

Oleksandr Voznyy

List of Publications by Year in descending order

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192
papers

35,594
citations

4120

87
h-index

3257

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. <i>Science</i> , 2017, 355, 722-726.	6.0	2,019
2	Homogeneously dispersed multimetal oxygen-evolving catalysts. <i>Science</i> , 2016, 352, 333-337.	6.0	1,948
3	Perovskite energy funnels for efficient light-emitting diodes. <i>Nature Nanotechnology</i> , 2016, 11, 872-877.	15.6	1,868
4	Enhanced electrocatalytic CO ₂ reduction via field-induced reagent concentration. <i>Nature</i> , 2016, 537, 382-386.	13.7	1,429
5	Ligand-Stabilized Reduced-Dimensionality Perovskites. <i>Journal of the American Chemical Society</i> , 2016, 138, 2649-2655.	6.6	1,157
6	Hybrid passivated colloidal quantum dot solids. <i>Nature Nanotechnology</i> , 2012, 7, 577-582.	15.6	1,100
7	Perovskite–fullerene hybrid materials suppress hysteresis in planar diodes. <i>Nature Communications</i> , 2015, 6, 7081.	5.8	948
8	Highly Efficient Perovskite–Quantum Dot Light-Emitting Diodes by Surface Engineering. <i>Advanced Materials</i> , 2016, 28, 8718-8725.	11.1	917
9	Accelerated discovery of CO ₂ electrocatalysts using active machine learning. <i>Nature</i> , 2020, 581, 178-183.	13.7	807
10	Materials Processing Routes to Trap-Free Halide Perovskites. <i>Nano Letters</i> , 2014, 14, 6281-6286.	4.5	671
11	Hybrid organic–inorganic inks flatten the energy landscape in colloidal quantum dot solids. <i>Nature Materials</i> , 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. <i>Nature Energy</i> , 2018, 3, 648-654.	19.8	552
13	Bipolar-shell resurfacing for blue LEDs based on strongly confined perovskite quantum dots. <i>Nature Nanotechnology</i> , 2020, 15, 668-674.	15.6	541
14	Color-stable highly luminescent sky-blue perovskite light-emitting diodes. <i>Nature Communications</i> , 2018, 9, 3541.	5.8	536
15	Air-stable n-type colloidal quantum dot solids. <i>Nature Materials</i> , 2014, 13, 822-828.	13.3	529
16	Efficient Luminescence from Perovskite Quantum Dot Solids. <i>ACS Applied Materials & Interfaces</i> , 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. <i>Nature Chemistry</i> , 2018, 10, 149-154.	6.6	476
18	Electron–phonon interaction in efficient perovskite blue emitters. <i>Nature Materials</i> , 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. <i>Nature Energy</i> , 2019, 4, 107-114.	19.8	470
20	Quantum-dot-in-perovskite solids. <i>Nature</i> , 2015, 523, 324-328.	13.7	468
21	25th Anniversary Article: Colloidal Quantum Dot Materials and Devices: A Quarter-Century of Advances. <i>Advanced Materials</i> , 2013, 25, 4986-5010.	11.1	419
22	Tailoring the Energy Landscape in Quasi-2D Halide Perovskites Enables Efficient Green-Light Emission. <i>Nano Letters</i> , 2017, 17, 3701-3709.	4.5	409
23	Sulfur-Modulated Tin Sites Enable Highly Selective Electrochemical Reduction of CO ₂ to Formate. <i>Joule</i> , 2017, 1, 794-805.	11.7	390
24	High-valence metals improve oxygen evolution reaction performance by modulating 3d metal oxidation cycle energetics. <i>Nature Catalysis</i> , 2020, 3, 985-992.	16.1	390
25	Spin control in reduced-dimensional chiral perovskites. <i>Nature Photonics</i> , 2018, 12, 528-533.	15.6	371
