Edward H Sargent

List of Publications by Year
in descending order

711
papers

119,822
citations

78

171
h-index

162

323
g-index

735
all docs

735
docs citations

735
times ranked

57282
citing authors

#	Article	IF	Citations
1	Low trap-state density and long carrier diffusion in organolead trihalide perovskite single crystals. Science, 2015, 347, 519-522.	12.6	4,156
2	Perovskite light-emitting diodes with external quantum efficiency exceeding 20 per cent. Nature, 2018, 562, 245-248.	27.8	2,589
3	Efficient and stable solution-processed planar perovskite solar cells via contact passivation. Science, 2017, 355, 722-726.	12.6	2,019
4	Homogeneously dispersed multimetal oxygen-evolving catalysts. Science, 2016, 352, 333-337.	12.6	1,948
5	Perovskite energy funnels for efficient light-emitting diodes. Nature Nanotechnology, 2016, 11, 872-877.	31.5	1,868
6	Solution-processed PbS quantum dot infrared photodetectors and photovoltaics. Nature Materials, 2005, 4, 138-142.	27.5	1,793
7	CO ₂ electroreduction to ethylene via hydroxide-mediated copper catalysis at an abrupt interface. Science, 2018, 360, 783-787.	12.6	1,638
8	Ultrasensitive solution-cast quantum dot photodetectors. Nature, 2006, 442, 180-183.	27.8	1,634
9	What would it take for renewably powered electrosynthesis to displace petrochemical processes?. Science, 2019, 364, .	12.6	1,505
10	Efficient and stable emission of warm-white light from lead-free halide double perovskites. Nature, 2018, 563, 541-545.	27.8	1,451
11	Enhanced electrocatalytic CO2 reduction via field-induced reagent concentration. Nature, 2016, 537, 382-386.	27.8	1,429
12	Colloidal-quantum-dot photovoltaics using atomic-ligand passivation. Nature Materials, 2011, 10, 765-771.	27.5	1,375
13	Perovskite photonic sources. Nature Photonics, 2016, 10, 295-302.	31.4	1,369
14	Challenges for commercializing perovskite solar cells. Science, 2018, 361, .	12.6	1,327
15	Nanostructured materials for photon detection. Nature Nanotechnology, 2010, 5, 391-400.	31.5	1,215
16	Ligand-Stabilized Reduced-Dimensionality Perovskites. Journal of the American Chemical Society, 2016, 138, 2649-2655.	13.7	1,157
17	Hybrid passivated colloidal quantum dot solids. Nature Nanotechnology, 2012, 7, 577-582.	31.5	1,100
18	Materials interface engineering for solution-processed photovoltaics. Nature, 2012, 488, 304-312.	27.8	1,000

