David Sinton

List of Publications by Citations

229 papers	16,277 citations	66 h-index	121 g-index
252 ext. papers	21,303 ext. citations	12.6 avg, IF	7.05 L-index

#	Paper	IF	Citations
229	Enhanced electrocatalytic CO reduction via field-induced reagent concentration. *Nature*, **2016**, 537, 382-386	50.4	997
228	CO electroreduction to ethylene via hydroxide-mediated copper catalysis at an abrupt interface. *Science*, **2018**, 360, 783-787	33.3	980
227	Microfluidic fuel cells: A review. *Journal of Power Sources*, **2009**, 186, 353-369	8.9	440
226	Dopant-induced electron localization drives CO reduction to C hydrocarbons. *Nature Chemistry*, **2018**, 10, 974-980	17.6	435
225	A new generation of sensors based on extraordinary optical transmission. *Accounts of Chemical Research*, **2008**, 41, 1049-57	24.3	423
224	CO electrolysis to multicarbon products at activities greater than 1 A cm. *Science*, **2020**, 367, 661-666	33.3	403
223	Electrochemical CO Reduction into Chemical Feedstocks: From Mechanistic Electrocatalysis Models to System Design. *Advanced Materials*, **2019**, 31, e1807166	24	396
222	Steering post-C□C coupling selectivity enables high efficiency electroreduction of carbon dioxide to multi-carbon alcohols. *Nature Catalysis*, **2018**, 1, 421-428	36.5	348
221	Turning the Page: Advancing Paper-Based Microfluidics for Broad Diagnostic Application. *Chemical Reviews*, **2017**, 117, 8447-8480	68.1	333
220	Molecular tuning of CO-to-ethylene conversion. *Nature*, **2020**, 577, 509-513	50.4	321
219	Multi-site electrocatalysts for hydrogen evolution in neutral media by destabilization of water molecules. *Nature Energy*, **2019**, 4, 107-114	62.3	264
218	A microfluidic fuel cell with flow-through porous electrodes. *Journal of the American Chemical Society*, **2008**, 130, 4000-6	16.4	255
217	Effect of compression on liquid water transport and microstructure of PEMFC gas diffusion layers. *Journal of Power Sources*, **2007**, 163, 784-792	8.9	245
216	On-chip surface-based detection with nanohole arrays. *Analytical Chemistry*, **2007**, 79, 4094-100	7.8	227
215	Optofluidics for energy applications. *Nature Photonics*, **2011**, 5, 583-590	33.9	223
214	Nanoholes as nanochannels: flow-through plasmonic sensing. *Analytical Chemistry*, **2009**, 81, 4308-11	7.8	223
213	Joule heating and heat transfer in poly(dimethylsiloxane) microfluidic systems. *Lab on A Chip*, **2003**, 3, 141-9	7.2	221

212	Copper nanocavities confine intermediates for efficient electrosynthesis of C3 alcohol fuels from carbon monoxide. *Nature Catalysis*, **2018**, 1, 946-951	36.5	205
211	Enhanced Nitrate-to-Ammonia Activity on Copper-Nickel Alloys via Tuning of Intermediate Adsorption. *Journal of the American Chemical Society*, **2020**, 142, 5702-5708	16.4	192
210	Metal-Organic Frameworks Mediate Cu Coordination for Selective CO Electroreduction. *Journal of the American Chemical Society*, **2018**, 140, 11378-11386	16.4	188
209	Binding Site Diversity Promotes CO Electroreduction to Ethanol. *Journal of the American Chemical Society*, **2019**, 141, 8584-8591	16.4	178
208	Cooperative CO2-to-ethanol conversion via enriched intermediates at molecule–metal catalyst interfaces. *Nature Catalysis*, **2020**, 3, 75-82	36.5	164
207	Copper-on-nitride enhances the stable electrosynthesis of multi-carbon products from CO. *Nature Communications*, **2018**, 9, 3828	17.4	164
206	Efficient electrically powered CO2-to-ethanol via suppression of deoxygenation. *Nature Energy*, **2020**, 5, 478-486	62.3	163