26	Highly efficient quantum dot near-infrared light-emitting diodes. <i>Nature Photonics</i> , 2016, 10, 253-257.	15.6	361
27	Amine-Free Synthesis of Cesium Lead Halide Perovskite Quantum Dots for Efficient Light-Emitting Diodes. <i>Advanced Functional Materials</i> , 2016, 26, 8757-8763.	7.8	344
28	Binding Site Diversity Promotes CO ₂ Electroreduction to Ethanol. <i>Journal of the American Chemical Society</i> , 2019, 141, 8584-8591.	6.6	338
29	Heterovalent Dopant Incorporation for Bandgap and Type Engineering of Perovskite Crystals. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 295-301.	2.1	332
30	Continuous-wave lasing in colloidal quantum dot solids enabled by facet-selective epitaxy. <i>Nature</i> , 2017, 544, 75-79.	13.7	319
31	Physically Flexible, Rapid-Response Gas Sensor Based on Colloidal Quantum Dot Solids. <i>Advanced Materials</i> , 2014, 26, 2718-2724.	11.1	313
32	10.6% Certified Colloidal Quantum Dot Solar Cells via Solvent-Polarity-Engineered Halide Passivation. <i>Nano Letters</i> , 2016, 16, 4630-4634.	4.5	312
33	Passivation Using Molecular Halides Increases Quantum Dot Solar Cell Performance. <i>Advanced Materials</i> , 2016, 28, 299-304.	11.1	312
34	Highly Emissive Green Perovskite Nanocrystals in a Solid State Crystalline Matrix. <i>Advanced Materials</i> , 2017, 29, 1605945.	11.1	309
35	Perovskite seeding growth of formamidinium-lead-iodide-based perovskites for efficient and stable solar cells. <i>Nature Communications</i> , 2018, 9, 1607.	5.8	309
36	Bright colloidal quantum dot light-emitting diodes enabled by efficient chlorination. <i>Nature Photonics</i> , 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. <i>Nature Photonics</i> , 2020, 14, 171-176.	15.6	303
38	Synthetic Control over Quantum Well Width Distribution and Carrier Migration in Low-Dimensional Perovskite Photovoltaics. <i>Journal of the American Chemical Society</i> , 2018, 140, 2890-2896.	6.6	288
39	Rational Design of Efficient Palladium Catalysts for Electroreduction of Carbon Dioxide to Formate. <i>ACS Catalysis</i> , 2016, 6, 8115-8120.	5.5	277
40	2D matrix engineering for homogeneous quantum dot coupling in photovoltaic solids. <i>Nature Nanotechnology</i> , 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). <i>Progress in Surface Science</i> , 2010, 85, 206-240.	3.8	249
42	Dipolar cations confer defect tolerance in wide-bandgap metal halide perovskites. <i>Nature Communications</i> , 2018, 9, 3100.	5.8	237
43	Engineering colloidal quantum dot solids within and beyond the mobility-invariant regime. <i>Nature Communications</i> , 2014, 5, 3803.	5.8	214
44	Lattice anchoring stabilizes solution-processed semiconductors. <i>Nature</i> , 2019, 570, 96-101.	13.7	208
45	A Charge-Orbital Balance Picture of Doping in Colloidal Quantum Dot Solids. <i>ACS Nano</i> , 2012, 6, 8448-8455.	7.3	206
46	Perovskite Thin Films via Atomic Layer Deposition. <i>Advanced Materials</i> , 2015, 27, 53-58.	11.1	204
47	Stabilizing Highly Active Ru Sites by Suppressing Lattice Oxygen Participation in Acidic Water Oxidation. <i>Journal of the American Chemical Society</i> , 2021, 143, 6482-6490.	6.6	204
48	Pure Cubic α -Phase Hybrid Iodobismuthates AgBi_2I_7 for Thin-Film Photovoltaics. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 9586-9590.	7.2	201
