Aram Amassian

List of Publications by Year
in descending order

245 papers	25,284 citations	6592 79 h-index	7333 152 g-index
257 all docs	257 docs citations	257 times ranked	22451 citing authors

#	Article	IF	Citations
1	Colloidal-quantum-dot photovoltaics using atomic-ligand passivation. Nature Materials, 2011, 10, 765-771.	13.3	1,375
2	Ligand-Stabilized Reduced-Dimensionality Perovskites. Journal of the American Chemical Society, 2016, 138, 2649-2655.	6.6	1,157
3	Hybrid passivated colloidal quantum dot solids. Nature Nanotechnology, 2012, 7, 577-582.	15.6	1,100
4	Reducing the efficiencyâ€“stabilityâ€“cost gap of organic photovoltaics with highly efficient and stable small molecule acceptor ternary solar cells. Nature Materials, 2017, 16, 363-369.	13.3	921
5	Efficient charge generation by relaxed charge-transfer states at organic interfaces. Nature Materials, 2014, 13, 63-68.	13.3	667
6	Stable Highâ€Performance Perovskite Solar Cells via Grain Boundary Passivation. Advanced Materials, 2018, 30, e1706576.	11.1	665
7	Stable high efficiency two-dimensional perovskite solar cells via cesium doping. Energy and Environmental Science, 2017, 10, 2095-2102.	15.6	588
8	Hybrid organicâ€“inorganic inks flatten the energy landscape in colloidal quantum dotÂsolids. Nature Materials, 2017, 16, 258-263.	13.3	563
9	Air-stable n-type colloidal quantum dot solids. Nature Materials, 2014, 13, 822-828.	13.3	529
10	Reduced voltage losses yield 10% efficient fullerene free organic solar cells with >1 V open circuit voltages. Energy and Environmental Science, 2016, 9, 3783-3793.	15.6	477
11	The Importance of Fullerene Percolation in the Mixed Regions of Polymerâ€“Fullerene Bulk Heterojunction Solar Cells. Advanced Energy Materials, 2013, 3, 364-374.	10.2	412
12	Compositional and orientational control in metal halide perovskites of reduced dimensionality. Nature Materials, 2018, 17, 900-907.	13.3	351
13	Diketopyrrolopyrroleâ€“Diketopyrrolopyrrole-Based Conjugated Copolymer for High-Mobility Organic Field-Effect Transistors. Journal of the American Chemical Society, 2012, 134, 16532-16535.	6.6	339
14	Importance of the Donor:Fullerene Intermolecular Arrangement for High-Efficiency Organic Photovoltaics. Journal of the American Chemical Society, 2014, 136, 9608-9618.	6.6	302
15	Molecular Design of Semiconducting Polymers for High-Performance Organic Electrochemical Transistors. Journal of the American Chemical Society, 2016, 138, 10252-10259.	6.6	270
16	Single crystal hybrid perovskite field-effect transistors. Nature Communications, 2018, 9, 5354.	5.8	255
17	2D matrix engineering for homogeneous quantum dot coupling in photovoltaic solids. Nature Nanotechnology, 2018, 13, 456-462.	15.6	252
18	A 1300 mm² Ultrahighâ€Performance Digital Imaging Assembly using Highâ€Quality Perovskite Single Crystals. Advanced Materials, 2018, 30, e1707314.	11.1	246