205	Catalyst synthesis under CO2 electroreduction favours faceting and promotes renewable fuels electrosynthesis. *Nature Catalysis*, **2020**, 3, 98-106	36.5	158
204	Continuous Carbon Dioxide Electroreduction to Concentrated Multi-carbon Products Using a Membrane Electrode Assembly. *Joule*, **2019**, 3, 2777-2791	27.8	155
203	Combined high alkalinity and pressurization enable efficient CO2 electroreduction to CO. *Energy and Environmental Science*, **2018**, 11, 2531-2539	35.4	147
202	Photon management for augmented photosynthesis. *Nature Communications*, **2016**, 7, 12699	17.4	142
201	Improved fuel utilization in microfluidic fuel cells: A computational study. *Journal of Power Sources*, **2005**, 143, 57-66	8.9	140
200	High Rate, Selective, and Stable Electroreduction of CO2 to CO in Basic and Neutral Media. *ACS Energy Letters*, **2018**, 3, 2835-2840	20.1	136
199	A Surface Reconstruction Route to High Productivity and Selectivity in CO Electroreduction toward C Hydrocarbons. *Advanced Materials*, **2018**, 30, e1804867	24	131
198	Electroosmotic flow with Joule heating effects. *Lab on A Chip*, **2004**, 4, 230-6	7.2	128
197	High-Density Nanosharp Microstructures Enable Efficient CO Electroreduction. *Nano Letters*, **2016**, 16, 7224-7228	11.5	126
196	2D Metal Oxyhalide-Derived Catalysts for Efficient CO Electroreduction. *Advanced Materials*, **2018**, 30, e1802858	24	123
195	Pore-Scale Assessment of Nanoparticle-Stabilized CO2 Foam for Enhanced Oil Recovery. *Energy & Fuels*, **2014**, 28, 6221-6227	4.1	116

194	CO electrolysis to multicarbon products in strong acid. *Science*, **2021**, 372, 1074-1078	33.3	115
193	Attomolar protein detection using in-hole surface plasmon resonance. *Journal of the American Chemical Society*, **2009**, 131, 436-7	16.4	112
192	Efficient electrocatalytic conversion of carbon monoxide to propanol using fragmented copper. *Nature Catalysis*, **2019**, 2, 251-258	36.5	111
191	Energy: the microfluidic frontier. *Lab on A Chip*, **2014**, 14, 3127-34	7.2	109
190	Planar and three-dimensional microfluidic fuel cell architectures based on graphite rod electrodes. *Journal of Power Sources*, **2007**, 168, 379-390	8.9	107
189	Two-dimensional slither swimming of sperm within a micrometre of a surface. *Nature Communications*, **2015**, 6, 8703	17.4	103
188	Optofluidic concentration: plasmonic nanostructure as concentrator and sensor. *Nano Letters*, **2012** , 12, 1592-6	11.5	102
187	High-performance microfluidic vanadium redox fuel cell. *Electrochimica Acta*, **2007**, 52, 4942-4946	6.7	102
186	Magnetic Extraction of Microplastics from Environmental Samples. *Environmental Science and Technology Letters*, **2019**, 6, 68-72	11	100
185	Direct DNA Analysis with Paper-Based Ion Concentration Polarization. *Journal of the American Chemical Society*, **2015**, 137, 13913-9	16.4	100
184	Hydronium-Induced Switching between CO Electroreduction Pathways. *Journal of the American Chemical Society*, **2018**, 140, 3833-3837	16.4	100
183	Hydrogen Peroxide as an Oxidant for Microfluidic Fuel Cells. *Journal of the Electrochemical Society*, **2007**, 154, B1220	3.9	100
182	Hydroxide promotes carbon dioxide electroreduction to ethanol on copper via tuning of adsorbed hydrogen. *Nature Communications*, **2019**, 10, 5814	17.4	95
181	Rapid selection of sperm with high DNA integrity. *Lab on A Chip*, **2014**, 14, 1142-50	7.2	94
180	Chip-off-the-old-rock: the study of reservoir-relevant geological processes with real-rock micromodels. *Lab on A Chip*, **2014**, 14, 4382-90	7.2	92
179	Deep Learning with Microfluidics for Biotechnology. *Trends in Biotechnology*, **2019**, 37, 310-324	15.1	92
