Suspended Nanoporous Single-Layer Graphene Membranes. *Nano Letters*, **2018**, 18, 5057-5069	11.5	42
127	Single-layer graphene membranes by crack-free transfer for gas mixture separation. *Nature Communications*, **2018**, 9, 2632	17.4	111
126	The Exterior of Single-Walled Carbon Nanotubes as a Millimeter-Long Cation-Preferring Nanochannel. *Chemistry of Materials*, **2018**, 30, 5184-5193	9.6	5
125	Noble-gas-infused neoprene closed-cell foams achieving ultra-low thermal conductivity fabrics.. *RSC Advances*, **2018**, 8, 21389-21398	3.7	8
124	Endotoxin-Free Preparation of Graphene Oxide and Graphene-Based Materials for Biological Applications. *Current Protocols in Chemical Biology*, **2018**, 10, e51	1.8	9
123	Polymethacrylamide and Carbon Composites that Grow, Strengthen, and Self-Repair using Ambient Carbon Dioxide Fixation. *Advanced Materials*, **2018**, 30, e1804037	24	16
122	Direct Electricity Generation Mediated by Molecular Interactions with Low Dimensional Carbon MaterialsA Mechanistic Perspective. *Advanced Energy Materials*, **2018**, 8, 1802212	21.8	26
121	Autoperforation of 2D materials for generating two-terminal memristive Janus particles. *Nature Materials*, **2018**, 17, 1005-1012	27	45
120	Rational Design Principles for the Transport and Subcellular Distribution of Nanomaterials into Plant Protoplasts. *Small*, **2018**, 14, e1802086	11	52

119	Emerging trends in 2D nanotechnology that are redefining our understanding of Nanocomposites *Nano Today*, **2018**, 21, 18-40	17.9	47
118	Electrokinetic Transport of Methanol and Lithium Ions Through a 2.25-nm-Diameter Carbon Nanotube Nanopore. *Journal of Physical Chemistry C*, **2017**, 121, 2005-2013	3.8	14
117	Single-molecule detection of protein efflux from microorganisms using fluorescent single-walled carbon nanotube sensor arrays. *Nature Nanotechnology*, **2017**, 12, 368-377	28.7	127
116	The double-resonance Raman spectra in single-chirality (n, m) carbon nanotubes. *Carbon*, **2017**, 117, 41-45	10.4	10
115	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	11.5	100
114	A study of bilayer phosphorene stability under MoS 2 -passivation. *2D Materials*, **2017**, 4, 025091	5.9	33
113	Current and future directions in electron transfer chemistry of graphene. *Chemical Society Reviews*, **2017**, 46, 4530-4571	58.5	101
112	Emerging Trends in Micro- and Nanoscale Technologies in Medicine: From Basic Discoveries to Translation. *ACS Nano*, **2017**, 11, 5195-5214	16.7	78
111	Fabrication, Pressure Testing, and Nanopore Formation of Single-Layer Graphene Membranes. *Journal of Physical Chemistry C*, **2017**, 121, 14312-14321	3.8	26
110	Nanosensor Technology Applied to Living Plant Systems. *Annual Review of Analytical Chemistry*, **2017**, 10, 113-140	12.5	102
109	Surface Water Dependent Properties of Sulfur-Rich Molybdenum Sulfides: Electrolyteless Gas Phase Water Splitting. *ACS Nano*, **2017**, 11, 6782-6794	16.7	38
108	Quantitative Modeling of MoS2 Solvent Interfaces: Predicting Contact Angles and Exfoliation Performance using Molecular Dynamics. *Journal of Physical Chemistry C*, **2017**, 121, 9022-9031	3.8	58
107	Experimental Observation of Real Time Molecular Dynamics Using Electromigrated Tunnel Junctions. *Journal of Physical Chemistry C*, **2017**, 121, 22550-22558	3.8	3
106	Ionic Strength-Mediated Phase Transitions of Surface-Adsorbed DNA on Single-Walled Carbon Nanotubes. *Journal of the American Chemical Society*, **2017**, 139, 16791-16802	16.4	45
105	Rational Design of Glucose-Responsive Insulin Using Pharmacokinetic Modeling. *Advanced Healthcare Materials*, **2017**, 6, 1700601	10.1	7
104	Glucose-responsive insulin by molecular and physical design. *Nature Chemistry*, **2017**, 9, 937-943	17.6	72