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19	Building devices from colloidal quantum dots. Science, 2016, 353, .	12.6	996
20	Solution-processed semiconductors for next-generation photodetectors. Nature Reviews Materials, 2017, 2, .	48.7	992
21	Colloidal Quantum Dot Solar Cells. Chemical Reviews, 2015, 115, 12732-12763.	47.7	987
22	What Should We Make with CO2 and How Can We Make It?. Joule, 2018, 2, 825-832.	24.0	975
23	Perovskiteâ€“fullerene hybrid materials suppress hysteresis in planar diodes. Nature Communications, 2015, 6, 7081.	12.8	948
24	Highly Efficient Perovskiteâ€Quantumâ€Dot Lightâ€Emitting Diodes by Surface Engineering. Advanced Materials, 2016, 28, 8718-8725.	21.0	917
25	Managing grains and interfaces via ligand anchoring enables 22.3%-efficiency inverted perovskite solar cells. Nature Energy, 2020, 5, 131-140.	39.5	894
26	CO ₂ electrolysis to multicarbon products at activities greater than 1 A cm ^{âˆ’2}. Science, 2020, 367, 661-666.	12.6	860
27	Designing materials for electrochemical carbon dioxide recycling. Nature Catalysis, 2019, 2, 648-658.	34.4	838
28	Accelerated discovery of CO2 electrocatalysts using active machine learning. Nature, 2020, 581, 178-183.	27.8	807
29	Depleted-Heterojunction Colloidal Quantum Dot Solar Cells. ACS Nano, 2010, 4, 3374-3380.	14.6	781
30	Thin-film Sb2Se3 photovoltaics with oriented one-dimensional ribbons and benign grain boundaries. Nature Photonics, 2015, 9, 409-415.	31.4	781
31	Dopant-induced electron localization drives CO2 reduction to C2 hydrocarbons. Nature Chemistry, 2018, 10, 974-980.	13.6	781
32	Electrochemical CO₂ Reduction into Chemical Feedstocks: From Mechanistic Electrocatalysis Models to System Design. Advanced Materials, 2019, 31, e1807166.	21.0	769
33	Catalyst electro-redeposition controls morphology and oxidation state for selective carbon dioxide reduction. Nature Catalysis, 2018, 1, 103-110.	34.4	737
34	Monolithic all-perovskite tandem solar cells with 24.8% efficiency exploiting comproportionation to suppress Sn(ii) oxidation in precursor ink. Nature Energy, 2019, 4, 864-873.	39.5	736
35	Highly Oriented Low-Dimensional Tin Halide Perovskites with Enhanced Stability and Photovoltaic Performance. Journal of the American Chemical Society, 2017, 139, 6693-6699.	13.7	723
36	Electrochemical Methods for the Analysis of Clinically Relevant Biomolecules. Chemical Reviews, 2016, 116, 9001-9090.	47.7	702

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37	Molecular tuning of CO2-to-ethylene conversion. Nature, 2020, 577, 509-513.	27.8	682
38	Materials Processing Routes to Trap-Free Halide Perovskites. Nano Letters, 2014, 14, 6281-6286.	9.1	671
39	Ultra-bright and highly efficient inorganic based perovskite light-emitting diodes. Nature Communications, 2017, 8, 15640.	12.8	669
40	Perovskites for Next-Generation Optical Sources. Chemical Reviews, 2019, 119, 7444-7477.	47.7	640
41	Enhanced Nitrate-to-Ammonia Activity on Copperâ€"Nickel Alloys via Tuning of Intermediate Adsorption. Journal of the American Chemical Society, 2020, 142, 5702-5708.	13.7	638
42	Planar-integrated single-crystalline perovskite photodetectors. Nature Communications, 2015, 6, 8724.	12.8	617
43	Semiconductor quantum dots: Technological progress and future challenges. Science, 2021, 373, .	12.6	600
44	Colloidal quantum dot solar cells. Nature Photonics, 2012, 6, 133-135.	31.4	571
45	Hybrid organicâ€"inorganic inks flatten the energy landscape in colloidal quantum dotÂsolids. Nature Materials, 2017, 16, 258-263.	27.5	563
46	Suppression of atomic vacancies via incorporation of isovalent small ions to increase the stability of halide perovskite solar cells in ambient air. Nature Energy, 2018, 3, 648-654.	39.5	552
47	All-perovskite tandem solar cells with improved grain surface passivation. Nature, 2022, 603, 73-78.	27.8	544
48	Colloidal Quantum-Dot Photodetectors Exploiting Multiexciton Generation. Science, 2009, 324, 1542-1544.	12.6	541
49	Bipolar-shell resurfacing for blue LEDs based on strongly confined perovskite quantum dots. Nature Nanotechnology, 2020, 15, 668-674.	31.5	541
50	CO ₂ electrolysis to multicarbon products in strong acid. Science, 2021, 372, 1074-1078.	12.6	541
51	Steering post-Câ€"C coupling selectivity enables high efficiency electroreduction of carbon dioxide to multi-carbon alcohols. Nature Catalysis, 2018, 1, 421-428.	34.4	537
52	Color-stable highly luminescent sky-blue perovskite light-emitting diodes. Nature Communications, 2018, 9, 3541.	12.8	536
53	Air-stable n-type colloidal quantum dot solids. Nature Materials, 2014, 13, 822-828.	27.5	529
54	Efficient tandem solar cells with solution-processed perovskite on textured crystalline silicon. Science, 2020, 367, 1135-1140.	12.6	525