178	Flow-through vs flow-over: analysis of transport and binding in nanohole array plasmonic biosensors. *Analytical Chemistry*, **2010**, 82, 10015-20	7.8	90
177	An alkaline microfluidic fuel cell based on formate and hypochlorite bleach. *Electrochimica Acta*, **2008**, 54, 698-705	6.7	90

176	Constraining CO coverage on copper promotes high-efficiency ethylene electroproduction. *Nature Catalysis*, **2019**, 2, 1124-1131	36.5	89
175	Copper adparticle enabled selective electrosynthesis of n-propanol. *Nature Communications*, **2018**, 9, 4614	17.4	86
174	Nanomorphology-Enhanced Gas-Evolution Intensifies CO2 Reduction Electrochemistry. *ACS Sustainable Chemistry and Engineering*, **2017**, 5, 4031-4040	8.3	84
173	Flow-directed block copolymer micelle morphologies via microfluidic self-assembly. *Journal of the American Chemical Society*, **2011**, 133, 18853-64	16.4	84
172	Thermal end effects on electroosmotic flow in a capillary. *International Journal of Heat and Mass Transfer*, **2004**, 47, 3145-3157	4.9	84
171	Aquifer-on-a-chip: understanding pore-scale salt precipitation dynamics during CO2 sequestration. *Lab on A Chip*, **2013**, 13, 2508-18	7.2	83
170	Microfluidics for sperm analysis and selection. *Nature Reviews Urology*, **2017**, 14, 707-730	5.5	80
169	Chloride-mediated selective electrosynthesis of ethylene and propylene oxides at high current density. *Science*, **2020**, 368, 1228-1233	33.3	78
168	Lab-on-chip methodologies for the study of transport in porous media: energy applications. *Lab on A Chip*, **2008**, 8, 689-93	7.2	77
167	Rapid Microfluidics-Based Measurement of CO2 Diffusivity in Bitumen. *Energy & Fuels*, **2011**, 25, 4829-4835	4.1	74
166	Nanohole arrays in metal films as optofluidic elements: progress and potential. *Microfluidics and Nanofluidics*, **2008**, 4, 107-116	2.8	70
165	Field-emission from quantum-dot-in-perovskite solids. *Nature Communications*, **2017**, 8, 14757	17.4	68
164	Steam-on-a-chip for oil recovery: the role of alkaline additives in steam assisted gravity drainage. *Lab on A Chip*, **2013**, 13, 3832-9	7.2	66
163	Efficient Methane Electrosynthesis Enabled by Tuning Local CO Availability. *Journal of the American Chemical Society*, **2020**, 142, 3525-3531	16.4	65
162	Electroosmotic velocity profiles in microchannels. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2003**, 222, 273-283	5.1	64
161	Measurement of CO2 diffusivity for carbon sequestration: a microfluidic approach for reservoir-specific analysis. *Environmental Science & Technology*, **2013**, 47, 71-8	10.3	63
160	Nanoporous membranes enable concentration and transport in fully wet paper-based assays. *Analytical Chemistry*, **2014**, 86, 8090-7	7.8	62
159	Full Characterization of CO-Oil Properties On-Chip: Solubility, Diffusivity, Extraction Pressure, Miscibility, and Contact Angle. *Analytical Chemistry*, **2018**, 90, 2461-2467	7.8	58

158	Bitumen□Toluene Mutual Diffusion Coefficients Using Microfluidics. *Energy & Fuels*, **2013**, 27, 2042-2048	4.1	57
157	Microfluidic and nanofluidic phase behaviour characterization for industrial CO, oil and gas. *Lab on A Chip*, **2017**, 17, 2740-2759	7.2	56
156	Self-Cleaning CO2 Reduction Systems: Unsteady Electrochemical Forcing Enables Stability. *ACS Energy Letters*, **2021**, 6, 809-815	20.1	56
155	Designing anion exchange membranes for CO2 electrolysers. *Nature Energy*, **2021**, 6, 339-348	62.3	56
154	Fluorescent Dyes for Visualizing Microplastic Particles and Fibers in Laboratory-Based Studies. *Environmental Science and Technology Letters*, **2019**, 6, 334-340	11	55