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19	Phase Transition Control for High Performance Ruddlesdenâ€“Popper Perovskite Solar Cells. Advanced Materials, 2018, 30, e1707166.	11.1	244
20	N-type organic electrochemical transistors with stability in water. Nature Communications, 2016, 7, 13066.	5.8	242
21	16.1% Efficient Hysteresisâ€Free Mesostructured Perovskite Solar Cells Based on Synergistically Improved ZnO Nanorod Arrays. Advanced Energy Materials, 2015, 5, 1500568.	10.2	222
22	Solutionâ€Processed Small Moleculeâ€Polymer Blend Organic Thinâ€Film Transistors with Hole Mobility Greater than 5 cm²/Vs. Advanced Materials, 2012, 24, 2441-2446.	11.1	219
23	Solution-printed organic semiconductor blends exhibiting transport properties on par with single crystals. Nature Communications, 2015, 6, 8598.	5.8	219
24	Multi-inch single-crystalline perovskite membrane for high-detectivity flexible photosensors. Nature Communications, 2018, 9, 5302.	5.8	212
25	A molecular interactionâ€“diffusion framework for predicting organic solar cell stability. Nature Materials, 2021, 20, 525-532.	13.3	212
26	Lattice anchoring stabilizes solution-processed semiconductors. Nature, 2019, 570, 96-101.	13.7	208
27	Low-temperature-gradient crystallization for multi-inch high-quality perovskite single crystals for record performance photodetectors. Materials Today, 2019, 22, 67-75.	8.3	204
28	Highly efficient perovskite solar cells based on a nanostructured WO₃â€“TiO₂coreâ€“shell electron transporting material. Journal of Materials Chemistry A, 2015, 3, 9051-9057.	5.2	199
29	Holeâ€Transporting Transistors and Circuits Based on the Transparent Inorganic Semiconductor Copper(I) Thiocyanate (CuSCN) Processed from Solution at Room Temperature. Advanced Materials, 2013, 25, 1504-1509.	11.1	196
30	High performance ambient-air-stable FAPbI₃ perovskite solar cells with molecule-passivated Ruddlesdenâ€“Popper/3D heterostructured film. Energy and Environmental Science, 2018, 11, 3358-3366.	15.6	196
31	Characterization of the Polymer Energy Landscape in Polymer:Fullerene Bulk Heterojunctions with Pure and Mixed Phases. Journal of the American Chemical Society, 2014, 136, 14078-14088.	6.6	193
32	Dynamical Transformation of Two-Dimensional Perovskites with Alternating Cations in the Interlayer Space for High-Performance Photovoltaics. Journal of the American Chemical Society, 2019, 141, 2684-2694.	6.6	189
33	Phase Transition Control for High-Performance Blade-Coated Perovskite Solar Cells. Joule, 2018, 2, 1313-1330.	11.7	180
34	Tetrathienoacene Copolymers As High Mobility, Soluble Organic Semiconductors. Journal of the American Chemical Society, 2008, 130, 13202-13203.	6.6	178
35	Fine Multiâ€Phase Alignments in 2D Perovskite Solar Cells with Efficiency over 17% via Slow Postâ€Annealing. Advanced Materials, 2019, 31, e1903889.	11.1	178
36	Blade-Coated Hybrid Perovskite Solar Cells with Efficiency > 17%: An In Situ Investigation. ACS Energy Letters, 2018, 3, 1078-1085.	8.8	171