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55	Infrared Quantum Dots. Advanced Materials, 2005, 17, 515-522.	21.0	510
56	All-perovskite tandem solar cells with 24.2% certified efficiency and area over 1â€‰cm2 using surface-anchoring zwitterionic antioxidant. Nature Energy, 2020, 5, 870-880.	39.5	497
57	Efficient Luminescence from Perovskite Quantum Dot Solids. ACS Applied Materials & Interfaces, 2015, 7, 25007-25013.	8.0	481
58	Theory-driven design of high-valence metal sites for water oxidation confirmed using in situ soft X-ray absorption. Nature Chemistry, 2018, 10, 149-154.	13.6	476
59	Fast, sensitive and spectrally tuneable colloidal-quantum-dot photodetectors. Nature Nanotechnology, 2009, 4, 40-44.	31.5	475
60	Electronâ€"phonon interaction in efficient perovskite blue emitters. Nature Materials, 2018, 17, 550-556.	27.5	472
61	Multi-site electrocatalysts for hydrogen evolution in neutral media by destabilization of water molecules. Nature Energy, 2019, 4, 107-114.	39.5	470
62	Quantum-dot-in-perovskite solids. Nature, 2015, 523, 324-328.	27.8	468
63	Chiral-perovskite optoelectronics. Nature Reviews Materials, 2020, 5, 423-439.	48.7	445
64	The Architecture of Colloidal Quantum Dot Solar Cells: Materials to Devices. Chemical Reviews, 2014, 114, 863-882.	47.7	444
65	Thermal unequilibrium of strained black CsPbI ₃ thin films. Science, 2019, 365, 679-684.	12.6	444
66	Infrared Colloidal Quantum Dots for Photovoltaics: Fundamentals and Recent Progress. Advanced Materials, 2011, 23, 12-29.	21.0	422
67	Efficient, Stable Infrared Photovoltaics Based on Solution-Cast Colloidal Quantum Dots. ACS Nano, 2008, 2, 833-840.	14.6	421
68	25th Anniversary Article: Colloidal Quantum Dot Materials and Devices: A Quarterâ€Century of Advances. Advanced Materials, 2013, 25, 4986-5010.	21.0	419
69	Perovskites for Light Emission. Advanced Materials, 2018, 30, e1801996.	21.0	417
70	Molecular enhancement of heterogeneous CO2 reduction. Nature Materials, 2020, 19, 266-276.	27.5	416
71	Sensitive solution-processed visible-wavelength photodetectors. Nature Photonics, 2007, 1, 531-534.	31.4	411
72	Tailoring the Energy Landscape in Quasi-2D Halide Perovskites Enables Efficient Green-Light Emission. Nano Letters, 2017, 17, 3701-3709.	9.1	409

