Oleksandr Voznyy

List of Publications by Year
in descending order

192 papers	35,594 citations	4136 87 h-index	3260 185 g-index
197 all docs	197 docs citations	197 times ranked	27884 citing authors

#	Article	IF	Citations
1	Efficient and stable solution-processed planar perovskite solar cells via contact passivation. Science, 2017, 355, 722-726.	6.0	2,019
2	Homogeneously dispersed multimetal oxygen-evolving catalysts. Science, 2016, 352, 333-337.	6.0	1,948
3	Perovskite energy funnels for efficient light-emitting diodes. Nature Nanotechnology, 2016, 11, 872-877.	15.6	1,868
4	Enhanced electrocatalytic CO2 reduction via field-induced reagent concentration. Nature, 2016, 537, 382-386.	13.7	1,429
5	Ligand-Stabilized Reduced-Dimensionality Perovskites. Journal of the American Chemical Society, 2016, 138, 2649-2655.	6.6	1,157
6	Hybrid passivated colloidal quantum dot solids. Nature Nanotechnology, 2012, 7, 577-582.	15.6	1,100
7	Perovskiteâ€“fullerene hybrid materials suppress hysteresis in planar diodes. Nature Communications, 2015, 6, 7081.	5.8	948
8	Highly Efficient Perovskiteâ€Quantumâ€Dot Lightâ€Emitting Diodes by Surface Engineering. Advanced Materials, 2016, 28, 8718-8725.	11.1	917
9	Accelerated discovery of CO2 electrocatalysts using active machine learning. Nature, 2020, 581, 178-183.	13.7	807
10	Materials Processing Routes to Trap-Free Halide Perovskites. Nano Letters, 2014, 14, 6281-6286.	4.5	671
11	Hybrid organicâ€“inorganic inks flatten the energy landscape in colloidal quantum dotÂsolids. Nature Materials, 2017, 16, 258-263.	13.3	563
12	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.	19.8	552
13	Bipolar-shell resurfacing for blue LEDs based on strongly confined perovskite quantum dots. Nature Nanotechnology, 2020, 15, 668-674.	15.6	541
14	Color-stable highly luminescent sky-blue perovskite light-emitting diodes. Nature Communications, 2018, 9, 3541.	5.8	536
15	Air-stable n-type colloidal quantum dot solids. Nature Materials, 2014, 13, 822-828.	13.3	529
16	Efficient Luminescence from Perovskite Quantum Dot Solids. ACS Applied Materials & Interfaces, 2015, 7, 25007-25013.	4.0	481
17	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.	6.6	476
18	Electronâ€“phonon interaction in efficient perovskite blue emitters. Nature Materials, 2018, 17, 550-556.	13.3	472

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19	Multi-site electrocatalysts for hydrogen evolution in neutral media by destabilization of water molecules. Nature Energy, 2019, 4, 107-114.	19.8	470
20	Quantum-dot-in-perovskite solids. Nature, 2015, 523, 324-328.	13.7	468
21	25th Anniversary Article: Colloidal Quantum Dot Materials and Devices: A Quarterâ€Century of Advances. Advanced Materials, 2013, 25, 4986-5010.	11.1	419
22	Tailoring the Energy Landscape in Quasi-2D Halide Perovskites Enables Efficient Green-Light Emission. Nano Letters, 2017, 17, 3701-3709.	4.5	409
23	Sulfur-Modulated Tin Sites Enable Highly Selective Electrochemical Reduction of CO2 to Formate. Joule, 2017, 1, 794-805.	11.7	390
24	High-valence metals improve oxygen evolution reaction performance by modulating 3d metal oxidation cycle energetics. Nature Catalysis, 2020, 3, 985-992.	16.1	390