103	Transport of Amino Acid Cations through a 2.25-nm-Diameter Carbon Nanotube Nanopore: Electrokinetic Motion and Trapping/Desorption. *Journal of Physical Chemistry C*, **2017**, 121, 27709-27720	3.8	5
102	A Nanobionic Light-Emitting Plant. *Nano Letters*, **2017**, 17, 7951-7961	11.5	66

101	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	16.4	18
100	Persistent drought monitoring using a microfluidic-printed electro-mechanical sensor of stomata in planta. *Lab on A Chip*, **2017**, 17, 4015-4024	7.2	33
99	Mechanism and Prediction of Gas Permeation through Sub-Nanometer Graphene Pores: Comparison of Theory and Simulation. *ACS Nano*, **2017**, 11, 7974-7987	16.7	78
98	Nitroaromatic detection and infrared communication from wild-type plants using plant nanobionics. *Nature Materials*, **2017**, 16, 264-272	27	162
97	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	14.3	28
96	Observation of extreme phase transition temperatures of water confined inside isolated carbon nanotubes. *Nature Nanotechnology*, **2017**, 12, 267-273	28.7	181
95	Dominance of Dispersion Interactions and Entropy over Electrostatics in Determining the Wettability and Friction of Two-Dimensional MoS Surfaces. *ACS Nano*, **2016**, 10, 9145-9155	16.7	50
94	Electrical Energy Generation via Reversible Chemical Doping on Carbon Nanotube Fibers. *Advanced Materials*, **2016**, 28, 9752-9757	24	15
93	A Dynamic, Mathematical Model for Quantitative Glycoprofiling Using Label-Free Lectin Microarrays. *ACS Sensors*, **2016**, 1, 987-996	9.2	2
92	Layered and scrolled nanocomposites with aligned semi-infinite graphene inclusions at the platelet limit. *Science*, **2016**, 353, 364-7	33.3	94
91	Persistently Auxetic Materials: Engineering the Poisson Ratio of 2D Self-Avoiding Membranes under Conditions of Non-Zero Anisotropic Strain. *ACS Nano*, **2016**, 10, 7542-9	16.7	12
90	A Pharmacokinetic Model of a Tissue Implantable Cortisol Sensor. *Advanced Healthcare Materials*, **2016**, 5, 3004-3015	10.1	20
89	Lipid Exchange Envelope Penetration (LEEP) of Nanoparticles for Plant Engineering: A Universal Localization Mechanism. *Nano Letters*, **2016**, 16, 1161-72	11.5	139
88	Analysis of Time-Varying, Stochastic Gas Transport through Graphene Membranes. *ACS Nano*, **2016**, 10, 786-95	16.7	23
87	Protein-targeted corona phase molecular recognition. *Nature Communications*, **2016**, 7, 10241	17.4	137
86	High-Performance Field Effect Transistors Using Electronic Inks of 2D Molybdenum Oxide Nanoflakes. *Advanced Functional Materials*, **2016**, 26, 91-100	15.6	140
85	Generalized Mechanistic Model for the Chemical Vapor Deposition of 2D Transition Metal Dichalcogenide Monolayers. *ACS Nano*, **2016**, 10, 4330-44	16.7	147
84	Sustainable power sources based on high efficiency thermopower wave devices. *Energy and Environmental Science*, **2016**, 9, 1290-1298	35.4	18

83	Quantitative Tissue Spectroscopy of Near Infrared Fluorescent Nanosensor Implants. *Journal of Biomedical Nanotechnology*, **2016**, 12, 1035-47	4	32
82	Chirality dependent corona phase molecular recognition of DNA-wrapped carbon nanotubes. *Carbon*, **2016**, 97, 147-153	10.4	57
81	A Mathematical Formulation and Solution of the CoPhMoRe Inverse Problem for Helically Wrapping Polymer Corona Phases on Cylindrical Substrates. *Journal of Physical Chemistry C*, **2015**, 119, 13876-13886	3.8	31
80	Molecular valves for controlling gas phase transport made from discrete ångström-sized pores in graphene. *Nature Nanotechnology*, **2015**, 10, 785-90	28.7	100
79	Mechanism of immobilized protein A binding to immunoglobulin G on nanosensor array surfaces. *Analytical Chemistry*, **2015**, 87, 8186-93	7.8	41
78	Comparative Dynamics and Sequence Dependence of DNA and RNA Binding to Single Walled Carbon Nanotubes. *Journal of Physical Chemistry C*, **2015**, 119, 10048-10058	3.8	61