49	High-Efficiency Colloidal Quantum Dot Photovoltaics via Robust Self-Assembled Monolayers. <i>Nano Letters</i> , 2015, 15, 7691-7696.	4.5	198
50	All-Inorganic Colloidal Quantum Dot Photovoltaics Employing Solution-Phase Halide Passivation. <i>Advanced Materials</i> , 2012, 24, 6295-6299.	11.1	197
51	Efficient Biexciton Interaction in Perovskite Quantum Dots Under Weak and Strong Confinement. <i>ACS Nano</i> , 2016, 10, 8603-8609.	7.3	190
52	N-Type Colloidal Quantum Dot Solids for Photovoltaics. <i>Advanced Materials</i> , 2012, 24, 6181-6185.	11.1	181
53	Cascade surface modification of colloidal quantum dot inks enables efficient bulk homojunction photovoltaics. <i>Nature Communications</i> , 2020, 11, 103.	5.8	181
54	Measuring Charge Carrier Diffusion in Coupled Colloidal Quantum Dot Solids. <i>ACS Nano</i> , 2013, 7, 5282-5290.	7.3	178

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55	Colloidal Quantum Dot Photovoltaics Enhanced by Perovskite Shelling. <i>Nano Letters</i> , 2015, 15, 7539-7543.	4.5	173
56	Graded Doping for Enhanced Colloidal Quantum Dot Photovoltaics. <i>Advanced Materials</i> , 2013, 25, 1719-1723.	11.1	164
57	Structural, optical, and electronic studies of wide-bandgap lead halide perovskites. <i>Journal of Materials Chemistry C</i> , 2015, 3, 8839-8843.	2.7	161
58	The Role of Gold Adatoms and Stereochemistry in Self-Assembly of Methylthiolate on Au(111). <i>Journal of the American Chemical Society</i> , 2009, 131, 12989-12993.	6.6	159
59	Solar Cells Based on Inks of n-Type Colloidal Quantum Dots. <i>ACS Nano</i> , 2014, 8, 10321-10327.	7.3	158
60	Mixed-quantum-dot solar cells. <i>Nature Communications</i> , 2017, 8, 1325.	5.8	148
61	Combining Efficiency and Stability in Mixed Tin-Lead Perovskite Solar Cells by Capping Grains with an Ultrathin 2D Layer. <i>Advanced Materials</i> , 2020, 32, e1907058.	11.1	148
62	Edge stabilization in reduced-dimensional perovskites. <i>Nature Communications</i> , 2020, 11, 170.	5.8	147
63	In Situ Back-Contact Passivation Improves Photovoltage and Fill Factor in Perovskite Solar Cells. <i>Advanced Materials</i> , 2019, 31, e1807435.	11.1	143
64	Monolayer Perovskite Bridges Enable Strong Quantum Dot Coupling for Efficient Solar Cells. <i>Joule</i> , 2020, 4, 1542-1556.	11.7	143
65	CO ₂ Electroreduction from Carbonate Electrolyte. <i>ACS Energy Letters</i> , 2019, 4, 1427-1431.	8.8	141
66	Efficient near-infrared light-emitting diodes based on quantum dots in layered perovskite. <i>Nature Photonics</i> , 2020, 14, 227-233.	15.6	136
67	Color-pure red light-emitting diodes based on two-dimensional lead-free perovskites. <i>Science Advances</i> , 2020, 6, .	4.7	135
68	High-Throughput Screening of Lead-Free Perovskite-like Materials for Optoelectronic Applications. <i>Journal of Physical Chemistry C</i> , 2017, 121, 7183-7187.	1.5	128
69	Magnetism and Correlations in Fractionally Filled Degenerate Shells of Graphene Quantum Dots. <i>Physical Review Letters</i> , 2009, 103, 246805.	2.9	127
70	Chloride Passivation of ZnO Electrodes Improves Charge Extraction in Colloidal Quantum Dot Photovoltaics. <i>Advanced Materials</i> , 2017, 29, 1702350.	11.1	126