153	Roadmap for optofluidics. *Journal of Optics (United Kingdom)*, **2017**, 19, 093003	1.7	55
152	Efficient upgrading of CO to C fuel using asymmetric C-C coupling active sites. *Nature Communications*, **2019**, 10, 5186	17.4	55
151	Emerging microalgae technology: a review. *Sustainable Energy and Fuels*, **2018**, 2, 13-38	5.8	53
150	Morphological control via chemical and shear forces in block copolymer self-assembly in the lab-on-chip. *ACS Nano*, **2013**, 7, 1424-36	16.7	52
149	Controlled self-assembly of quantum dots and block copolymers in a microfluidic device. *Langmuir*, **2008**, 24, 637-43	4	51
148	Quantification of ovarian cancer markers with integrated microfluidic concentration gradient and imaging nanohole surface plasmon resonance. *Analyst, The*, **2013**, 138, 1450-8	5	49
147	Paper-Based Quantification of Male Fertility Potential. *Clinical Chemistry*, **2016**, 62, 458-65	5.5	46
146	Fast fluorescence-based microfluidic method for measuring minimum miscibility pressure of CO2 in crude oils. *Analytical Chemistry*, **2015**, 87, 3160-4	7.8	45
145	A plate-frame flow-through microfluidic fuel cell stack. *Journal of Power Sources*, **2011**, 196, 9481-9487	8.9	45
144	Controlled self-assembly of quantum dot-block copolymer colloids in multiphase microfluidic reactors. *Langmuir*, **2010**, 26, 716-23	4	45
143	Formation and shear-induced processing of quantum dot colloidal assemblies in a multiphase microfluidic chip. *Langmuir*, **2008**, 24, 10596-603	4	45
142	High-efficiency electrokinetic micromixing through symmetric sequential injection and expansion. *Lab on A Chip*, **2006**, 6, 1033-9	7.2	45
141	Direct and indirect electroosmotic flow velocity measurements in microchannels. *Journal of Colloid and Interface Science*, **2002**, 254, 184-9	9.3	45

140	Oxygen-tolerant electroproduction of C2 products from simulated flue gas. *Energy and Environmental Science*, **2020**, 13, 554-561	35.4	45
139	Capillary Condensation in 8 nm Deep Channels. *Journal of Physical Chemistry Letters*, **2018**, 9, 497-503	6.4	42
138	Surface-enhanced Raman scattering (SERS) optrodes for multiplexed on-chip sensing of nile blue A and oxazine 720. *Lab on A Chip*, **2012**, 12, 1554-60	7.2	42
137	A miniaturized high-voltage integrated power supply for portable microfluidic applications. *Lab on A Chip*, **2004**, 4, 87-90	7.2	42
136	Condensation in One-Dimensional Dead-End Nanochannels. *ACS Nano*, **2017**, 11, 304-313	16.7	41
135	Tuning OH binding energy enables selective electrochemical oxidation of ethylene to ethylene glycol. *Nature Catalysis*, **2020**, 3, 14-22	36.5	41
134	A sequential injection microfluidic mixing strategy. *Microfluidics and Nanofluidics*, **2005**, 1, 319-327	2.8	40
133	Pressure Drop in Rectangular Microchannels as Compared With Theory Based on Arbitrary Cross Section. *Journal of Fluids Engineering, Transactions of the ASME*, **2009**, 131,	2.1	39
132	High-Rate and Efficient Ethylene Electrosynthesis Using a Catalyst/Promoter/Transport Layer. *ACS Energy Letters*, **2020**, 5, 2811-2818	20.1	39
131	CO_2 Electroreduction to Formate at a Partial Current Density of 930 mA cm□ with InP Colloidal Quantum Dot Derived Catalysts. *ACS Energy Letters*, **2021**, 6, 79-84	20.1	39
130	Suppressing the liquid product crossover in electrochemical CO_2 reduction. *SmartMat*, **2021**, 2, 12-16	22.8	38
129	Microfluidic pore-scale comparison of alcohol- and alkaline-based SAGD processes. *Journal of Petroleum Science and Engineering*, **2017**, 154, 139-149	4.4	37
128	Microfluidic Manufacturing of Polymeric Nanoparticles: Comparing Flow Control of Multiscale Structure in Single-Phase Staggered Herringbone and Two-Phase Reactors. *Langmuir*, **2016**, 32, 12781-12789	4	37