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73	Sulfur-Modulated Tin Sites Enable Highly Selective Electrochemical Reduction of CO2 to Formate. Joule, 2017, 1, 794-805.	24.0	390
74	High-valence metals improve oxygen evolution reaction performance by modulating 3d metal oxidation cycle energetics. Nature Catalysis, 2020, 3, 985-992.	34.4	390
75	Cooperative CO2-to-ethanol conversion via enriched intermediates at moleculeâ€"metal catalyst interfaces. Nature Catalysis, 2020, 3, 75-82.	34.4	390
76	Spin control in reduced-dimensional chiral perovskites. Nature Photonics, 2018, 12, 528-533.	31.4	371
77	Programming the detection limits of biosensors through controlled nanostructuring. Nature Nanotechnology, 2009, 4, 844-848.	31.5	370
78	Tandem colloidal quantum dot solar cells employing a graded recombination layer. Nature Photonics, 2011, 5, 480-484.	31.4	367
79	Efficient electrically powered CO2-to-ethanol via suppression of deoxygenation. Nature Energy, 2020, 5, 478-486.	39.5	363
80	Highly efficient quantum dot near-infrared light-emitting diodes. Nature Photonics, 2016, 10, 253-257.	31.4	361
81	Distribution control enables efficient reduced-dimensional perovskite LEDs. Nature, 2021, 599, 594-598.	27.8	358
82	Size-tunable infrared (1000â€"1600 nm) electroluminescence from PbS quantum-dot nanocrystals in a semiconducting polymer. Applied Physics Letters, 2003, 82, 2895-2897.	3.3	356
83	Copper nanocavities confine intermediates for efficient electrosynthesis of C3 alcohol fuels from carbon monoxide. Nature Catalysis, 2018, 1, 946-951.	34.4	354
84	Compositional and orientational control in metal halide perovskites of reduced dimensionality. Nature Materials, 2018, 17, 900-907.	27.5	351
85	Continuous Carbon Dioxide Electroreduction to Concentrated Multi-carbon Products Using a Membrane Electrode Assembly. Joule, 2019, 3, 2777-2791.	24.0	350
86	Advancing the speed, sensitivity and accuracy of biomolecular detection using multi-length-scale engineering. Nature Nanotechnology, 2014, 9, 969-980.	31.5	349
87	Regulating strain in perovskite thin films through charge-transport layers. Nature Communications, 2020, 11, 1514.	12.8	346
88	A general phase-transfer protocol for metal ions and its application in nanocrystal synthesis. Nature Materials, 2009, 8, 683-689.	27.5	345
89	Quantum Dot Photovoltaics in the Extreme Quantum Confinement Regime: The Surface-Chemical Origins of Exceptional Air- and Light-Stability. ACS Nano, 2010, 4, 869-878.	14.6	345
90	Amineâ€Free Synthesis of Cesium Lead Halide Perovskite Quantum Dots for Efficient Lightâ€Emitting Diodes. Advanced Functional Materials, 2016, 26, 8757-8763.	14.9	344

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91	Binding Site Diversity Promotes CO₂ Electroreduction to Ethanol. Journal of the American Chemical Society, 2019, 141, 8584-8591.	13.7	338
92	N-heterocyclic carbene-functionalized magic-number gold nanoclusters. Nature Chemistry, 2019, 11, 419-425.	13.6	333
93	Heterovalent Dopant Incorporation for Bandgap and Type Engineering of Perovskite Crystals. Journal of Physical Chemistry Letters, 2016, 7, 295-301.	4.6	332
94	Conformal Organohalide Perovskites Enable Lasing on Spherical Resonators. ACS Nano, 2014, 8, 10947-10952.	14.6	330
95	Colloidal Quantum Dot Photovoltaics: A Path Forward. ACS Nano, 2011, 5, 8506-8514.	14.6	327
96	Infrared photovoltaics made by solution processing. Nature Photonics, 2009, 3, 325-331.	31.4	326
97	Metalâ€“Organic Frameworks Mediate Cu Coordination for Selective CO₂ Electroreduction. Journal of the American Chemical Society, 2018, 140, 11378-11386.	13.7	326
98	Catalyst synthesis under CO2 electroreduction favours faceting and promotes renewable fuels electrosynthesis. Nature Catalysis, 2020, 3, 98-106.	34.4	325
99	Continuous-wave lasing in colloidal quantum dot solids enabled by facet-selective epitaxy. Nature, 2017, 544, 75-79.	27.8	319
100	Physically Flexible, Rapidâ€Response Gas Sensor Based on Colloidal Quantum Dot Solids. Advanced Materials, 2014, 26, 2718-2724.	21.0	313
101	10.6% Certified Colloidal Quantum Dot Solar Cells via Solvent-Polarity-Engineered Halide Passivation. Nano Letters, 2016, 16, 4630-4634.	9.1	312
102	Passivation Using Molecular Halides Increases Quantum Dot Solar Cell Performance. Advanced Materials, 2016, 28, 299-304.	21.0	312
103	Highly Emissive Green Perovskite Nanocrystals in a Solid State Crystalline Matrix. Advanced Materials, 2017, 29, 1605945.	21.0	309
104	Perovskite seeding growth of formamidinium-lead-iodide-based perovskites for efficient and stable solar cells. Nature Communications, 2018, 9, 1607.	12.8	309
105	Halide-Dependent Electronic Structure of Organolead Perovskite Materials. Chemistry of Materials, 2015, 27, 4405-4412.	6.7	305
106	Bright colloidal quantum dot light-emitting diodes enabled by efficient chlorination. Nature Photonics, 2018, 12, 159-164.	31.4	303
107	Bright high-colour-purity deep-blue carbon dot light-emitting diodes via efficient edge amination. Nature Photonics, 2020, 14, 171-176.	31.4	303
108	Synthesis of Colloidal CuGaSe₂, CuInSe₂, and Cu(InGa)Se₂ Nanoparticles. Chemistry of Materials, 2008, 20, 6906-6910.	6.7	298

