# Oleksandr Voznyy

## List of Publications by Citations

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|---|---|---|---|
| 185<br>papers | 26,202<br>citations | 78<br>h-index | 161<br>g-index |
| 197<br>ext. papers | 30,751<br>ext. citations | 18.4<br>avg, IF | 6.98<br>L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 185 | Efficient and stable solution-processed planar perovskite solar cells via contact passivation. *Science*, **2017**, 355, 722-726 | 33.3 | 1667 |
| 184 | Perovskite energy funnels for efficient light-emitting diodes. *Nature Nanotechnology*, **2016**, 11, 872-877 | 28.7 | 1484 |
| 183 | Homogeneously dispersed multimetal oxygen-evolving catalysts. *Science*, **2016**, 352, 333-7 | 33.3 | 1459 |
| 182 | Enhanced electrocatalytic CO reduction via field-induced reagent concentration. *Nature*, **2016**, 537, 382-386 | 50.4 | 997 |
| 181 | Hybrid passivated colloidal quantum dot solids. *Nature Nanotechnology*, **2012**, 7, 577-82 | 28.7 | 993 |
| 180 | Ligand-Stabilized Reduced-Dimensionality Perovskites. *Journal of the American Chemical Society*, **2016**, 138, 2649-55 | 16.4 | 889 |
| 179 | Perovskite-fullerene hybrid materials suppress hysteresis in planar diodes. *Nature Communications*, **2015**, 6, 7081 | 17.4 | 815 |
| 178 | Highly Efficient Perovskite-Quantum-Dot Light-Emitting Diodes by Surface Engineering. *Advanced Materials*, **2016**, 28, 8718-8725 | 24 | 700 |
| 177 | Materials processing routes to trap-free halide perovskites. *Nano Letters*, **2014**, 14, 6281-6 | 11.5 | 567 |
| 176 | Air-stable n-type colloidal quantum dot solids. *Nature Materials*, **2014**, 13, 822-8 | 27 | 466 |
| 175 | Hybrid organic-inorganic inks flatten the energy landscape in colloidal quantum dot solids. *Nature Materials*, **2017**, 16, 258-263 | 27 | 432 |
| 174 | Efficient Luminescence from Perovskite Quantum Dot Solids. *ACS Applied Materials & Interfaces*, **2015**, 7, 25007-13 | 9.5 | 401 |
| 173 | Quantum-dot-in-perovskite solids. *Nature*, **2015**, 523, 324-8 | 50.4 | 382 |
| 172 | Color-stable highly luminescent sky-blue perovskite light-emitting diodes. *Nature Communications*, **2018**, 9, 3541 | 17.4 | 370 |
| 171 | 25th anniversary article: Colloidal quantum dot materials and devices: a quarter-century of advances. *Advanced Materials*, **2013**, 25, 4986-5010 | 24 | 369 |
| 170 | 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 | 62.3 | 355 |
| 169 | Accelerated discovery of CO electrocatalysts using active machine learning. *Nature*, **2020**, 581, 178-183 | 50.4 | 328 |

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| 168 | 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 | 17.6 | 328 |
| 167 | Electron-phonon interaction in efficient perovskite blue emitters. *Nature Materials*, **2018**, 17, 550-556 | 27 | 310 |
| 166 | Tailoring the Energy Landscape in Quasi-2D Halide Perovskites Enables Efficient Green-Light Emission. *Nano Letters*, **2017**, 17, 3701-3709 | 11.5 | 309 |
| 165 | Highly efficient quantum dot near-infrared light-emitting diodes. *Nature Photonics*, **2016**, 10, 253-257 | 33.9 | 295 |
| 164 | Bipolar-shell resurfacing for blue LEDs based on strongly confined perovskite quantum dots. *Nature Nanotechnology*, **2020**, 15, 668-674 | 28.7 | 281 |