25	Spin control in reduced-dimensional chiral perovskites. Nature Photonics, 2018, 12, 528-533.	15.6	371
26	Highly efficient quantum dot near-infrared light-emitting diodes. Nature Photonics, 2016, 10, 253-257.	15.6	361
27	Amineâ€Free Synthesis of Cesium Lead Halide Perovskite Quantum Dots for Efficient Lightâ€Emitting Diodes. Advanced Functional Materials, 2016, 26, 8757-8763.	7.8	344
28	Binding Site Diversity Promotes CO₂ Electroreduction to Ethanol. Journal of the American Chemical Society, 2019, 141, 8584-8591.	6.6	338
29	Heterovalent Dopant Incorporation for Bandgap and Type Engineering of Perovskite Crystals. Journal of Physical Chemistry Letters, 2016, 7, 295-301.	2.1	332
30	Continuous-wave lasing in colloidal quantum dot solids enabled by facet-selective epitaxy. Nature, 2017, 544, 75-79.	13.7	319
31	Physically Flexible, Rapidâ€Response Gas Sensor Based on Colloidal Quantum Dot Solids. Advanced Materials, 2014, 26, 2718-2724.	11.1	313
32	10.6% Certified Colloidal Quantum Dot Solar Cells via Solvent-Polarity-Engineered Halide Passivation. Nano Letters, 2016, 16, 4630-4634.	4.5	312
33	Passivation Using Molecular Halides Increases Quantum Dot Solar Cell Performance. Advanced Materials, 2016, 28, 299-304.	11.1	312
34	Highly Emissive Green Perovskite Nanocrystals in a Solid State Crystalline Matrix. Advanced Materials, 2017, 29, 1605945.	11.1	309
35	Perovskite seeding growth of formamidinium-lead-iodide-based perovskites for efficient and stable solar cells. Nature Communications, 2018, 9, 1607.	5.8	309
36	Bright colloidal quantum dot light-emitting diodes enabled by efficient chlorination. Nature Photonics, 2018, 12, 159-164.	15.6	303

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37	Bright high-colour-purity deep-blue carbon dot light-emitting diodes via efficient edge amination. Nature Photonics, 2020, 14, 171-176.	15.6	303
38	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.	6.6	288
39	Rational Design of Efficient Palladium Catalysts for Electroreduction of Carbon Dioxide to Formate. ACS Catalysis, 2016, 6, 8115-8120.	5.5	277
40	2D matrix engineering for homogeneous quantum dot coupling in photovoltaic solids. Nature Nanotechnology, 2018, 13, 456-462.	15.6	252
41	Gold adatom as a key structural component in self-assembled monolayers of organosulfur molecules on Au(111). Progress in Surface Science, 2010, 85, 206-240.	3.8	249
42	Dipolar cations confer defect tolerance in wide-bandgap metal halide perovskites. Nature Communications, 2018, 9, 3100.	5.8	237
43	Engineering colloidal quantum dot solids within and beyond the mobility-invariant regime. Nature Communications, 2014, 5, 3803.	5.8	214
44	Lattice anchoring stabilizes solution-processed semiconductors. Nature, 2019, 570, 96-101.	13.7	208
45	A Charge-Orbital Balance Picture of Doping in Colloidal Quantum Dot Solids. ACS Nano, 2012, 6, 8448-8455.	7.3	206
46	Perovskite Thin Films via Atomic Layer Deposition. Advanced Materials, 2015, 27, 53-58.	11.1	204
47	Stabilizing Highly Active Ru Sites by Suppressing Lattice Oxygen Participation in Acidic Water Oxidation. Journal of the American Chemical Society, 2021, 143, 6482-6490.	6.6	204
48	Pure Cubicâ€Phase Hybrid Iodobismuthates AgBi₂I₇ for Thinâ€Film Photovoltaics. Angewandte Chemie - International Edition, 2016, 55, 9586-9590.	7.2	201