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109	Colloidal quantum dot ligand engineering for high performance solar cells. Energy and Environmental Science, 2016, 9, 1130-1143.	30.8	297
110	Sensitive, Fast, and Stable Perovskite Photodetectors Exploiting Interface Engineering. ACS Photonics, 2015, 2, 1117-1123.	6.6	292
111	Synthetic Control over Quantum Well Width Distribution and Carrier Migration in Low-Dimensional Perovskite Photovoltaics. Journal of the American Chemical Society, 2018, 140, 2890-2896.	13.7	288
112	Sensitive Solution-Processed Bi₂S₃ Nanocrystalline Photodetectors. Nano Letters, 2008, 8, 4002-4006.	9.1	282
113	One-Step Synthesis of SnI₂Â·(DMSO)_{<i>x</i>} Adducts for High-Performance Tin Perovskite Solar Cells. Journal of the American Chemical Society, 2021, 143, 10970-10976.	13.7	280
114	Copper-on-nitride enhances the stable electrosynthesis of multi-carbon products from CO2. Nature Communications, 2018, 9, 3828.	12.8	279
115	Rational Design of Efficient Palladium Catalysts for Electroreduction of Carbon Dioxide to Formate. ACS Catalysis, 2016, 6, 8115-8120.	11.2	277
116	Charge-extraction strategies for colloidal quantum dot photovoltaics. Nature Materials, 2014, 13, 233-240.	27.5	273
117	Tunable Cu Enrichment Enables Designer Syngas Electrosynthesis from CO₂. Journal of the American Chemical Society, 2017, 139, 9359-9363.	13.7	260
118	Colloidal quantum dot solids for solution-processed solar cells. Nature Energy, 2016, 1, .	39.5	255
119	Two-Photon Absorption in Organometallic Bromide Perovskites. ACS Nano, 2015, 9, 9340-9346.	14.6	254
120	2D matrix engineering for homogeneous quantum dot coupling in photovoltaic solids. Nature Nanotechnology, 2018, 13, 456-462.	31.5	252
121	Ultralow Self-Doping in Two-dimensional Hybrid Perovskite Single Crystals. Nano Letters, 2017, 17, 4759-4767.	9.1	251
122	Enhanced Mobility-Lifetime Products in PbS Colloidal Quantum Dot Photovoltaics. ACS Nano, 2012, 6, 89-99.	14.6	244
123	Photovoltaic concepts inspired by coherence effects in photosynthetic systems. Nature Materials, 2017, 16, 35-44.	27.5	243
124	Gold Nanoparticle Plasmonic Superlattices as Surface-Enhanced Raman Spectroscopy Substrates. ACS Nano, 2018, 12, 8531-8539.	14.6	239
125	Bifunctional Surface Engineering on SnO₂ Reduces Energy Loss in Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 2796-2801.	17.4	239
126	DNA-based programming of quantum dot valency, self-assembly and luminescence. Nature Nanotechnology, 2011, 6, 485-490.	31.5	237