| 163 | Passivation Using Molecular Halides Increases Quantum Dot Solar Cell Performance. *Advanced Materials*, **2016**, 28, 299-304 | 24 | 279 |
| 162 | 10.6% Certified Colloidal Quantum Dot Solar Cells via Solvent-Polarity-Engineered Halide Passivation. *Nano Letters*, **2016**, 16, 4630-4 | 11.5 | 275 |
| 161 | Heterovalent Dopant Incorporation for Bandgap and Type Engineering of Perovskite Crystals. *Journal of Physical Chemistry Letters*, **2016**, 7, 295-301 | 6.4 | 268 |
| 160 | Amine-Free Synthesis of Cesium Lead Halide Perovskite Quantum Dots for Efficient Light-Emitting Diodes. *Advanced Functional Materials*, **2016**, 26, 8757-8763 | 15.6 | 265 |
| 159 | Multi-site electrocatalysts for hydrogen evolution in neutral media by destabilization of water molecules. *Nature Energy*, **2019**, 4, 107-114 | 62.3 | 264 |
| 158 | Sulfur-Modulated Tin Sites Enable Highly Selective Electrochemical Reduction of CO2 to Formate. *Joule*, **2017**, 1, 794-805 | 27.8 | 263 |
| 157 | Highly Emissive Green Perovskite Nanocrystals in a Solid State Crystalline Matrix. *Advanced Materials*, **2017**, 29, 1605945 | 24 | 252 |
| 156 | Physically flexible, rapid-response gas sensor based on colloidal quantum dot solids. *Advanced Materials*, **2014**, 26, 2718-24, 2617 | 24 | 237 |
| 155 | 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 | 6.6 | 232 |
| 154 | Continuous-wave lasing in colloidal quantum dot solids enabled by facet-selective epitaxy. *Nature*, **2017**, 544, 75-79 | 50.4 | 225 |
| 153 | Perovskite seeding growth of formamidinium-lead-iodide-based perovskites for efficient and stable solar cells. *Nature Communications*, **2018**, 9, 1607 | 17.4 | 218 |
| 152 | Rational Design of Efficient Palladium Catalysts for Electroreduction of Carbon Dioxide to Formate. *ACS Catalysis*, **2016**, 6, 8115-8120 | 13.1 | 212 |
| 151 | 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 | 16.4 | 211 |

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| 150 | Bright colloidal quantum dot light-emitting diodes enabled by efficient chlorination. *Nature Photonics*, **2018**, 12, 159-164 | 33.9 | 206 |
| 149 | Spin control in reduced-dimensional chiral perovskites. *Nature Photonics*, **2018**, 12, 528-533 | 33.9 | 205 |
| 148 | 2D matrix engineering for homogeneous quantum dot coupling in photovoltaic solids. *Nature Nanotechnology*, **2018**, 13, 456-462 | 28.7 | 196 |
| 147 | Engineering colloidal quantum dot solids within and beyond the mobility-invariant regime. *Nature Communications*, **2014**, 5, 3803 | 17.4 | 188 |
| 146 | A charge-orbital balance picture of doping in colloidal quantum dot solids. *ACS Nano*, **2012**, 6, 8448-55 | 16.7 | 183 |
| 145 | All-inorganic colloidal quantum dot photovoltaics employing solution-phase halide passivation. *Advanced Materials*, **2012**, 24, 6295-9 | 24 | 179 |
| 144 | Binding Site Diversity Promotes CO Electroreduction to Ethanol. *Journal of the American Chemical Society*, **2019**, 141, 8584-8591 | 16.4 | 178 |
| 143 | High-Efficiency Colloidal Quantum Dot Photovoltaics via Robust Self-Assembled Monolayers. *Nano Letters*, **2015**, 15, 7691-6 | 11.5 | 175 |
| 142 | Perovskite thin films via atomic layer deposition. *Advanced Materials*, **2015**, 27, 53-8 | 24 | 171 |