77	Competitive Binding in Mixed Surfactant Systems for Single-Walled Carbon Nanotube Separation. *Journal of Physical Chemistry C*, **2015**, 119, 22737-22745	3.8	37
76	Recent Advances in Two-Dimensional Materials beyond Graphene. *ACS Nano*, **2015**, 9, 11509-39	16.7	1581
75	Understanding and Analyzing Freezing-Point Transitions of Confined Fluids within Nanopores. *Langmuir*, **2015**, 31, 10113-8	4	22
74	Protein functionalized carbon nanomaterials for biomedical applications. *Carbon*, **2015**, 95, 767-779	10.4	147
73	A pharmacokinetic model of a tissue implantable insulin sensor. *Advanced Healthcare Materials*, **2015**, 4, 87-97	10.1	30
72	Two-Dimensional Transition Metal Dichalcogenides in Biosystems. *Advanced Functional Materials*, **2015**, 25, 5086-5099	15.6	256
71	Generating selective saccharide binding affinity of phenyl boronic acids by using single-walled carbon nanotube corona phases. *Chemistry - A European Journal*, **2015**, 21, 4523-8	4.8	11
70	A Ratiometric Sensor Using Single Chirality Near-Infrared Fluorescent Carbon Nanotubes: Application to In Vivo Monitoring. *Small*, **2015**, 11, 3973-84	11	103
69	In Vivo Delivery of Nitric Oxide-Sensing, Single-Walled Carbon Nanotubes. *Current Protocols in Chemical Biology*, **2015**, 7, 93-102	1.8	6
68	2D equation-of-state model for corona phase molecular recognition on single-walled carbon nanotube and graphene surfaces. *Langmuir*, **2015**, 31, 628-36	4	20
67	A graphene-based physiometer array for the analysis of single biological cells. *Scientific Reports*, **2014**, 4, 6865	4.9	29
66	Plant nanobionics approach to augment photosynthesis and biochemical sensing. *Nature Materials*, **2014**, 13, 400-8	27	612

65	Neurotransmitter detection using corona phase molecular recognition on fluorescent single-walled carbon nanotube sensors. *Journal of the American Chemical Society*, **2014**, 136, 713-24	16.4	205
64	Recent advances in molecular recognition based on nanoengineered platforms. *Accounts of Chemical Research*, **2014**, 47, 979-88	24.3	59
63	Low Dimensional Carbon Materials for Applications in Mass and Energy Transport. *Chemistry of Materials*, **2014**, 26, 172-183	9.6	35
62	Spatiotemporal intracellular nitric oxide signaling captured using internalized, near-infrared fluorescent carbon nanotube nanosensors. *Nano Letters*, **2014**, 14, 4887-94	11.5	67
61	Selective assembly of DNA-conjugated single-walled carbon nanotubes from the vascular secretome. *ACS Nano*, **2014**, 8, 9126-36	16.7	11
60	A rapid, direct, quantitative, and label-free detector of cardiac biomarker troponin T using near-infrared fluorescent single-walled carbon nanotube sensors. *Advanced Healthcare Materials*, **2014**, 3, 412-23	10.1	61
59	Experimental tools to study molecular recognition within the nanoparticle corona. *Sensors*, **2014**, 14, 16196-211	3.8	37
58	CVD growth of carbon nanostructures from zirconia: mechanisms and a method for enhancing yield. *Journal of the American Chemical Society*, **2014**, 136, 17808-17	16.4	27
57	Carbon nanotubes as optical biomedical sensors. *Advanced Drug Delivery Reviews*, **2013**, 65, 1933-50	18.5	245
56	Emergent properties of nanosensor arrays: applications for monitoring IgG affinity distributions, weakly affined hypermannosylation, and colony selection for biomanufacturing. *ACS Nano*, **2013**, 7, 7472-82	16.7	38
55	A kinetic model for the deterministic prediction of gel-based single-chirality single-walled carbon nanotube separation. *ACS Nano*, **2013**, 7, 1779-89	16.7	65
54	Excess thermopower and the theory of thermopower waves. *ACS Nano*, **2013**, 7, 6533-44	16.7	58
53	In vivo biosensing via tissue-localizable near-infrared-fluorescent single-walled carbon nanotubes. *Nature Nanotechnology*, **2013**, 8, 873-80	28.7	257