49	High-Efficiency Colloidal Quantum Dot Photovoltaics via Robust Self-Assembled Monolayers. Nano Letters, 2015, 15, 7691-7696.	4.5	198
50	Allâ€Inorganic Colloidal Quantum Dot Photovoltaics Employing Solutionâ€Phase Halide Passivation. Advanced Materials, 2012, 24, 6295-6299.	11.1	197
51	Efficient Biexciton Interaction in Perovskite Quantum Dots Under Weak and Strong Confinement. ACS Nano, 2016, 10, 8603-8609.	7.3	190
52	Nâ€Type Colloidalâ€Quantumâ€Dot Solids for Photovoltaics. Advanced Materials, 2012, 24, 6181-6185.	11.1	181
53	Cascade surface modification of colloidal quantum dot inks enables efficient bulk homojunction photovoltaics. Nature Communications, 2020, 11, 103.	5.8	181
54	Measuring Charge Carrier Diffusion in Coupled Colloidal Quantum Dot Solids. ACS Nano, 2013, 7, 5282-5290.	7.3	178

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55	Colloidal Quantum Dot Photovoltaics Enhanced by Perovskite Shelling. Nano Letters, 2015, 15, 7539-7543.	4.5	173
56	Graded Doping for Enhanced Colloidal Quantum Dot Photovoltaics. Advanced Materials, 2013, 25, 1719-1723.	11.1	164
57	Structural, optical, and electronic studies of wide-bandgap lead halide perovskites. Journal of Materials Chemistry C, 2015, 3, 8839-8843.	2.7	161
58	The Role of Gold Adatoms and Stereochemistry in Self-Assembly of Methylthiolate on Au(111). Journal of the American Chemical Society, 2009, 131, 12989-12993.	6.6	159
59	Solar Cells Based on Inks of n-Type Colloidal Quantum Dots. ACS Nano, 2014, 8, 10321-10327.	7.3	158
60	Mixed-quantum-dot solar cells. Nature Communications, 2017, 8, 1325.	5.8	148
61	Combining Efficiency and Stability in Mixed Tinâ€“Lead Perovskite Solar Cells by Capping Grains with an Ultrathin 2D Layer. Advanced Materials, 2020, 32, e1907058.	11.1	148
62	Edge stabilization in reduced-dimensional perovskites. Nature Communications, 2020, 11, 170.	5.8	147
63	In Situ Backâ€Contact Passivation Improves Photovoltage and Fill Factor in Perovskite Solar Cells. Advanced Materials, 2019, 31, e1807435.	11.1	143
64	Monolayer Perovskite Bridges Enable Strong Quantum Dot Coupling for Efficient Solar Cells. Joule, 2020, 4, 1542-1556.	11.7	143
65	CO₂ Electroreduction from Carbonate Electrolyte. ACS Energy Letters, 2019, 4, 1427-1431.	8.8	141
66	Efficient near-infrared light-emitting diodes based on quantum dots in layered perovskite. Nature Photonics, 2020, 14, 227-233.	15.6	136
67	Color-pure red light-emitting diodes based on two-dimensional lead-free perovskites. Science Advances, 2020, 6, .	4.7	135
68	High-Throughput Screening of Lead-Free Perovskite-like Materials for Optoelectronic Applications. Journal of Physical Chemistry C, 2017, 121, 7183-7187.	1.5	128
69	Magnetism and Correlations in Fractionally Filled Degenerate Shells of Graphene Quantum Dots. Physical Review Letters, 2009, 103, 246805.	2.9	127
70	Chloride Passivation of ZnO Electrodes Improves Charge Extraction in Colloidal Quantum Dot Photovoltaics. Advanced Materials, 2017, 29, 1702350.	11.1	126
71	Mobile Surface Traps in CdSe Nanocrystals with Carboxylic Acid Ligands. Journal of Physical Chemistry C, 2011, 115, 15927-15932.	1.5	125