127	Visualization and numerical modelling of microfluidic on-chip injection processes. *Journal of Colloid and Interface Science*, **2003**, 260, 431-9	9.3	37
126	Determination of dew point conditions for CO_2 with impurities using microfluidics. *Environmental Science & Technology*, **2014**, 48, 3567-74	10.3	36
125	A dynamic loading method for controlling on-chip microfluidic sample injection. *Journal of Colloid and Interface Science*, **2003**, 266, 448-56	9.3	36
124	Numerical simulation of microfluidic injection processes in crossing microchannels. *Journal of Micromechanics and Microengineering*, **2003**, 13, 739-747	2	36
123	Deep learning for the classification of human sperm. *Computers in Biology and Medicine*, **2019**, 111, 103342	7	35

122	Out-of-plane ion concentration polarization for scalable water desalination. *Lab on A Chip*, **2014**, 14, 681-5	7.2	35
121	Flow-directed assembly of block copolymer vesicles in the lab-on-a-chip. *Langmuir*, **2012**, 28, 15756-61	4	35
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119	Integrated electrochemical velocimetry for microfluidic devices. *Microfluidics and Nanofluidics*, **2007**, 3, 403-416	2.8	34
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117	Predominance of sperm motion in corners. *Scientific Reports*, **2016**, 6, 26669	4.9	32
116	Nanomodel visualization of fluid injections in tight formations. *Nanoscale*, **2018**, 10, 21994-22002	7.7	32
115	Joint tuning of nanostructured Cu-oxide morphology and local electrolyte programs high-rate CO2 reduction to C2H4. *Green Chemistry*, **2017**, 19, 4023-4030	10	31
114	Slab waveguide photobioreactors for microalgae based biofuel production. *Lab on A Chip*, **2012**, 12, 3740-5	7.2	31
113	Cascade CO2 electroreduction enables efficient carbonate-free production of ethylene. *Joule*, **2021**, 5, 706-719	27.8	31
112	Identification of Microfibers in the Environment Using Multiple Lines of Evidence. *Environmental Science & Technology*, **2019**, 53, 11877-11887	10.3	30
111	Accessory-free quantitative smartphone imaging of colorimetric paper-based assays. *Lab on A Chip*, **2019**, 19, 1991-1999	7.2	30
110	Efficient electrocatalytic conversion of carbon dioxide in a low-resistance pressurized alkaline electrolyzer. *Applied Energy*, **2020**, 261, 114305	10.7	30
109	Promoting CO methanation via ligand-stabilized metal oxide clusters as hydrogen-donating motifs. *Nature Communications*, **2020**, 11, 6190	17.4	30
108	Bubble nucleation and growth in nanochannels. *Physical Chemistry Chemical Physics*, **2017**, 19, 8223-8229	3.6	29
107	Asphaltene Deposition during Bitumen Extraction with Natural Gas Condensate and Naphtha. *Energy & Fuels*, **2018**, 32, 1433-1439	4.1	29
106	Microalgae on display: a microfluidic pixel-based irradiance assay for photosynthetic growth. *Lab on A Chip*, **2015**, 15, 3116-24	7.2	29
105	Low pressure supercritical CO extraction of astaxanthin from Haematococcus pluvialis demonstrated on a microfluidic chip. *Bioresource Technology*, **2018**, 250, 481-485	11	29

104	Nanoscale Phase Measurement for the Shale Challenge: Multicomponent Fluids in Multiscale Volumes. *Langmuir*, **2018**, 34, 9927-9935	4	28
103	Deep learning-based selection of human sperm with high DNA integrity. *Communications Biology*, **2019**, 2, 250	6.7	28
102	Enhanced multi-carbon alcohol electroproduction from CO via modulated hydrogen adsorption. *Nature Communications*, **2020**, 11, 3685	17.4	28
