

Andrew H Proppe

List of Publications by Year in descending order

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58
papers

7,290
citations

53660

45
h-index

155451

55
g-index

59
all docs

59
docs citations

59
times ranked

8092
citing authors

#	ARTICLE	IF	CITATIONS
1	Efficient electrically powered CO ₂ -to-ethanol via suppression of deoxygenation. <i>Nature Energy</i> , 2020, 5, 478-486.	19.8	363
2	Distribution control enables efficient reduced-dimensional perovskite LEDs. <i>Nature</i> , 2021, 599, 594-598.	13.7	358
3	Copper nanocavities confine intermediates for efficient electrosynthesis of C ₃ alcohol fuels from carbon monoxide. <i>Nature Catalysis</i> , 2018, 1, 946-951.	16.1	354
4	Compositional and orientational control in metal halide perovskites of reduced dimensionality. <i>Nature Materials</i> , 2018, 17, 900-907.	13.3	351
5	Regulating strain in perovskite thin films through charge-transport layers. <i>Nature Communications</i> , 2020, 11, 1514.	5.8	346
6	Metal-Organic Frameworks Mediate Cu Coordination for Selective CO ₂ Electroreduction. <i>Journal of the American Chemical Society</i> , 2018, 140, 11378-11386.	6.6	326
7	Catalyst synthesis under CO ₂ electroreduction favours faceting and promotes renewable fuels electrosynthesis. <i>Nature Catalysis</i> , 2020, 3, 98-106.	16.1	325
8	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
9	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
10	2D matrix engineering for homogeneous quantum dot coupling in photovoltaic solids. <i>Nature Nanotechnology</i> , 2018, 13, 456-462.	15.6	252
11	Bifunctional Surface Engineering on SnO ₂ Reduces Energy Loss in Perovskite Solar Cells. <i>ACS Energy Letters</i> , 2020, 5, 2796-2801.	8.8	239
12	Quantum-size-tuned heterostructures enable efficient and stable inverted perovskite solar cells. <i>Nature Photonics</i> , 2022, 16, 352-358.	15.6	233
13	Lattice anchoring stabilizes solution-processed semiconductors. <i>Nature</i> , 2019, 570, 96-101.	13.7	208
14	2D Metal Oxyhalide-Derived Catalysts for Efficient CO ₂ Electroreduction. <i>Advanced Materials</i> , 2018, 30, e1802858.	11.1	200
15	Cascade surface modification of colloidal quantum dot inks enables efficient bulk homojunction photovoltaics. <i>Nature Communications</i> , 2020, 11, 103.	5.8	181
16	Enhanced optical path and electron diffusion length enable high-efficiency perovskite tandems. <i>Nature Communications</i> , 2020, 11, 1257.	5.8	180
17	Mixed-quantum-dot solar cells. <i>Nature Communications</i> , 2017, 8, 1325.	5.8	148
18	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

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19	Bioinspiration in light harvesting and catalysis. <i>Nature Reviews Materials</i> , 2020, 5, 828-846.	23.3	136
20	Efficient near-infrared light-emitting diodes based on quantum dots in layered perovskite. <i>Nature Photonics</i> , 2020, 14, 227-233.	15.6	136
21	Suppressed Ion Migration in Reduced-Dimensional Perovskites Improves Operating Stability. <i>ACS Energy Letters</i> , 2019, 4, 1521-1527.	8.8	130
22	Efficient upgrading of CO to C3 fuel using asymmetric C-C coupling active sites. <i>Nature Communications</i> , 2019, 10, 5186.	5.8	127
23	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
24	Photochemically Cross-Linked Quantum Well Ligands for 2D/3D Perovskite Photovoltaics with Improved Photovoltage and Stability. <i>Journal of the American Chemical Society</i> , 2019, 141, 14180-14189.	6.6	107
25	Multi-cation perovskites prevent carrier reflection from grain surfaces. <i>Nature Materials</i> , 2020, 19, 412-418.	13.3	100
26	Passivation of the Buried Interface via Preferential Crystallization of 2D Perovskite on Metal Oxide Transport Layers. <i>Advanced Materials</i> , 2021, 33, e2103394.	11.1	99
27	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
28	Multication perovskite 2D/3D interfaces form via progressive dimensional reduction. <i>Nature Communications</i> , 2021, 12, 3472.	5.8	89
29	A Facet-Specific Quantum Dot Passivation Strategy for Colloid Management and Efficient Infrared Photovoltaics. <i>Advanced Materials</i> , 2019, 31, e1805580.	11.1	87
30	Pseudohalide-Exchanged Quantum Dot Solids Achieve Record Quantum Efficiency in Infrared Photovoltaics. <i>Advanced Materials</i> , 2017, 29, 1700749.	11.1	79
31	Spectrally Resolved Ultrafast Exciton Transfer in Mixed Perovskite Quantum Wells. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 419-426.	2.1	74
32	Origins of Stokes Shift in PbS Nanocrystals. <i>Nano Letters</i> , 2017, 17, 7191-7195.	4.5	72
33	Ligand-Induced Surface Charge Density Modulation Generates Local Type-II Band Alignment in Reduced-Dimensional Perovskites. <i>Journal of the American Chemical Society</i> , 2019, 141, 13459-13467.	6.6	62
34	An antibonding valence band maximum enables defect-tolerant and stable GeSe photovoltaics. <i>Nature Communications</i> , 2021, 12, 670.	5.8	58
35	Activated Electron-Transport Layers for Infrared Quantum Dot Optoelectronics. <i>Advanced Materials</i> , 2018, 30, e1801720.	11.1	57
36	Metal-Organic Framework Thin Films on High-Curvature Nanostructures Toward Tandem Electrocatalysis. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 31225-31232.	4.0	57