| 141 | Dipolar cations confer defect tolerance in wide-bandgap metal halide perovskites. *Nature Communications*, **2018**, 9, 3100 | 17.4 | 171 |
| 140 | N-type colloidal-quantum-dot solids for photovoltaics. *Advanced Materials*, **2012**, 24, 6181-5 | 24 | 165 |
| 139 | Measuring charge carrier diffusion in coupled colloidal quantum dot solids. *ACS Nano*, **2013**, 7, 5282-90 | 16.7 | 163 |
| 138 | Pure Cubic-Phase Hybrid Iodobismuthates AgBi2 I7 for Thin-Film Photovoltaics. *Angewandte Chemie - International Edition*, **2016**, 55, 9586-90 | 16.4 | 156 |
| 137 | Colloidal Quantum Dot Photovoltaics Enhanced by Perovskite Shelling. *Nano Letters*, **2015**, 15, 7539-43 | 11.5 | 155 |
| 136 | Graded doping for enhanced colloidal quantum dot photovoltaics. *Advanced Materials*, **2013**, 25, 1719-23 | 24 | 150 |
| 135 | Lattice anchoring stabilizes solution-processed semiconductors. *Nature*, **2019**, 570, 96-101 | 50.4 | 149 |
| 134 | High-valence metals improve oxygen evolution reaction performance by modulating 3d metal oxidation cycle energetics. *Nature Catalysis*, **2020**, 3, 985-992 | 36.5 | 149 |
| 133 | The role of gold adatoms and stereochemistry in self-assembly of methylthiolate on Au(111). *Journal of the American Chemical Society*, **2009**, 131, 12989-93 | 16.4 | 147 |

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| 132 | Bright high-colour-purity deep-blue carbon dot light-emitting diodes via efficient edge amination. *Nature Photonics*, **2020**, 14, 171-176 | 33.9 | 144 |
| 131 | Efficient Biexciton Interaction in Perovskite Quantum Dots Under Weak and Strong Confinement. *ACS Nano*, **2016**, 10, 8603-9 | 16.7 | 142 |
| 130 | Solar cells based on inks of n-type colloidal quantum dots. *ACS Nano*, **2014**, 8, 10321-7 | 16.7 | 141 |
| 129 | Structural, optical, and electronic studies of wide-bandgap lead halide perovskites. *Journal of Materials Chemistry C*, **2015**, 3, 8839-8843 | 7.1 | 129 |
| 128 | Mixed-quantum-dot solar cells. *Nature Communications*, **2017**, 8, 1325 | 17.4 | 113 |
| 127 | In Situ Back-Contact Passivation Improves Photovoltage and Fill Factor in Perovskite Solar Cells. *Advanced Materials*, **2019**, 31, e1807435 | 24 | 112 |
| 126 | Mobile Surface Traps in CdSe Nanocrystals with Carboxylic Acid Ligands. *Journal of Physical Chemistry C*, **2011**, 115, 15927-15932 | 3.8 | 110 |
| 125 | Magnetism and correlations in fractionally filled degenerate shells of graphene quantum dots. *Physical Review Letters*, **2009**, 103, 246805 | 7.4 | 110 |
| 124 | Cascade surface modification of colloidal quantum dot inks enables efficient bulk homojunction photovoltaics. *Nature Communications*, **2020**, 11, 103 | 17.4 | 110 |
| 123 | Record Charge Carrier Diffusion Length in Colloidal Quantum Dot Solids via Mutual Dot-To-Dot Surface Passivation. *Advanced Materials*, **2015**, 27, 3325-30 | 24 | 103 |
| 122 | Double-Sided Junctions Enable High-Performance Colloidal-Quantum-Dot Photovoltaics. *Advanced Materials*, **2016**, 28, 4142-8 | 24 | 100 |
| 121 | Colloidal CdSe(1-x)S(x) Nanoplatelets with Narrow and Continuously-Tunable Electroluminescence. *Nano Letters*, **2015**, 15, 4611-5 | 11.5 | 100 |