101	Low coordination number copper catalysts for electrochemical CO methanation in a membrane electrode assembly. *Nature Communications*, **2021**, 12, 2932	17.4	27
100	Single Pass CO2 Conversion Exceeding 85% in the Electrosynthesis of Multicarbon Products via Local CO2 Regeneration. *ACS Energy Letters*, **2021**, 6, 2952-2959	20.1	27
99	Biological Responses to Climate Change and Nanoplastics Are Altered in Concert: Full-Factor Screening Reveals Effects of Multiple Stressors on Primary Producers. *Environmental Science & Technology*, **2020**, 54, 2401-2410	10.3	25
98	Direct Visualization of Evaporation in a Two-Dimensional Nanoporous Model for Unconventional Natural Gas. *ACS Applied Nano Materials*, **2018**, 1, 1332-1338	5.6	25
97	Biomass-to-biocrude on a chip via hydrothermal liquefaction of algae. *Lab on A Chip*, **2016**, 16, 256-60	7.2	25
96	Microfluidic Synthesis of Photoresponsive Spool-Like Block Copolymer Nanoparticles: Flow-Directed Formation and Light-Triggered Dissociation. *Chemistry of Materials*, **2015**, 27, 8094-8104	9.6	25
95	Exploring Anomalous Fluid Behavior at the Nanoscale: Direct Visualization and Quantification via Nanofluidic Devices. *Accounts of Chemical Research*, **2020**, 53, 347-357	24.3	25
94	Disposable silicon-glass microfluidic devices: precise, robust and cheap. *Lab on A Chip*, **2018**, 18, 3872-3880	7.2	25
93	Stable, active CO reduction to formate via redox-modulated stabilization of active sites. *Nature Communications*, **2021**, 12, 5223	17.4	25
92	Pore-scale analysis of condensing solvent bitumen extraction. *Fuel*, **2017**, 193, 284-293	7.1	24
91	Natural gas vaporization in a nanoscale throat connected model of shale: multi-scale, multi-component and multi-phase. *Lab on A Chip*, **2019**, 19, 272-280	7.2	24
90	Field tested milliliter-scale blood filtration device for point-of-care applications. *Biomicrofluidics*, **2013**, 7, 44111	3.2	24
89	Microfluidics-based measurement of solubility and diffusion coefficient of propane in bitumen. *Fuel* , **2017**, 210, 23-31	7.1	24
88	Flow-directed loading of block copolymer micelles with hydrophobic probes in a gas-liquid microreactor. *Langmuir*, **2013**, 29, 8385-94	4	24
87	Thermally induced velocity gradients in electroosmotic microchannel flows: the cooling influence of optical infrastructure. *Experiments in Fluids*, **2004**, 37, 872-882	2.5	24

86	Changes in mineral reactivity driven by pore fluid mobility in partially wetted porous media. *Chemical Geology*, **2017**, 463, 1-11	4.2	23
85	Microfluidic assessment of swimming media for motility-based sperm selection. *Biomicrofluidics*, **2015**, 9, 044113	3.2	23
84	Increased Temperature and Turbulence Alter the Effects of Leachates from Tire Particles on Fathead Minnow (). *Environmental Science & Technology*, **2020**, 54, 1750-1759	10.3	23
83	Light dilution via wavelength management for efficient high-density photobioreactors. *Biotechnology and Bioengineering*, **2017**, 114, 1160-1169	4.9	22
82	Visualization of fracturing fluid dynamics in a nanofluidic chip. *Journal of Petroleum Science and Engineering*, **2018**, 165, 181-186	4.4	22
81	Lab-in-a-pen: a diagnostics format familiar to patients for low-resource settings. *Lab on A Chip*, **2014**, 14, 957-63	7.2	22
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78	Turning the corner in fertility: high DNA integrity of boundary-following sperm. *Lab on A Chip*, **2016**, 16, 2418-22	7.2	22
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75	Culturing photosynthetic bacteria through surface plasmon resonance. *Applied Physics Letters*, **2012**, 101, 253701	3.4	21