72	Doubleâ€Sided Junctions Enable Highâ€Performance Colloidalâ€Quantumâ€Dot Photovoltaics. Advanced Materials, 2016, 28, 4142-4148.	11.1	121

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73	Efficient hybrid colloidal quantum dot/organic solar cells mediated by near-infrared sensitizing small molecules. Nature Energy, 2019, 4, 969-976.	19.8	120
74	Record Charge Carrier Diffusion Length in Colloidal Quantum Dot Solids via Mutual Dotâ€Toâ€Dot Surface Passivation. Advanced Materials, 2015, 27, 3325-3330.	11.1	118
75	Chloride Insertionâ€“Immobilization Enables Bright, Narrowband, and Stable Blue-Emitting Perovskite Diodes. Journal of the American Chemical Society, 2020, 142, 5126-5134.	6.6	116
76	Dynamic Trap Formation and Elimination in Colloidal Quantum Dots. Journal of Physical Chemistry Letters, 2013, 4, 987-992.	2.1	115
77	Colloidal CdSe_{1â€“<i>x</i>}S_{<i>x</i>} Nanoplatelets with Narrow and Continuously-Tunable Electroluminescence. Nano Letters, 2015, 15, 4611-4615.	4.5	114
78	Chelating-agent-assisted control of CsPbBr3 quantum well growth enables stable blue perovskite emitters. Nature Communications, 2020, 11, 3674.	5.8	112
79	A Multi-functional Molecular Modifier Enabling Efficient Large-Area Perovskite Light-Emitting Diodes. Joule, 2020, 4, 1977-1987.	11.7	111
80	Microsecond-sustained lasing from colloidal quantum dot solids. Nature Communications, 2015, 6, 8694.	5.8	109
81	Crosslinked Remoteâ€Doped Holeâ€Extracting Contacts Enhance Stability under Accelerated Lifetime Testing in Perovskite Solar Cells. Advanced Materials, 2016, 28, 2807-2815.	11.1	108
82	Machine Learning Accelerates Discovery of Optimal Colloidal Quantum Dot Synthesis. ACS Nano, 2019, 13, 11122-11128.	7.3	108
83	Engineering charge transport by heterostructuring solution-processed semiconductors. Nature Reviews Materials, 2017, 2, .	23.3	105
84	Crystal symmetry breaking and vacancies in colloidal lead chalcogenide quantum dots. Nature Materials, 2016, 15, 987-994.	13.3	101
85	Directly Deposited Quantum Dot Solids Using a Colloidally Stable Nanoparticle Ink. Advanced Materials, 2013, 25, 5742-5749.	11.1	99
86	Automated Synthesis of Photovoltaic-Quality Colloidal Quantum Dots Using Separate Nucleation and Growth Stages. ACS Nano, 2013, 7, 10158-10166.	7.3	97
87	Infrared Colloidal Quantum Dot Photovoltaics <i>via</i> Coupling Enhancement and Agglomeration Suppression. ACS Nano, 2015, 9, 8833-8842.	7.3	96
88	Bright and Stable Light-Emitting Diodes Based on Perovskite Quantum Dots in Perovskite Matrix. Journal of the American Chemical Society, 2021, 143, 15606-15615.	6.6	94
89	Wide-Bandgap Perovskite Quantum Dots in Perovskite Matrix for Sky-Blue Light-Emitting Diodes. Journal of the American Chemical Society, 2022, 144, 4009-4016.	6.6	92
90	A Facetâ€Specific Quantum Dot Passivation Strategy for Colloid Management and Efficient Infrared Photovoltaics. Advanced Materials, 2019, 31, e1805580.	11.1	87

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91	Fine structure and size dependence of exciton and biexciton optical spectra in CdSe nanocrystals. Physical Review B, 2010, 82, .	1.1	84
92	Field-emission from quantum-dot-in-perovskite solids. Nature Communications, 2017, 8, 14757.	5.8	83