| 120 | Chloride Passivation of ZnO Electrodes Improves Charge Extraction in Colloidal Quantum Dot Photovoltaics. *Advanced Materials*, **2017**, 29, 1702350 | 24 | 97 |
| 119 | Dynamic Trap Formation and Elimination in Colloidal Quantum Dots. *Journal of Physical Chemistry Letters*, **2013**, 4, 987-92 | 6.4 | 95 |
| 118 | Crosslinked Remote-Doped Hole-Extracting Contacts Enhance Stability under Accelerated Lifetime Testing in Perovskite Solar Cells. *Advanced Materials*, **2016**, 28, 2807-15 | 24 | 94 |
| 117 | Combining Efficiency and Stability in Mixed Tin-Lead Perovskite Solar Cells by Capping Grains with an Ultrathin 2D Layer. *Advanced Materials*, **2020**, 32, e1907058 | 24 | 92 |
| 116 | Microsecond-sustained lasing from colloidal quantum dot solids. *Nature Communications*, **2015**, 6, 8694 | 17.4 | 91 |
| 115 | Efficient near-infrared light-emitting diodes based on quantum dots in layered perovskite. *Nature Photonics*, **2020**, 14, 227-233 | 33.9 | 91 |

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| 114 | High-Throughput Screening of Lead-Free Perovskite-like Materials for Optoelectronic Applications. *Journal of Physical Chemistry C*, **2017**, 121, 7183-7187 | 3.8 | 87 |
| 113 | Directly deposited quantum dot solids using a colloidally stable nanoparticle ink. *Advanced Materials*, **2013**, 25, 5742-9 | 24 | 87 |
| 112 | Monolayer Perovskite Bridges Enable Strong Quantum Dot Coupling for Efficient Solar Cells. *Joule*, **2020**, 4, 1542-1556 | 27.8 | 85 |
| 111 | Engineering charge transport by heterostructuring solution-processed semiconductors. *Nature Reviews Materials*, **2017**, 2, | 73.3 | 84 |
| 110 | Crystal symmetry breaking and vacancies in colloidal lead chalcogenide quantum dots. *Nature Materials*, **2016**, 15, 987-94 | 27 | 80 |
| 109 | Edge stabilization in reduced-dimensional perovskites. *Nature Communications*, **2020**, 11, 170 | 17.4 | 79 |
| 108 | Fine structure and size dependence of exciton and biexciton optical spectra in CdSe nanocrystals. *Physical Review B*, **2010**, 82, | 3.3 | 78 |
| 107 | Efficient hybrid colloidal quantum dot/organic solar cells mediated by near-infrared sensitizing small molecules. *Nature Energy*, **2019**, 4, 969-976 | 62.3 | 78 |
| 106 | Automated synthesis of photovoltaic-quality colloidal quantum dots using separate nucleation and growth stages. *ACS Nano*, **2013**, 7, 10158-66 | 16.7 | 77 |
| 105 | Infrared Colloidal Quantum Dot Photovoltaics via Coupling Enhancement and Agglomeration Suppression. *ACS Nano*, **2015**, 9, 8833-42 | 16.7 | 73 |
| 104 | A Multi-functional Molecular Modifier Enabling Efficient Large-Area Perovskite Light-Emitting Diodes. *Joule*, **2020**, 4, 1977-1987 | 27.8 | 70 |
| 103 | Field-emission from quantum-dot-in-perovskite solids. *Nature Communications*, **2017**, 8, 14757 | 17.4 | 68 |
| 102 | CO2 Electroreduction from Carbonate Electrolyte. *ACS Energy Letters*, **2019**, 4, 1427-1431 | 20.1 | 66 |
| 101 | Synergistic doping of fullerene electron transport layer and colloidal quantum dot solids enhances solar cell performance. *Advanced Materials*, **2015**, 27, 917-21 | 24 | 65 |
| 100 | Atomistic model of fluorescence intermittency of colloidal quantum dots. *Physical Review Letters*, **2014**, 112, 157401 | 7.4 | 65 |