71	Mobile Surface Traps in CdSe Nanocrystals with Carboxylic Acid Ligands. <i>Journal of Physical Chemistry C</i> , 2011, 115, 15927-15932.	1.5	125
72	Double-Sided Junctions Enable High-Performance Colloidal Quantum Dot Photovoltaics. <i>Advanced Materials</i> , 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. <i>Nature Energy</i> , 2019, 4, 969-976.	19.8	120
74	Record Charge Carrier Diffusion Length in Colloidal Quantum Dot Solids via Mutual Dot-to-Dot Surface Passivation. <i>Advanced Materials</i> , 2015, 27, 3325-3330.	11.1	118
75	Chloride Insertion-Immobilization Enables Bright, Narrowband, and Stable Blue-Emitting Perovskite Diodes. <i>Journal of the American Chemical Society</i> , 2020, 142, 5126-5134.	6.6	116
76	Dynamic Trap Formation and Elimination in Colloidal Quantum Dots. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 987-992.	2.1	115
77	Colloidal CdSe _x S _x Nanoplatelets with Narrow and Continuously-Tunable Electroluminescence. <i>Nano Letters</i> , 2015, 15, 4611-4615.	4.5	114
78	Chelating-agent-assisted control of CsPbBr ₃ quantum well growth enables stable blue perovskite emitters. <i>Nature Communications</i> , 2020, 11, 3674.	5.8	112
79	A Multi-functional Molecular Modifier Enabling Efficient Large-Area Perovskite Light-Emitting Diodes. <i>Joule</i> , 2020, 4, 1977-1987.	11.7	111
80	Microsecond-sustained lasing from colloidal quantum dot solids. <i>Nature Communications</i> , 2015, 6, 8694.	5.8	109
81	Crosslinked Remote-Doped Hole-Extracting Contacts Enhance Stability under Accelerated Lifetime Testing in Perovskite Solar Cells. <i>Advanced Materials</i> , 2016, 28, 2807-2815.	11.1	108
82	Machine Learning Accelerates Discovery of Optimal Colloidal Quantum Dot Synthesis. <i>ACS Nano</i> , 2019, 13, 11122-11128.	7.3	108
83	Engineering charge transport by heterostructuring solution-processed semiconductors. <i>Nature Reviews Materials</i> , 2017, 2, .	23.3	105
84	Crystal symmetry breaking and vacancies in colloidal lead chalcogenide quantum dots. <i>Nature Materials</i> , 2016, 15, 987-994.	13.3	101
85	Directly Deposited Quantum Dot Solids Using a Colloidally Stable Nanoparticle Ink. <i>Advanced Materials</i> , 2013, 25, 5742-5749.	11.1	99
86	Automated Synthesis of Photovoltaic-Quality Colloidal Quantum Dots Using Separate Nucleation and Growth Stages. <i>ACS Nano</i> , 2013, 7, 10158-10166.	7.3	97
87	Infrared Colloidal Quantum Dot Photovoltaics via Coupling Enhancement and Agglomeration Suppression. <i>ACS Nano</i> , 2015, 9, 8833-8842.	7.3	96
88	Bright and Stable Light-Emitting Diodes Based on Perovskite Quantum Dots in Perovskite Matrix. <i>Journal of the American Chemical Society</i> , 2021, 143, 15606-15615.	6.6	94
89	Wide-Bandgap Perovskite Quantum Dots in Perovskite Matrix for Sky-Blue Light-Emitting Diodes. <i>Journal of the American Chemical Society</i> , 2022, 144, 4009-4016.	6.6	92
90	A Facet-Specific Quantum Dot Passivation Strategy for Colloid Management and Efficient Infrared Photovoltaics. <i>Advanced Materials</i> , 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. <i>Physical Review B</i> , 2010, 82, .	1.1	84
92	Field-emission from quantum-dot-in-perovskite solids. <i>Nature Communications</i> , 2017, 8, 14757.	5.8	83
93	In Situ Inorganic Ligand Replenishment Enables Bandgap Stability in Mixed-Halide Perovskite Quantum Dot Solids. <i>Advanced Materials</i> , 2022, 34, e2200854.	11.1	82