93	In Situ Inorganic Ligand Replenishment Enables Bandgap Stability in Mixedâ€Halide Perovskite Quantum Dot Solids. Advanced Materials, 2022, 34, e2200854.	11.1	82
94	Amideâ€Catalyzed Phaseâ€Selective Crystallization Reduces Defect Density in Wideâ€Bandgap Perovskites. Advanced Materials, 2018, 30, e1706275.	11.1	80
95	Pseudohalideâ€Exchanged Quantum Dot Solids Achieve Record Quantum Efficiency in Infrared Photovoltaics. Advanced Materials, 2017, 29, 1700749.	11.1	79
96	Overcoming the Ambient Manufacturabilityâ€Scalabilityâ€Performance Bottleneck in Colloidal Quantum Dot Photovoltaics. Advanced Materials, 2018, 30, e1801661.	11.1	79
97	Synergistic Doping of Fullerene Electron Transport Layer and Colloidal Quantum Dot Solids Enhances Solar Cell Performance. Advanced Materials, 2015, 27, 917-921.	11.1	75
98	Spectrally Resolved Ultrafast Exciton Transfer in Mixed Perovskite Quantum Wells. Journal of Physical Chemistry Letters, 2019, 10, 419-426.	2.1	74
99	Atomistic Model of Fluorescence Intermittency of Colloidal Quantum Dots. Physical Review Letters, 2014, 112, 157401.	2.9	73
100	Origins of Stokes Shift in PbS Nanocrystals. Nano Letters, 2017, 17, 7191-7195.	4.5	72
101	Effect of edge reconstruction and passivation on zero-energy states and magnetism in triangular graphene quantum dots with zigzag edges. Physical Review B, 2011, 83, .	1.1	69
102	Role of Bond Adaptability in the Passivation of Colloidal Quantum Dot Solids. ACS Nano, 2013, 7, 7680-7688.	7.3	69
103	Hydrophobic stabilizer-anchored fully inorganic perovskite quantum dots enhance moisture resistance and photovoltaic performance. Nano Energy, 2020, 75, 104985.	8.2	69
104	Single-step fabrication of quantum funnels via centrifugal colloidal casting of nanoparticle films. Nature Communications, 2015, 6, 7772.	5.8	68
105	Butylamineâ€Catalyzed Synthesis of Nanocrystal Inks Enables Efficient Infrared CQD Solar Cells. Advanced Materials, 2018, 30, e1803830.	11.1	67
106	Quantum Dot-Plasmon Lasing with Controlled Polarization Patterns. ACS Nano, 2020, 14, 3426-3433.	7.3	66
107	Doping Control Via Molecularly Engineered Surface Ligand Coordination. Advanced Materials, 2013, 25, 5586-5592.	11.1	62
108	All-Quantum-Dot Infrared Light-Emitting Diodes. ACS Nano, 2015, 9, 12327-12333.	7.3	61

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109	The quantum-confined Stark effect in layered hybrid perovskites mediated by orientational polarizability of confined dipoles. Nature Communications, 2018, 9, 4214.	5.8	61
110	Electronic and optical properties of semiconductor and graphene quantum dots. Frontiers of Physics, 2012, 7, 328-352.	2.4	57
111	Activated Electronâ€Transport Layers for Infrared Quantum Dot Optoelectronics. Advanced Materials, 2018, 30, e1801720.	11.1	57
112	Acid-Assisted Ligand Exchange Enhances Coupling in Colloidal Quantum Dot Solids. Nano Letters, 2018, 18, 4417-4423.	4.5	57
113	ZnFe₂O₄ Leaves Grown on TiO₂ Trees Enhance Photoelectrochemical Water Splitting. Small, 2016, 12, 3181-3188.	5.2	56
114	Multibandgap quantum dot ensembles for solar-matched infrared energy harvesting. Nature Communications, 2018, 9, 4003.	5.8	56
115	The Silicon:Colloidal Quantum Dot Heterojunction. Advanced Materials, 2015, 27, 7445-7450.	11.1	55