| 99 | Amide-Catalyzed Phase-Selective Crystallization Reduces Defect Density in Wide-Bandgap Perovskites. *Advanced Materials*, **2018**, 30, e1706275 | 24 | 62 |
| 98 | Role of bond adaptability in the passivation of colloidal quantum dot solids. *ACS Nano*, **2013**, 7, 7680-8 | 16.7 | 62 |
| 97 | Pseudohalide-Exchanged Quantum Dot Solids Achieve Record Quantum Efficiency in Infrared Photovoltaics. *Advanced Materials*, **2017**, 29, 1700749 | 24 | 61 |

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| 96 | Chloride Insertion-Immobilization Enables Bright, Narrowband, and Stable Blue-Emitting Perovskite Diodes. *Journal of the American Chemical Society*, **2020**, 142, 5126-5134 | 16.4 | 61 |
| 95 | 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, | 3.3 | 59 |
| 94 | Overcoming the Ambient Manufacturability-Scalability-Performance Bottleneck in Colloidal Quantum Dot Photovoltaics. *Advanced Materials*, **2018**, 30, e1801661 | 24 | 58 |
| 93 | Single-step fabrication of quantum funnels via centrifugal colloidal casting of nanoparticle films. *Nature Communications*, **2015**, 6, 7772 | 17.4 | 57 |
| 92 | A Facet-Specific Quantum Dot Passivation Strategy for Colloid Management and Efficient Infrared Photovoltaics. *Advanced Materials*, **2019**, 31, e1805580 | 24 | 55 |
| 91 | Doping control via molecularly engineered surface ligand coordination. *Advanced Materials*, **2013**, 25, 5586-92 | 24 | 55 |
| 90 | Spectrally Resolved Ultrafast Exciton Transfer in Mixed Perovskite Quantum Wells. *Journal of Physical Chemistry Letters*, **2019**, 10, 419-426 | 6.4 | 53 |
| 89 | Machine Learning Accelerates Discovery of Optimal Colloidal Quantum Dot Synthesis. *ACS Nano*, **2019**, 13, 11122-11128 | 16.7 | 52 |
| 88 | Color-pure red light-emitting diodes based on two-dimensional lead-free perovskites. *Science Advances*, **2020**, 6, | 14.3 | 52 |
| 87 | The complete in-gap electronic structure of colloidal quantum dot solids and its correlation with electronic transport and photovoltaic performance. *Advanced Materials*, **2014**, 26, 937-42 | 24 | 51 |
| 86 | ZnFe2 O4 Leaves Grown on TiO2 Trees Enhance Photoelectrochemical Water Splitting. *Small*, **2016**, 12, 3181-8 | 11 | 50 |
| 85 | Electronic and optical properties of semiconductor and graphene quantum dots. *Frontiers of Physics* , **2012**, 7, 328-352 | 3.7 | 50 |
| 84 | All-Quantum-Dot Infrared Light-Emitting Diodes. *ACS Nano*, **2015**, 9, 12327-33 | 16.7 | 48 |
| 83 | Magic-Sized Cd3P2 II-V Nanoparticles Exhibiting Bandgap Photoemission. *Journal of Physical Chemistry C*, **2009**, 113, 17979-17982 | 3.8 | 48 |
| 82 | Butylamine-Catalyzed Synthesis of Nanocrystal Inks Enables Efficient Infrared CQD Solar Cells. *Advanced Materials*, **2018**, 30, e1803830 | 24 | 48 |
| 81 | Origins of Stokes Shift in PbS Nanocrystals. *Nano Letters*, **2017**, 17, 7191-7195 | 11.5 | 45 |
| 80 | Chelating-agent-assisted control of CsPbBr quantum well growth enables stable blue perovskite emitters. *Nature Communications*, **2020**, 11, 3674 | 17.4 | 45 |
| 79 | Enhanced Open-Circuit Voltage in Colloidal Quantum Dot Photovoltaics via Reactivity-Controlled Solution-Phase Ligand Exchange. *Advanced Materials*, **2017**, 29, 1703627 | 24 | 42 |