94	Amide-Catalyzed Phase-Selective Crystallization Reduces Defect Density in Wide-Bandgap Perovskites. <i>Advanced Materials</i> , 2018, 30, e1706275.	11.1	80
95	Pseudohalide-Exchanged Quantum Dot Solids Achieve Record Quantum Efficiency in Infrared Photovoltaics. <i>Advanced Materials</i> , 2017, 29, 1700749.	11.1	79
96	Overcoming the Ambient Manufacturability-Scalability-Performance Bottleneck in Colloidal Quantum Dot Photovoltaics. <i>Advanced Materials</i> , 2018, 30, e1801661.	11.1	79
97	Synergistic Doping of Fullerene Electron Transport Layer and Colloidal Quantum Dot Solids Enhances Solar Cell Performance. <i>Advanced Materials</i> , 2015, 27, 917-921.	11.1	75
98	Spectrally Resolved Ultrafast Exciton Transfer in Mixed Perovskite Quantum Wells. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 419-426.	2.1	74
99	Atomistic Model of Fluorescence Intermittency of Colloidal Quantum Dots. <i>Physical Review Letters</i> , 2014, 112, 157401.	2.9	73
100	Origins of Stokes Shift in PbS Nanocrystals. <i>Nano Letters</i> , 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. <i>Physical Review B</i> , 2011, 83, .	1.1	69
102	Role of Bond Adaptability in the Passivation of Colloidal Quantum Dot Solids. <i>ACS Nano</i> , 2013, 7, 7680-7688.	7.3	69
103	Hydrophobic stabilizer-anchored fully inorganic perovskite quantum dots enhance moisture resistance and photovoltaic performance. <i>Nano Energy</i> , 2020, 75, 104985.	8.2	69
104	Single-step fabrication of quantum funnels via centrifugal colloidal casting of nanoparticle films. <i>Nature Communications</i> , 2015, 6, 7772.	5.8	68
105	Butylamine-Catalyzed Synthesis of Nanocrystal Inks Enables Efficient Infrared CQD Solar Cells. <i>Advanced Materials</i> , 2018, 30, e1803830.	11.1	67
106	Quantum Dot-Plasmon Lasing with Controlled Polarization Patterns. <i>ACS Nano</i> , 2020, 14, 3426-3433.	7.3	66
107	Doping Control Via Molecularly Engineered Surface Ligand Coordination. <i>Advanced Materials</i> , 2013, 25, 5586-5592.	11.1	62
108	All-Quantum-Dot Infrared Light-Emitting Diodes. <i>ACS Nano</i> , 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. <i>Nature Communications</i> , 2018, 9, 4214.	5.8	61
110	Electronic and optical properties of semiconductor and graphene quantum dots. <i>Frontiers of Physics</i> , 2012, 7, 328-352.	2.4	57
111	Activated Electron Transport Layers for Infrared Quantum Dot Optoelectronics. <i>Advanced Materials</i> , 2018, 30, e1801720.	11.1	57
112	Acid-Assisted Ligand Exchange Enhances Coupling in Colloidal Quantum Dot Solids. <i>Nano Letters</i> , 2018, 18, 4417-4423.	4.5	57
113	ZnFe ₂ O ₄ Leaves Grown on TiO ₂ Trees Enhance Photoelectrochemical Water Splitting. <i>Small</i> , 2016, 12, 3181-3188.	5.2	56
114	Multibandgap quantum dot ensembles for solar-matched infrared energy harvesting. <i>Nature Communications</i> , 2018, 9, 4003.	5.8	56
115	The Silicon:Colloidal Quantum Dot Heterojunction. <i>Advanced Materials</i> , 2015, 27, 7445-7450.	11.1	55
116	Contactless measurements of photocarrier transport properties in perovskite single crystals. <i>Nature Communications</i> , 2019, 10, 1591.	5.8	55
117	Magic-Sized Cd ₃ P ₂ II ^v Nanoparticles Exhibiting Bandgap Photoemission. <i>Journal of Physical Chemistry C</i> , 2009, 113, 17979-17982.	1.5	54