116	Contactless measurements of photocarrier transport properties in perovskite single crystals. Nature Communications, 2019, 10, 1591.	5.8	55
117	Magic-Sized Cd₃P₂ IIâˆ'V Nanoparticles Exhibiting Bandgap Photoemission. Journal of Physical Chemistry C, 2009, 113, 17979-17982.	1.5	54
118	The Complete Inâ€Gap Electronic Structure of Colloidal Quantum Dot Solids and Its Correlation with Electronic Transport and Photovoltaic Performance. Advanced Materials, 2014, 26, 937-942.	11.1	54
119	Controlled Steric Hindrance Enables Efficient Ligand Exchange for Stable, Infrared-Bandgap Quantum Dot Inks. ACS Energy Letters, 2019, 4, 1225-1230.	8.8	54
120	Anchored Ligands Facilitate Efficient B-Site Doping in Metal Halide Perovskites. Journal of the American Chemical Society, 2019, 141, 8296-8305.	6.6	53
121	Single-step colloidal quantum dot films for infrared solar harvesting. Applied Physics Letters, 2016, 109, .	1.5	52
122	Atomistic Design of CdSe/CdS Coreâ€"Shell Quantum Dots with Suppressed Auger Recombination. Nano Letters, 2016, 16, 6491-6496.	4.5	51
123	Picosecond Charge Transfer and Long Carrier Diffusion Lengths in Colloidal Quantum Dot Solids. Nano Letters, 2018, 18, 7052-7059.	4.5	51
124	Enhanced Openâ€Circuit Voltage in Colloidal Quantum Dot Photovoltaics via Reactivityâ€Controlled Solutionâ€Phase Ligand Exchange. Advanced Materials, 2017, 29, 1703627.	11.1	49
125	Solid Electrolyte Interphase Engineering for Aqueous Aluminum Metal Batteries: A Critical Evaluation. Advanced Energy Materials, 2021, 11, 2100077.	10.2	49
126	Atomistic Description of Thiostannate-Capped CdSe Nanocrystals: Retention of Four-Coordinate SnS4 Motif and Preservation of Cd-Rich Stoichiometry. Journal of the American Chemical Society, 2015, 137, 1862-1874.	6.6	48

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127	Orthogonal colloidal quantum dot inks enable efficient multilayer optoelectronic devices. Nature Communications, 2020, 11, 4814.	5.8	48
128	Engineering Directionality in Quantum Dot Shell Lasing Using Plasmonic Lattices. Nano Letters, 2020, 20, 1468-1474.	4.5	48
129	Stabilizing Surface Passivation Enables Stable Operation of Colloidal Quantum Dot Photovoltaic Devices at Maximum Power Point in an Air Ambient. Advanced Materials, 2020, 32, e1906497.	11.1	47
130	Ligand-Assisted Reconstruction of Colloidal Quantum Dots Decreases Trap State Density. Nano Letters, 2020, 20, 3694-3702.	4.5	46
131	Structure of Thiol Self-Assembled Monolayers Commensurate with the GaAs (001) Surface. Langmuir, 2008, 24, 13299-13305.	1.6	44
132	Solution-processed perovskite-colloidal quantum dot tandem solar cells for photon collection beyond 1000 nm. Journal of Materials Chemistry A, 2019, 7, 26020-26028.	5.2	44
133	Pure Cubicâ€Phase Hybrid Iodobismuthates AgBi₂I₇ for Thinâ€Film Photovoltaics. Angewandte Chemie, 2016, 128, 9738-9742.	1.6	42
134	Facetâ€Oriented Coupling Enables Fast and Sensitive Colloidal Quantum Dot Photodetectors. Advanced Materials, 2021, 33, e2101056.	11.1	42
135	Molecular self-assembly and passivation of GaAs (001) with alkanethiol monolayers: A view towards bio-functionalization. Applied Surface Science, 2010, 256, 5714-5721.	3.1	41