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| 78 | Structure of thiol self-assembled monolayers commensurate with the GaAs (001) surface. *Langmuir*, **2008**, 24, 13299-305 | 4 | 42 |
| 77 | Single-step colloidal quantum dot films for infrared solar harvesting. *Applied Physics Letters*, **2016**, 109, 183105 | 3.4 | 42 |
| 76 | Picosecond Charge Transfer and Long Carrier Diffusion Lengths in Colloidal Quantum Dot Solids. *Nano Letters*, **2018**, 18, 7052-7059 | 11.5 | 42 |
| 75 | The Silicon:Colloidal Quantum Dot Heterojunction. *Advanced Materials*, **2015**, 27, 7445-50 | 24 | 40 |
| 74 | 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, 1862-74 | 16.4 | 40 |
| 73 | Atomistic Design of CdSe/CdS Core-Shell Quantum Dots with Suppressed Auger Recombination. *Nano Letters*, **2016**, 16, 6491-6496 | 11.5 | 39 |
| 72 | Multibandgap quantum dot ensembles for solar-matched infrared energy harvesting. *Nature Communications*, **2018**, 9, 4003 | 17.4 | 39 |
| 71 | Stabilizing Highly Active Ru Sites by Suppressing Lattice Oxygen Participation in Acidic Water Oxidation. *Journal of the American Chemical Society*, **2021**, 143, 6482-6490 | 16.4 | 38 |
| 70 | Acid-Assisted Ligand Exchange Enhances Coupling in Colloidal Quantum Dot Solids. *Nano Letters*, **2018**, 18, 4417-4423 | 11.5 | 37 |
| 69 | Hydrophobic stabilizer-anchored fully inorganic perovskite quantum dots enhance moisture resistance and photovoltaic performance. *Nano Energy*, **2020**, 75, 104985 | 17.1 | 36 |
| 68 | Contactless measurements of photocarrier transport properties in perovskite single crystals. *Nature Communications*, **2019**, 10, 1591 | 17.4 | 35 |
| 67 | Pure Cubic-Phase Hybrid Iodobismuthates AgBi2I7 for Thin-Film Photovoltaics. *Angewandte Chemie* , **2016**, 128, 9738-9742 | 3.6 | 35 |
| 66 | The quantum-confined Stark effect in layered hybrid perovskites mediated by orientational polarizability of confined dipoles. *Nature Communications*, **2018**, 9, 4214 | 17.4 | 35 |
| 65 | c(4x2) structures of alkanethiol monolayers on Au (111) compatible with the constraint of dense packing. *Langmuir*, **2009**, 25, 7353-8 | 4 | 34 |
| 64 | Remote Molecular Doping of Colloidal Quantum Dot Photovoltaics. *ACS Energy Letters*, **2016**, 1, 922-930 | 20.1 | 34 |
| 63 | Activated Electron-Transport Layers for Infrared Quantum Dot Optoelectronics. *Advanced Materials* , **2018**, 30, e1801720 | 24 | 34 |
| 62 | Anchored Ligands Facilitate Efficient B-Site Doping in Metal Halide Perovskites. *Journal of the American Chemical Society*, **2019**, 141, 8296-8305 | 16.4 | 32 |
| 61 | Adsorption Kinetics of Hydrogen Sulfide and Thiols on GaAs (001) Surfaces in a Vacuum. *Journal of Physical Chemistry C*, **2008**, 112, 3726-3733 | 3.8 | 32 |

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| 60 | Molecular self-assembly and passivation of GaAs (0 0 1) with alkanethiol monolayers: A view towards bio-functionalization. *Applied Surface Science*, **2010**, 256, 5714-5721 | 6.7 | 31 |
| 59 | Controlled Steric Hindrance Enables Efficient Ligand Exchange for Stable, Infrared-Bandgap Quantum Dot Inks. *ACS Energy Letters*, **2019**, 4, 1225-1230 | 20.1 | 30 |
| 58 | Electronically active impurities in colloidal quantum dot solids. *ACS Nano*, **2014**, 8, 11763-9 | 16.7 | 30 |