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127	Dipolar cations confer defect tolerance in wide-bandgap metal halide perovskites. Nature Communications, 2018, 9, 3100.	12.8	237
128	Gas diffusion electrodes, reactor designs and key metrics of low-temperature CO2 electrolysers. Nature Energy, 2022, 7, 130-143.	39.5	237
129	An electrochemical clamp assay for direct, rapid analysis of circulating nucleic acids in serum. Nature Chemistry, 2015, 7, 569-575.	13.6	234
130	Fast and Sensitive Solutionâ€Processed Visibleâ€Blind Perovskite UV Photodetectors. Advanced Materials, 2016, 28, 7264-7268.	21.0	234
131	Quantum-size-tuned heterostructures enable efficient and stable inverted perovskite solar cells. Nature Photonics, 2022, 16, 352-358.	31.4	233
132	High Rate, Selective, and Stable Electroreduction of CO₂ to CO in Basic and Neutral Media. ACS Energy Letters, 2018, 3, 2835-2840.	17.4	230
133	Quantum Dots Supply Bulk- and Surface-Passivation Agents for Efficient and Stable Perovskite Solar Cells. Joule, 2019, 3, 1963-1976.	24.0	222
134	Schottky-quantum dot photovoltaics for efficient infrared power conversion. Applied Physics Letters, 2008, 92, .	3.3	221
135	Engineering the Temporal Response of Photoconductive Photodetectors via Selective Introduction of Surface Trap States. Nano Letters, 2008, 8, 1446-1450.	9.1	219
136	Engineering colloidal quantum dot solids within and beyond the mobility-invariant regime. Nature Communications, 2014, 5, 3803.	12.8	214
137	Constraining CO coverage on copper promotes high-efficiency ethylene electroproduction. Nature Catalysis, 2019, 2, 1124-1131.	34.4	214
138	Combined high alkalinity and pressurization enable efficient CO₂ electroreduction to CO. Energy and Environmental Science, 2018, 11, 2531-2539.	30.8	214
139	Photonic crystal heterostructures and interfaces. Reviews of Modern Physics, 2006, 78, 455-481.	45.6	210
140	Allâ€Inorganic Quantumâ€Dot LEDs Based on a Phaseâ€Stabilized Î±â€CsPbI₃ Perovskite. Angewandte Chemie - International Edition, 2021, 60, 16164-16170.	13.8	210
141	Designing anion exchange membranes for CO2 electrolysers. Nature Energy, 2021, 6, 339-348.	39.5	209
142	Thiols Passivate Recombination Centers in Colloidal Quantum Dots Leading to Enhanced Photovoltaic Device Efficiency. ACS Nano, 2008, 2, 2356-2362.	14.6	208
143	Lattice anchoring stabilizes solution-processed semiconductors. Nature, 2019, 570, 96-101.	27.8	208
144	Chlorine Vacancy Passivation in Mixed Halide Perovskite Quantum Dots by Organic Pseudohalides Enables Efficient Rec. 2020 Blue Light-Emitting Diodes. ACS Energy Letters, 2020, 5, 793-798.	17.4	208