52	Molecular recognition using corona phase complexes made of synthetic polymers adsorbed on carbon nanotubes. *Nature Nanotechnology*, **2013**, 8, 959-68	28.7	205
51	Liquid Exfoliation of Layered Materials. *Science*, **2013**, 340, 1226419-1226419	33.3	2604
50	Evolution of physical and electronic structures of bilayer graphene upon chemical functionalization. *Journal of the American Chemical Society*, **2013**, 135, 18866-75	16.4	39
49	Diameter-dependent ion transport through the interior of isolated single-walled carbon nanotubes. *Nature Communications*, **2013**, 4, 2397	17.4	100
48	Carbon nanotubes: A bright future for defects. *Nature Chemistry*, **2013**, 5, 812-3	17.6	14

47	Wetting translucency of graphene. *Nature Materials*, **2013**, 12, 866-9	27	198
46	Application of Nanoparticle Antioxidants to Enable Hyperstable Chloroplasts for Solar Energy Harvesting. *Advanced Energy Materials*, **2013**, 3, 881-893	21.8	80
45	Enhanced charge carrier mobility in two-dimensional high dielectric molybdenum oxide. *Advanced Materials*, **2013**, 25, 109-14	24	296
44	Stochastic Pore Blocking and Gating in PDMS–Glass Nanopores from Vapor–Liquid Phase Transitions. *Journal of Physical Chemistry C*, **2013**, 117, 9641-9651	3.8	15
43	Disorder imposed limits of mono- and bilayer graphene electronic modification using covalent chemistry. *Nano Letters*, **2013**, 13, 809-17	11.5	55
42	A Quantitative and Predictive Model of Electromigration-Induced Breakdown of Metal Nanowires. *Journal of Physical Chemistry C*, **2013**, 117, 12373-12378	3.8	7
41	Covalent electron transfer chemistry of graphene with diazonium salts. *Accounts of Chemical Research*, **2013**, 46, 160-70	24.3	231
40	Electronics and optoelectronics of two-dimensional transition metal dichalcogenides. *Nature Nanotechnology*, **2012**, 7, 699-712	28.7	10871
39	Understanding and controlling the substrate effect on graphene electron-transfer chemistry via reactivity imprint lithography. *Nature Chemistry*, **2012**, 4, 724-32	17.6	407
38	Observation of oscillatory surface reactions of riboflavin, trolox, and singlet oxygen using single carbon nanotube fluorescence spectroscopy. *ACS Nano*, **2012**, 6, 10632-45	16.7	45
37	Breakdown in the wetting transparency of graphene. *Physical Review Letters*, **2012**, 109, 176101	7.4	268
36	Boronic acid library for selective, reversible near-infrared fluorescence quenching of surfactant suspended single-walled carbon nanotubes in response to glucose. *ACS Nano*, **2012**, 6, 819-30	16.7	63
35	Mechanisms of gas permeation through single layer graphene membranes. *Langmuir*, **2012**, 28, 16671-8	4	132
34	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	11.5	217
33	Understanding surfactant/graphene interactions using a graphene field effect transistor: relating molecular structure to hysteresis and carrier mobility. *Langmuir*, **2012**, 28, 8579-86	4	46
32	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, 567-81	16.4	140
31	Carbon Nanotubes as Molecular Conduits: Advances and Challenges for Transport through Isolated Sub-2 nm Pores. *Journal of Physical Chemistry Letters*, **2011**, 2, 2892-2896	6.4	18
30	Transduction of glycan-lectin binding using near-infrared fluorescent single-walled carbon nanotubes for glycan profiling. *Journal of the American Chemical Society*, **2011**, 133, 17923-33	16.4	47

29	Label-free, single protein detection on a near-infrared fluorescent single-walled carbon nanotube/protein microarray fabricated by cell-free synthesis. *Nano Letters*, **2011**, 11, 2743-52	11.5	79
28	Single-molecule detection of H$_2$O$_2$ mediating angiogenic redox signaling on fluorescent single-walled carbon nanotube array. *ACS Nano*, **2011**, 5, 7848-57	16.7	59