118	The Complete In ^{III} Gap Electronic Structure of Colloidal Quantum Dot Solids and Its Correlation with Electronic Transport and Photovoltaic Performance. <i>Advanced Materials</i> , 2014, 26, 937-942.	11.1	54
119	Controlled Steric Hindrance Enables Efficient Ligand Exchange for Stable, Infrared-Bandgap Quantum Dot Inks. <i>ACS Energy Letters</i> , 2019, 4, 1225-1230.	8.8	54
120	Anchored Ligands Facilitate Efficient B-Site Doping in Metal Halide Perovskites. <i>Journal of the American Chemical Society</i> , 2019, 141, 8296-8305.	6.6	53
121	Single-step colloidal quantum dot films for infrared solar harvesting. <i>Applied Physics Letters</i> , 2016, 109, .	1.5	52
122	Atomistic Design of CdSe/CdS Core-Shell Quantum Dots with Suppressed Auger Recombination. <i>Nano Letters</i> , 2016, 16, 6491-6496.	4.5	51
123	Picosecond Charge Transfer and Long Carrier Diffusion Lengths in Colloidal Quantum Dot Solids. <i>Nano Letters</i> , 2018, 18, 7052-7059.	4.5	51
124	Enhanced Open-Circuit Voltage in Colloidal Quantum Dot Photovoltaics via Reactivity-Controlled Solution-Phase Ligand Exchange. <i>Advanced Materials</i> , 2017, 29, 1703627.	11.1	49
125	Solid Electrolyte Interphase Engineering for Aqueous Aluminum Metal Batteries: A Critical Evaluation. <i>Advanced Energy Materials</i> , 2021, 11, 2100077.	10.2	49
126	Atomistic Description of Thiostannate-Capped CdSe Nanocrystals: Retention of Four-Coordinate SnS ₄ Motif and Preservation of Cd-Rich Stoichiometry. <i>Journal of the American Chemical Society</i> , 2015, 137, 1862-1874.	6.6	48

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127	Orthogonal colloidal quantum dot inks enable efficient multilayer optoelectronic devices. <i>Nature Communications</i> , 2020, 11, 4814.	5.8	48
128	Engineering Directionality in Quantum Dot Shell Lasing Using Plasmonic Lattices. <i>Nano Letters</i> , 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. <i>Advanced Materials</i> , 2020, 32, e1906497.	11.1	47
130	Ligand-Assisted Reconstruction of Colloidal Quantum Dots Decreases Trap State Density. <i>Nano Letters</i> , 2020, 20, 3694-3702.	4.5	46
131	Structure of Thiol Self-Assembled Monolayers Commensurate with the GaAs (001) Surface. <i>Langmuir</i> , 2008, 24, 13299-13305.	1.6	44
132	Solution-processed perovskite-colloidal quantum dot tandem solar cells for photon collection beyond 1000 nm. <i>Journal of Materials Chemistry A</i> , 2019, 7, 26020-26028.	5.2	44
133	Pure Cubic Phase Hybrid Iodobismuthates AgBi_2I_7 for Thin-Film Photovoltaics. <i>Angewandte Chemie</i> , 2016, 128, 9738-9742.	1.6	42
134	Facet-Oriented Coupling Enables Fast and Sensitive Colloidal Quantum Dot Photodetectors. <i>Advanced Materials</i> , 2021, 33, e2101056.	11.1	42
135	Molecular self-assembly and passivation of GaAs (001) with alkanethiol monolayers: A view towards bio-functionalization. <i>Applied Surface Science</i> , 2010, 256, 5714-5721.	3.1	41
136	Biexciton Resonances Reveal Exciton Localization in Stacked Perovskite Quantum Wells. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 3895-3901.	2.1	41
137	Remote Molecular Doping of Colloidal Quantum Dot Photovoltaics. <i>ACS Energy Letters</i> , 2016, 1, 922-930.	8.8	40