136	Biexciton Resonances Reveal Exciton Localization in Stacked Perovskite Quantum Wells. Journal of Physical Chemistry Letters, 2017, 8, 3895-3901.	2.1	41
137	Remote Molecular Doping of Colloidal Quantum Dot Photovoltaics. ACS Energy Letters, 2016, 1, 922-930.	8.8	40
138	Electrocatalytic Reduction of CO₂ to CH₄ and CO in Aqueous Solution Using Pyridine-Porphyrins Immobilized onto Carbon Nanotubes. ACS Sustainable Chemistry and Engineering, 2020, 8, 9549-9557.	3.2	39
139	c(4 Ã— 2) Structures of Alkanethiol Monolayers on Au (111) Compatible with the Constraint of Dense Packing. Langmuir, 2009, 25, 7353-7358.	1.6	35
140	Halide Re-Shelled Quantum Dot Inks for Infrared Photovoltaics. ACS Applied Materials & Interfaces, 2017, 9, 37536-37541.	4.0	35
141	Fast Nearâ€Infrared Photodetection Using IIIâ€“V Colloidal Quantum Dots. Advanced Materials, 2022, 34, .	11.1	34
142	Adsorption Kinetics of Hydrogen Sulfide and Thiols on GaAs (001) Surfaces in a Vacuum. Journal of Physical Chemistry C, 2008, 112, 3726-3733.	1.5	33
143	Crystal Site Feature Embedding Enables Exploration of Large Chemical Spaces. Matter, 2020, 3, 433-448.	5.0	33
144	Electronically Active Impurities in Colloidal Quantum Dot Solids. ACS Nano, 2014, 8, 11763-11769.	7.3	32

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145	Computational Study of Magic-Size CdSe Clusters with Complementary Passivation by Carboxylic and Amine Ligands. Journal of Physical Chemistry C, 2016, 120, 10015-10019.	1.5	32
146	Structure, Bonding Nature, and Binding Energy of Alkanethiolate on As-Rich GaAs (001) Surface:Â A Density Functional Theory Study. Journal of Physical Chemistry B, 2006, 110, 23619-23622.	1.2	31
147	Quantum Dots in Two-Dimensional Perovskite Matrices for Efficient Near-Infrared Light Emission. ACS Photonics, 2017, 4, 830-836.	3.2	30
148	Applied Machine Learning for Developing Nextâ€Generation Functional Materials. Advanced Functional Materials, 2021, 31, 2104195.	7.8	28
149	Multiscale hierarchical structures from a nanocluster mesophase. Nature Materials, 2022, 21, 518-525.	13.3	27
150	Effect of disorder on transport properties in a tight-binding model for lead halide perovskites. Scientific Reports, 2017, 7, 8902.	1.6	25
151	Theory of highly excited semiconductor nanostructures including Auger coupling: Exciton-biexciton mixing in CdSe nanocrystals. Physical Review B, 2011, 84, .	1.1	23
152	Small-Band-Offset Perovskite Shells Increase Auger Lifetime in Quantum Dot Solids. ACS Nano, 2017, 11, 12378-12384.	7.3	23
153	Pulsed axial epitaxy of colloidal quantum dots in nanowires enables facet-selective passivation. Nature Communications, 2018, 9, 4947.	5.8	22
154	Structural Distortion and Bandgap Increase of Two-Dimensional Perovskites Induced by Trifluoromethyl Substitution on Spacer Cations. Journal of Physical Chemistry Letters, 2020, 11, 10144-10149.	2.1	22
155	Tertiary Hierarchical Complexity in Assemblies of Sulfur-Bridged Metal Chiral Clusters. Journal of the American Chemical Society, 2020, 142, 14495-14503.	6.6	22
156	Epitaxial Metal Halide Perovskites by Inkjetâ€Printing on Various Substrates. Advanced Functional Materials, 2020, 30, 2004612.	7.8	21
157	Hybridization of Phenylthiolate- and Methylthiolate-Adatom Species at Low Coverage on the Au(111) Surface. Journal of the American Chemical Society, 2013, 135, 4922-4925.	6.6	20