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145	Depleted Bulk Heterojunction Colloidal Quantum Dot Photovoltaics. Advanced Materials, 2011, 23, 3134-3138.	21.0	206
146	A Charge-Orbital Balance Picture of Doping in Colloidal Quantum Dot Solids. ACS Nano, 2012, 6, 8448-8455.	14.6	206
147	Perovskite Thin Films via Atomic Layer Deposition. Advanced Materials, 2015, 27, 53-58.	21.0	204
148	Photovoltage field-effect transistors. Nature, 2017, 542, 324-327.	27.8	204
149	Stabilizing Highly Active Ru Sites by Suppressing Lattice Oxygen Participation in Acidic Water Oxidation. Journal of the American Chemical Society, 2021, 143, 6482-6490.	13.7	204
150	One-step DNA-programmed growth of luminescent and biofunctionalized nanocrystals. Nature Nanotechnology, 2009, 4, 121-125.	31.5	203
151	Pure Cubicâ€Phase Hybrid Iodobismuthates AgBi₂I₇ for Thinâ€Film Photovoltaics. Angewandte Chemie - International Edition, 2016, 55, 9586-9590.	13.8	201
152	Hydroxide promotes carbon dioxide electroreduction to ethanol on copper via tuning of adsorbed hydrogen. Nature Communications, 2019, 10, 5814.	12.8	201
153	Impact of dithiol treatment and air annealing on the conductivity, mobility, and hole density in PbS colloidal quantum dot solids. Applied Physics Letters, 2008, 92, .	3.3	200
154	Photon management for augmented photosynthesis. Nature Communications, 2016, 7, 12699.	12.8	200
155	A Surface Reconstruction Route to High Productivity and Selectivity in CO₂ Electroreduction toward C₂₊ Hydrocarbons. Advanced Materials, 2018, 30, e1804867.	21.0	200
156	2D Metal Oxyhalideâ€Derived Catalysts for Efficient CO₂ Electroreduction. Advanced Materials, 2018, 30, e1802858.	21.0	200
157	Highly Efficient Visible Colloidal Lead-Halide Perovskite Nanocrystal Light-Emitting Diodes. Nano Letters, 2018, 18, 3157-3164.	9.1	199
158	High-Efficiency Colloidal Quantum Dot Photovoltaics via Robust Self-Assembled Monolayers. Nano Letters, 2015, 15, 7691-7696.	9.1	198
159	Tracking the dynamics of circulating tumour cell phenotypes using nanoparticle-mediated magnetic ranking. Nature Nanotechnology, 2017, 12, 274-281.	31.5	198
160	Allâ€Inorganic Colloidal Quantum Dot Photovoltaics Employing Solutionâ€Phase Halide Passivation. Advanced Materials, 2012, 24, 6295-6299.	21.0	197
161	High carbon utilization in CO2 reduction to multi-carbon products in acidic media. Nature Catalysis, 2022, 5, 564-570.	34.4	197
162	Quantum Junction Solar Cells. Nano Letters, 2012, 12, 4889-4894.	9.1	196