74	Pore-scale analysis of steam-solvent coinjection: azeotropic temperature, dilution and asphaltene deposition. *Fuel*, **2018**, 220, 151-158	7.1	20
73	A photosynthetic-plasmonic-voltaic cell: Excitation of photosynthetic bacteria and current collection through a plasmonic substrate. *Applied Physics Letters*, **2014**, 104, 043704	3.4	20
72	Gold-in-copper at low *CO coverage enables efficient electromethanation of CO. *Nature Communications*, **2021**, 12, 3387	17.4	20
71	A combined method for pore-scale optical and thermal characterization of SAGD. *Journal of Petroleum Science and Engineering*, **2016**, 146, 866-873	4.4	20
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68	Wavelength-selective plasmonics for enhanced cultivation of microalgae. *Applied Physics Letters*, **2015**, 106, 063902	3.4	19
67	Paper-based sperm DNA integrity analysis. *Analytical Methods*, **2016**, 8, 6260-6264	3.2	19
66	Laminated thin-film Teflon chips for petrochemical applications. *Lab on A Chip*, **2012**, 12, 4236-9	7.2	19
65	Silica-copper catalyst interfaces enable carbon-carbon coupling towards ethylene electrosynthesis. *Nature Communications*, **2021**, 12, 2808	17.4	19
64	Self-assembled nanoparticle-stabilized photocatalytic reactors. *Nanoscale*, **2016**, 8, 2107-15	7.7	18
63	Evanescent photosynthesis: exciting cyanobacteria in a surface-confined light field. *Physical Chemistry Chemical Physics*, **2012**, 14, 4817-23	3.6	18
62	Effects of liquid conductivity differences on multi-component sample injection, pumping and stacking in microfluidic chips. *Lab on A Chip*, **2003**, 3, 173-9	7.2	18
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60	Microfluidics Underground: A Micro-Core Method for Pore Scale Analysis of Supercritical CO2 Reactive Transport in Saline Aquifers. *Journal of Fluids Engineering, Transactions of the ASME*, **2013**, 135,	2.1	17
59	Bubble Point Pressures of Hydrocarbon Mixtures in Multiscale Volumes from Density Functional Theory. *Langmuir*, **2018**, 34, 14058-14068	4	17
58	Direct visualization of fluid dynamics in sub-10 nm nanochannels. *Nanoscale*, **2017**, 9, 9556-9561	7.7	16
57	Fractal Flow Patterns in Hydrophobic Microfluidic Pore Networks: Experimental Modeling of Two-Phase Flow in Porous Electrodes. *Journal of the Electrochemical Society*, **2010**, 157, B760	3.9	16
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55	When robotics met fluidics. *Lab on A Chip*, **2020**, 20, 709-716	7.2	16
54	Optothermal sample preconcentration and manipulation with temperature gradient focusing. *Microfluidics and Nanofluidics*, **2012**, 12, 221-228	2.8	15
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52	CO2 Electroreduction to Methane at Production Rates Exceeding 100 mA/cm2. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 14668-14673	8.3	14
51	Breathable waveguides for combined light and CO2 delivery to microalgae. *Bioresource Technology*, **2016**, 209, 391-6	11	13

50	Dopant-tuned stabilization of intermediates promotes electrosynthesis of valuable C3 products. *Nature Communications*, **2019**, 10, 4807	17.4	13
49	Detection of bubble and dew point using optical thin-film interference. *Sensors and Actuators B: Chemical*, **2015**, 207, 640-649	8.5	13
48	Prediction of DNA Integrity from Morphological Parameters Using a Single-Sperm DNA Fragmentation Index Assay. *Advanced Science*, **2019**, 6, 1900712	13.6	12
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42	Two-dimensional planar swimming selects for high DNA integrity sperm. *Lab on A Chip*, **2019**, 19, 2161-2167	7.2	10
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