| 57 | Biexciton Resonances Reveal Exciton Localization in Stacked Perovskite Quantum Wells. *Journal of Physical Chemistry Letters*, **2017**, 8, 3895-3901 | 6.4 | 30 |
| 56 | Structure, bonding nature, and binding energy of alkanethiolate on As-rich GaAs (001) surface: a density functional theory study. *Journal of Physical Chemistry B*, **2006**, 110, 23619-22 | 3.4 | 30 |
| 55 | Solution-processed perovskite-colloidal quantum dot tandem solar cells for photon collection beyond 1000 nm. *Journal of Materials Chemistry A*, **2019**, 7, 26020-26028 | 13 | 30 |
| 54 | Quantum Dots in Two-Dimensional Perovskite Matrices for Efficient Near-Infrared Light Emission. *ACS Photonics*, **2017**, 4, 830-836 | 6.3 | 28 |
| 53 | Computational Study of Magic-Size CdSe Clusters with Complementary Passivation by Carboxylic and Amine Ligands. *Journal of Physical Chemistry C*, **2016**, 120, 10015-10019 | 3.8 | 28 |
| 52 | Ligand-Assisted Reconstruction of Colloidal Quantum Dots Decreases Trap State Density. *Nano Letters*, **2020**, 20, 3694-3702 | 11.5 | 27 |
| 51 | Halide Re-Shelled Quantum Dot Inks for Infrared Photovoltaics. *ACS Applied Materials & Interfaces*, **2017**, 9, 37536-37541 | 9.5 | 26 |
| 50 | Quantum Dot-Plasmon Lasing with Controlled Polarization Patterns. *ACS Nano*, **2020**, 14, 3426-3433 | 16.7 | 26 |
| 49 | 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 | 8.3 | 24 |
| 48 | 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 | 24 | 23 |
| 47 | Bright and Stable Light-Emitting Diodes Based on Perovskite Quantum Dots in Perovskite Matrix. *Journal of the American Chemical Society*, **2021**, 143, 15606-15615 | 16.4 | 22 |
| 46 | Wide-Bandgap Perovskite Quantum Dots in Perovskite Matrix for Sky-Blue Light-Emitting Diodes.. *Journal of the American Chemical Society*, **2022**, | 16.4 | 22 |
| 45 | Engineering Directionality in Quantum Dot Shell Lasing Using Plasmonic Lattices. *Nano Letters*, **2020**, 20, 1468-1474 | 11.5 | 21 |
| 44 | Theory of highly excited semiconductor nanostructures including Auger coupling: Exciton-biexciton mixing in CdSe nanocrystals. *Physical Review B*, **2011**, 84, | 3.3 | 21 |
| 43 | Small-Band-Offset Perovskite Shells Increase Auger Lifetime in Quantum Dot Solids. *ACS Nano*, **2017**, 11, 12378-12384 | 16.7 | 20 |

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| 42 | Hybridization of phenylthiolate- and methylthiolate-adatom species at low coverage on the Au(111) surface. *Journal of the American Chemical Society*, **2013**, 135, 4922-5 | 16.4 | 20 |
| 41 | Orthogonal colloidal quantum dot inks enable efficient multilayer optoelectronic devices. *Nature Communications*, **2020**, 11, 4814 | 17.4 | 19 |
| 40 | Effect of disorder on transport properties in a tight-binding model for lead halide perovskites. *Scientific Reports*, **2017**, 7, 8902 | 4.9 | 18 |
| 39 | Crystal Site Feature Embedding Enables Exploration of Large Chemical Spaces. *Matter*, **2020**, 3, 433-448 | 12.7 | 17 |
| 38 | The striped phases of ethylthiolate monolayers on the Au(111) surface: a scanning tunneling microscopy study. *Journal of Chemical Physics*, **2013**, 138, 194707 | 3.9 | 17 |
| 37 | Solid Electrolyte Interphase Engineering for Aqueous Aluminum Metal Batteries: A Critical Evaluation. *Advanced Energy Materials*, **2021**, 11, 2100077 | 21.8 | 17 |