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37	Acid-Assisted Ligand Exchange Enhances Coupling in Colloidal Quantum Dot Solids. <i>Nano Letters</i> , 2018, 18, 4417-4423.	4.5	57
38	Multibandgap quantum dot ensembles for solar-matched infrared energy harvesting. <i>Nature Communications</i> , 2018, 9, 4003.	5.8	56
39	Contactless measurements of photocarrier transport properties in perovskite single crystals. <i>Nature Communications</i> , 2019, 10, 1591.	5.8	55
40	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
41	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
42	Single-step colloidal quantum dot films for infrared solar harvesting. <i>Applied Physics Letters</i> , 2016, 109, .	1.5	52
43	Picosecond Charge Transfer and Long Carrier Diffusion Lengths in Colloidal Quantum Dot Solids. <i>Nano Letters</i> , 2018, 18, 7052-7059.	4.5	51
44	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
45	Micron Thick Colloidal Quantum Dot Solids. <i>Nano Letters</i> , 2020, 20, 5284-5291.	4.5	47
46	Ligand-Assisted Reconstruction of Colloidal Quantum Dots Decreases Trap State Density. <i>Nano Letters</i> , 2020, 20, 3694-3702.	4.5	46
47	Energy Level Tuning at the MAPbI ₃ Perovskite/Contact Interface Using Chemical Treatment. <i>ACS Energy Letters</i> , 2019, 4, 2181-2184.	8.8	45
48	Biexciton Resonances Reveal Exciton Localization in Stacked Perovskite Quantum Wells. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 3895-3901.	2.1	41
49	Thiophene Cation Intercalation to Improve Band-Edge Integrity in Reduced-Dimensional Perovskites. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 13977-13983.	7.2	36
50	Dimensional Mixing Increases the Efficiency of 2D/3D Perovskite Solar Cells. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 5115-5119.	2.1	34
51	Examining Structure-Property-Function Relationships in Thiophene, Selenophene, and Tellurophene Homopolymers. <i>ACS Applied Energy Materials</i> , 2018, 1, 5033-5042.	2.5	24
52	Transition Dipole Moments of n = 1, 2, and 3 Perovskite Quantum Wells from the Optical Stark Effect and Many-Body Perturbation Theory. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 716-723.	2.1	24
53	Stable, Bromine-Free, Tetragonal Perovskites with 1.7 eV Bandgaps via A-Site Cation Substitution. , 2020, 2, 869-872.		18
54	Naphthalenediimide Cations Inhibit 2D Perovskite Formation and Facilitate Subpicosecond Electron Transfer. <i>Journal of Physical Chemistry C</i> , 2020, 124, 24379-24390.	1.5	17

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55	Thiophene Cation Intercalation to Improve Bandâ€Edge Integrity in Reducedâ€Dimensional Perovskites. <i>Angewandte Chemie</i> , 2020, 132, 14081-14087.	1.6	16
56	High-Throughput Screening of Antisolvents for the Deposition of High-Quality Perovskite Thin Films. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 26026-26032.	4.0	11
57	Ligand-induced symmetry breaking, size and morphology in colloidal lead sulfide QDs: from classic to thiourea precursors. , 0, 2, 1.		8
58	Ultrafast photophysics of metal halide perovskite multiple quantum wells: device implications and reconciling band alignment. , 2019, , .		0