138	Electrocatalytic Reduction of CO_2 to CH_4 and CO in Aqueous Solution Using Pyridine-Porphyrins Immobilized onto Carbon Nanotubes. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 9549-9557.	3.2	39
139	$c(4\sqrt{2})$ Structures of Alkanethiol Monolayers on Au (111) Compatible with the Constraint of Dense Packing. <i>Langmuir</i> , 2009, 25, 7353-7358.	1.6	35
140	Halide Re-Shelled Quantum Dot Inks for Infrared Photovoltaics. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 37536-37541.	4.0	35
141	Fast Near-Infrared Photodetection Using III-V Colloidal Quantum Dots. <i>Advanced Materials</i> , 2022, 34, .	11.1	34
142	Adsorption Kinetics of Hydrogen Sulfide and Thiols on GaAs (001) Surfaces in a Vacuum. <i>Journal of Physical Chemistry C</i> , 2008, 112, 3726-3733.	1.5	33
143	Crystal Site Feature Embedding Enables Exploration of Large Chemical Spaces. <i>Matter</i> , 2020, 3, 433-448.	5.0	33
144	Electronically Active Impurities in Colloidal Quantum Dot Solids. <i>ACS Nano</i> , 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. <i>Journal of Physical Chemistry C</i> , 2016, 120, 10015-10019.	1.5	32
146	Structure, Bonding Nature, and Binding Energy of Alkanethiolate on As-Rich GaAs (001) Surface: A Density Functional Theory Study. <i>Journal of Physical Chemistry B</i> , 2006, 110, 23619-23622.	1.2	31
147	Quantum Dots in Two-Dimensional Perovskite Matrices for Efficient Near-Infrared Light Emission. <i>ACS Photonics</i> , 2017, 4, 830-836.	3.2	30
148	Applied Machine Learning for Developing Next-Generation Functional Materials. <i>Advanced Functional Materials</i> , 2021, 31, 2104195.	7.8	28
149	Multiscale hierarchical structures from a nanocluster mesophase. <i>Nature Materials</i> , 2022, 21, 518-525.	13.3	27
150	Effect of disorder on transport properties in a tight-binding model for lead halide perovskites. <i>Scientific Reports</i> , 2017, 7, 8902.	1.6	25
151	Theory of highly excited semiconductor nanostructures including Auger coupling: Exciton-biexciton mixing in CdSe nanocrystals. <i>Physical Review B</i> , 2011, 84, .	1.1	23
152	Small-Band-Offset Perovskite Shells Increase Auger Lifetime in Quantum Dot Solids. <i>ACS Nano</i> , 2017, 11, 12378-12384.	7.3	23
153	Pulsed axial epitaxy of colloidal quantum dots in nanowires enables facet-selective passivation. <i>Nature Communications</i> , 2018, 9, 4947.	5.8	22
154	Structural Distortion and Bandgap Increase of Two-Dimensional Perovskites Induced by Trifluoromethyl Substitution on Spacer Cations. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 10144-10149.	2.1	22
155	Tertiary Hierarchical Complexity in Assemblies of Sulfur-Bridged Metal Chiral Clusters. <i>Journal of the American Chemical Society</i> , 2020, 142, 14495-14503.	6.6	22
156	Epitaxial Metal Halide Perovskites by Inkjet Printing on Various Substrates. <i>Advanced Functional Materials</i> , 2020, 30, 2004612.	7.8	21
157	Hybridization of Phenylthiolate- and Methylthiolate-Adatom Species at Low Coverage on the Au(111) Surface. <i>Journal of the American Chemical Society</i> , 2013, 135, 4922-4925.	6.6	20
158	Linear Electro-Optic Modulation in Highly Polarizable Organic Perovskites. <i>Advanced Materials</i> , 2021, 33, e2006368.	11.1	20
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