27	Near-infrared fluorescent sensors based on single-walled carbon nanotubes for life sciences applications. *ChemSusChem*, **2011**, 4, 848-63	8.3	102
26	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, 203-5	16.4	35
25	Detection of single-molecule H2O2 signalling from epidermal growth factor receptor using fluorescent single-walled carbon nanotubes. *Nature Nanotechnology*, **2010**, 5, 302-9	28.7	205
24	Coherence resonance in a single-walled carbon nanotube ion channel. *Science*, **2010**, 329, 1320-4	33.3	208
23	Anomalously large reactivity of single graphene layers and edges toward electron transfer chemistries. *Nano Letters*, **2010**, 10, 398-405	11.5	433
22	Chemically driven carbon-nanotube-guided thermopower waves. *Nature Materials*, **2010**, 9, 423-9	27	256
21	The rational design of nitric oxide selectivity in single-walled carbon nanotube near-infrared fluorescence sensors for biological detection. *Nature Chemistry*, **2009**, 1, 473-81	17.6	212
20	Multimodal optical sensing and analyte specificity using single-walled carbon nanotubes. *Nature Nanotechnology*, **2009**, 4, 114-20	28.7	255
19	Modulation of single-walled carbon nanotube photoluminescence by hydrogel swelling. *ACS Nano*, **2009**, 3, 3869-77	16.7	72
18	Dynamics of surfactant-suspended single-walled carbon nanotubes in a centrifugal field. *Langmuir*, **2008**, 24, 1790-5	4	115
17	Stochastic analysis of stepwise fluorescence quenching reactions on single-walled carbon nanotubes: single molecule sensors. *Nano Letters*, **2008**, 8, 4299-304	11.5	76
16	High-resolution electrohydrodynamic jet printing. *Nature Materials*, **2007**, 6, 782-9	27	1011
15	Solvatochromism in single-walled carbon nanotubes. *Applied Physics Letters*, **2007**, 90, 223114	3.4	173
14	A structure-reactivity relationship for single walled carbon nanotubes reacting with 4-hydroxybenzene diazonium salt. *Journal of the American Chemical Society*, **2007**, 129, 3946-54	16.4	91
13	Reversible control of carbon nanotube aggregation for a glucose affinity sensor. *Angewandte Chemie - International Edition*, **2006**, 45, 8138-41	16.4	125
12	In vivo fluorescence detection of glucose using a single-walled carbon nanotube optical sensor: design, fluorophore properties, advantages, and disadvantages. *Analytical Chemistry*, **2005**, 77, 7556-62	7.8	219

11	Near-infrared optical sensors based on single-walled carbon nanotubes. *Nature Materials*, **2005**, 4, 86-92	27	771
10	The role of surfactant adsorption during ultrasonication in the dispersion of single-walled carbon nanotubes. *Journal of Nanoscience and Nanotechnology*, **2003**, 3, 81-6	1.3	418
9	Individually Suspended Single-Walled Carbon Nanotubes in Various Surfactants. *Nano Letters*, **2003**, 3, 1379-1382	11.5	1425
8	Reversible, Band-Gap-Selective Protonation of Single-Walled Carbon Nanotubes in Solution. *Journal of Physical Chemistry B*, **2003**, 107, 6979-6985	3.4	321
7	Structure-based carbon nanotube sorting by sequence-dependent DNA assembly. *Science*, **2003**, 302, 1545-8	33.3	1399
6	Band gap fluorescence from individual single-walled carbon nanotubes. *Science*, **2002**, 297, 593-6	33.3	3262
5	Structure-assigned optical spectra of single-walled carbon nanotubes. *Science*, **2002**, 298, 2361-6	33.3	2547
4	Atomically Thin 2D Interfaces as Sensors for Molecular Permeability through Cellular Layers and Thin Tissues. *Advanced Functional Materials*,2109598	15.6	
3	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*,	7.1	2
2	Design Rules for Chemostrictive Materials as Selective Molecular Barriers. *Advanced Engineering Materials*,2101112	3.5	0
1	Memristor Circuits for Colloidal Robotics: Temporal Access to Memory, Sensing, and Actuation. *Advanced Intelligent Systems*,2100205	6	0