158	Linear Electroâ€Optic Modulation in Highly Polarizable Organic Perovskites. Advanced Materials, 2021, 33, e2006368.	11.1	20
159	The striped phases of ethylthiolate monolayers on the Au(111) surface: A scanning tunneling microscopy study. Journal of Chemical Physics, 2013, 138, 194707.	1.2	18
160	Narrow Emission from Rb₃Sb₂I₉ Nanoparticles. Advanced Optical Materials, 2020, 8, 1901606.	3.6	18
161	Manganese MOF Enables Efficient Oxygen Evolution in Acid. , 2020, 2, 798-800.		18
162	Quantum Dot Color-Converting Solids Operating Efficiently in the kW/cm² Regime. Chemistry of Materials, 2017, 29, 5104-5112.	3.2	17

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163	Ultrafast Carrier Trapping in Thick-Shell Colloidal Quantum Dots. Journal of Physical Chemistry Letters, 2017, 8, 3179-3184.	2.1	16
164	Suppression of Auger Recombination by Gradient Alloying in InAs/CdSe/CdS QDs. Chemistry of Materials, 2020, 32, 7703-7709.	3.2	15
165	High-throughput exploration of halide perovskite compositionally-graded films and degradation mechanisms. Communications Materials, 2022, 3, .	2.9	14
166	Orthorhombic Nonâ€Perovskite CsPbI₃ Microwires for Stable Highâ€Resolution Xâ€Ray Detectors. Advanced Optical Materials, 2022, 10, .	3.6	14
167	Underappreciated Role of Low-Energy Facets in Nitrogen Electroreduction. , 2021, 3, 327-330.		13
168	Accelerated solution-phase exchanges minimize defects in colloidal quantum dot solids. Nano Energy, 2019, 63, 103876.	8.2	12
169	Electro-Optic Modulation Using Metal-Free Perovskites. ACS Applied Materials & Interfaces, 2021, 13, 19042-19047.	4.0	12
170	Self-Assembled PbSe Nanowire:Perovskite Hybrids. Journal of the American Chemical Society, 2015, 137, 14869-14872.	6.6	11
171	Enhanced emission directivity from asymmetrically strained colloidal quantum dots. Science Advances, 2022, 8, eabl8219.	4.7	10
172	Cleavable Ligands Enable Uniform Close Packing in Colloidal Quantum Dot Solids. ACS Applied Materials & Interfaces, 2015, 7, 21995-22000.	4.0	9
173	Gradient-Doped Colloidal Quantum Dot Solids Enable Thermophotovoltaic Harvesting of Waste Heat. ACS Energy Letters, 2016, 1, 740-746.	8.8	8
174	Controlling C₆₀ Organization through Dipole-Induced Band Alignment at Self-Assembled Monolayer Interfaces. Chemistry of Materials, 2016, 28, 8322-8329.	3.2	8
175	Black and Stable: A Path to All-Inorganic Halide Perovskite Solar Cells. Joule, 2018, 2, 1215-1216.	11.7	8
176	Temperature-Induced Self-Compensating Defect Traps and Gain Thresholds in Colloidal Quantum Dots. ACS Nano, 2019, 13, 8970-8976.	7.3	8
177	Water/acetonitrile hybrid electrolyte enables using smaller ions for achieving superior energy density in carbon-based supercapacitors. Journal of Power Sources, 2021, 498, 229905.	4.0	8
178	Ligand-induced symmetry breaking, size and morphology in colloidal lead sulfide QDs: from classic to thiourea precursors. , 0, 2, 1.		8
179	Glycol ether additives control the size of PbS nanocrystals at reaction completion. Journal of Materials Chemistry C, 2020, 8, 12068-12074.	2.7	7
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#	Article	IF	Citations
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