| 36 | Narrow Emission from Rb3Sb2I9 Nanoparticles. *Advanced Optical Materials*, **2020**, 8, 1901606 | 8.1 | 16 |
| 35 | Ultrafast Carrier Trapping in Thick-Shell Colloidal Quantum Dots. *Journal of Physical Chemistry Letters*, **2017**, 8, 3179-3184 | 6.4 | 15 |
| 34 | Quantum Dot Color-Converting Solids Operating Efficiently in the kW/cm2 Regime. *Chemistry of Materials*, **2017**, 29, 5104-5112 | 9.6 | 15 |
| 33 | Pulsed axial epitaxy of colloidal quantum dots in nanowires enables facet-selective passivation. *Nature Communications*, **2018**, 9, 4947 | 17.4 | 15 |
| 32 | Facet-Oriented Coupling Enables Fast and Sensitive Colloidal Quantum Dot Photodetectors. *Advanced Materials*, **2021**, 33, e2101056 | 24 | 13 |
| 31 | In-situ inorganic ligand replenishment enables bandgap stability in mixed-halide perovskite quantum dot solids.. *Advanced Materials*, **2022**, e2200854 | 24 | 11 |
| 30 | Self-Assembled PbSe Nanowire:Perovskite Hybrids. *Journal of the American Chemical Society*, **2015**, 137, 14869-72 | 16.4 | 10 |
| 29 | Tertiary Hierarchical Complexity in Assemblies of Sulfur-Bridged Metal Chiral Clusters. *Journal of the American Chemical Society*, **2020**, 142, 14495-14503 | 16.4 | 10 |
| 28 | Epitaxial Metal Halide Perovskites by Inkjet-Printing on Various Substrates. *Advanced Functional Materials*, **2020**, 30, 2004612 | 15.6 | 10 |
| 27 | Cleavable Ligands Enable Uniform Close Packing in Colloidal Quantum Dot Solids. *ACS Applied Materials & Interfaces*, **2015**, 7, 21995-2000 | 9.5 | 8 |
| 26 | Linear Electro-Optic Modulation in Highly Polarizable Organic Perovskites. *Advanced Materials*, **2021**, 33, e2006368 | 24 | 8 |
| 25 | Temperature-Induced Self-Compensating Defect Traps and Gain Thresholds in Colloidal Quantum Dots. *ACS Nano*, **2019**, 13, 8970-8976 | 16.7 | 7 |

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| 24 | 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 | 6.4 | 7 |
| 23 | Gradient-Doped Colloidal Quantum Dot Solids Enable Thermophotovoltaic Harvesting of Waste Heat. *ACS Energy Letters*, **2016**, 1, 740-746 | 20.1 | 7 |
| 22 | Applied Machine Learning for Developing Next-Generation Functional Materials. *Advanced Functional Materials*,2104195 | 15.6 | 7 |
| 21 | Black and Stable: A Path to All-Inorganic Halide Perovskite Solar Cells. *Joule*, **2018**, 2, 1215-1216 | 27.8 | 6 |
| 20 | Accelerated solution-phase exchanges minimize defects in colloidal quantum dot solids. *Nano Energy*, **2019**, 63, 103876 | 17.1 | 6 |
| 19 | Ligand-induced symmetry breaking, size and morphology in colloidal lead sulfide QDs: from classic to thiourea precursors2, 1 | | 6 |
| 18 | Controlling C60 Organization through Dipole-Induced Band Alignment at Self-Assembled Monolayer Interfaces. *Chemistry of Materials*, **2016**, 28, 8322-8329 | 9.6 | 6 |
| 17 | Manganese MOF Enables Efficient Oxygen Evolution in Acid **2020**, 2, 798-800 | | 5 |
| 16 | Realizing ultra-pure red emission with Sn-based lead-free perovskites. *Rare Metals*, **2020**, 39, 330-331 | 5.5 | 4 |
| 15 | It's a Trap! Fused Quantum Dots Are Undesired Defects in Thin-Film Solar Cells. *CheM*, **2019**, 5, 1692-1694 | 16.2 | 4 |
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