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163	Chloride-mediated selective electrosynthesis of ethylene and propylene oxides at high current density. Science, 2020, 368, 1228-1233.	12.6	196
164	Colloidal quantum dot electronics. Nature Electronics, 2021, 4, 548-558.	26.0	192
165	Efficient Biexciton Interaction in Perovskite Quantum Dots Under Weak and Strong Confinement. ACS Nano, 2016, 10, 8603-8609.	14.6	190
166	Efficient electrocatalytic conversion of carbon monoxide to propanol using fragmented copper. Nature Catalysis, 2019, 2, 251-258.	34.4	188
167	The Inâ€Gap Electronic State Spectrum of Methylammonium Lead Iodide Singleâ€Crystal Perovskites. Advanced Materials, 2016, 28, 3406-3410.	21.0	187
168	Profiling circulating tumour cells and other biomarkers of invasive cancers. Nature Biomedical Engineering, 2018, 2, 72-84.	22.5	187
169	Nâ€Type Colloidalâ€Quantumâ€Dot Solids for Photovoltaics. Advanced Materials, 2012, 24, 6181-6185.	21.0	181
170	Cascade surface modification of colloidal quantum dot inks enables efficient bulk homojunction photovoltaics. Nature Communications, 2020, 11, 103.	12.8	181
171	An ultrasensitive universal detector based on neutralizer displacement. Nature Chemistry, 2012, 4, 642-648.	13.6	180
172	Enhanced optical path and electron diffusion length enable high-efficiency perovskite tandems. Nature Communications, 2020, 11, 1257.	12.8	180
173	Measuring Charge Carrier Diffusion in Coupled Colloidal Quantum Dot Solids. ACS Nano, 2013, 7, 5282-5290.	14.6	178
174	Colloidal Quantum Dot Photovoltaics Enhanced by Perovskite Shelling. Nano Letters, 2015, 15, 7539-7543.	9.1	173
175	Graphdiyne: An Efficient Hole Transporter for Stable Highâ€Performance Colloidal Quantum Dot Solar Cells. Advanced Functional Materials, 2016, 26, 5284-5289.	14.9	172
176	DNA Clutch Probes for Circulating Tumor DNA Analysis. Journal of the American Chemical Society, 2016, 138, 11009-11016.	13.7	169
177	PbS colloidal quantum dot photoconductive photodetectors: Transport, traps, and gain. Applied Physics Letters, 2007, 91, 173505.	3.3	164
178	Graded Doping for Enhanced Colloidal Quantum Dot Photovoltaics. Advanced Materials, 2013, 25, 1719-1723.	21.0	164
179	Efficient bifacial monolithic perovskite/silicon tandem solar cells via bandgap engineering. Nature Energy, 2021, 6, 167-175.	39.5	164
180	Solar Cells, Photodetectors, and Optical Sources from Infrared Colloidal Quantum Dots. Advanced Materials, 2008, 20, 3958-3964.	21.0	163

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181	Schottky Quantum Dot Solar Cells Stable in Air under Solar Illumination. Advanced Materials, 2010, 22, 1398-1402.	21.0	162
182	Reducing Defects in Halide Perovskite Nanocrystals for Light-Emitting Applications. Journal of Physical Chemistry Letters, 2019, 10, 2629-2640.	4.6	162
183	Can sustainable ammonia synthesis pathways compete with fossil-fuel based Haberâ€“Bosch processes?. Energy and Environmental Science, 2021, 14, 2535-2548.	30.8	162
184	Structural, optical, and electronic studies of wide-bandgap lead halide perovskites. Journal of Materials Chemistry C, 2015, 3, 8839-8843.	5.5	161
185	Self-Cleaning CO₂ Reduction Systems: Unsteady Electrochemical Forcing Enables Stability. ACS Energy Letters, 2021, 6, 809-815.	17.4	159
186	Solar Cells Based on Inks of n-Type Colloidal Quantum Dots. ACS Nano, 2014, 8, 10321-10327.	14.6	158
187	High-Density Nanosharp Microstructures Enable Efficient CO₂ Electroreduction. Nano Letters, 2016, 16, 7224-7228.	9.1	158
188	Cascade CO2 electroreduction enables efficient carbonate-free production of ethylene. Joule, 2021, 5, 706-719.	24.0	158
189	Detection of SARS-CoV-2 Viral Particles Using Direct, Reagent-Free Electrochemical Sensing. Journal of the American Chemical Society, 2021, 143, 1722-1727.	13.7	156
190	Efficient Schottky-quantum-dot photovoltaics: The roles of depletion, drift, and diffusion. Applied Physics Letters, 2008, 92, .	3.3	155
191	Single Pass CO₂ Conversion Exceeding 85% in the Electrosynthesis of Multicarbon Products via Local CO₂ Regeneration. ACS Energy Letters, 2021, 6, 2952-2959.	17.4	155
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