#	Article	IF	Citations
37	Compositional Control in 2D Perovskites with Alternating Cations in the Interlayer Space for Photovoltaics with Efficiency over 18%. Advanced Materials, 2019, 31, e1903848.	11.1	171
38	Morphology changes upon scaling a high-efficiency, solution-processed solar cell. Energy and Environmental Science, 2016, 9, 2835-2846.	15.6	170
39	Artificial Chemist: An Autonomous Quantum Dot Synthesis Bot. Advanced Materials, 2020, 32, e2001626.	11.1	170
40	Electric field-induced hole transport in copper(i) thiocyanate (CuSCN) thin-films processed from solution at room temperature. Chemical Communications, 2013, 49, 4154-4156.	2.2	169
41	Spinâ€Cast Bulk Heterojunction Solar Cells: A Dynamical Investigation. Advanced Materials, 2013, 25, 1923-1929.	11.1	163
42	Interfacial Engineering at the 2D/3D Heterojunction for High-Performance Perovskite Solar Cells. Nano Letters, 2019, 19, 7181-7190.	4.5	163
43	Multi-cation Synergy Suppresses Phase Segregation in Mixed-Halide Perovskites. Joule, 2019, 3, 1746-1764.	11.7	159
44	Printable CsPbI₃ Perovskite Solar Cells with PCE of 19% via an Additive Strategy. Advanced Materials, 2020, 32, e2001243.	11.1	157
45	Solvent Additive Effects on Small Molecule Crystallization in Bulk Heterojunction Solar Cells Probed During Spin Casting. Advanced Materials, 2013, 25, 6380-6384.	11.1	156
46	Highâ€Performance ZnO Transistors Processed Via an Aqueous Carbonâ€Free Metal Oxide Precursor Route at Temperatures Between 80â€“180 Â°C. Advanced Materials, 2013, 25, 4340-4346.	11.1	156
47	Hybrid Perovskite Thinâ€Film Photovoltaics: In Situ Diagnostics and Importance of the Precursor Solvate Phases. Advanced Materials, 2017, 29, 1604113.	11.1	155
48	Optoelectronic and photovoltaic properties of the air-stable organohalide semiconductor (CH₃NH₃)₃Bi₂I₉. Journal of Materials Chemistry A, 2016, 4, 12504-12515.	5.2	151
49	Heterojunction oxide thin-film transistors with unprecedented electron mobility grown from solution. Science Advances, 2017, 3, e1602640.	4.7	148
50	Mechanical and optical properties of hard SiCN coatings prepared by PECVD. Thin Solid Films, 2004, 447-448, 201-207.	0.8	145
51	Amorphous Tin Oxide as a Low-Temperature-Processed Electron-Transport Layer for Organic and Hybrid Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 11828-11836.	4.0	145
52	Morphology Development in Solution-Processed Functional Organic Blend Films: An In Situ Viewpoint. Chemical Reviews, 2017, 117, 6332-6366.	23.0	145
53	Polymer Solar Cells with Efficiency >10% Enabled via a Facile Solutionâ€Processed Alâ€Doped ZnO Electron Transporting Layer. Advanced Energy Materials, 2015, 5, 1500204.	10.2	142
54	Surface Restructuring of Hybrid Perovskite Crystals. ACS Energy Letters, 2016, 1, 1119-1126.	8.8	140

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55	Efficient Sprayâ€Coated Colloidal Quantum Dot Solar Cells. Advanced Materials, 2015, 27, 116-121.	11.1	139
56	Efficient near-infrared light-emitting diodes based on quantum dots in layered perovskite. Nature Photonics, 2020, 14, 227-233.	15.6	136
57	Enhanced Electrical Conductivity of Molecularly p-Doped Poly(3-hexylthiophene) through Understanding the Correlation with Solid-State Order. Macromolecules, 2017, 50, 8140-8148.	2.2	135
58	Highly Efficient Ruddlesdenâ€"Popper Halide Perovskite PA₂MA₄Pb₅I₁₆ Solar Cells. ACS Energy Letters, 2018, 3, 1975-1982.	8.8	135
59	High Electron Mobility Thinâ€Film Transistors Based on Solutionâ€Processed Semiconducting Metal Oxide Heterojunctions and Quasiâ€Superlattices. Advanced Science, 2015, 2, 1500058.	5.6	134
60	Solution-processed inorganic copper(<scp>i</scp>) thiocyanate (CuSCN) hole transporting layers for efficient pâ€"iâ€"n perovskite solar cells. Journal of Materials Chemistry A, 2015, 3, 20554-20559.	5.2	132
61	Entanglement of Conjugated Polymer Chains Influences Molecular Selfâ€Assembly and Carrier Transport. Advanced Functional Materials, 2013, 23, 6024-6035.	7.8	131
62	One-dimensional self-confinement promotes polymorph selection in large-area organic semiconductor thin films. Nature Communications, 2014, 5, 3573.	5.8	129
63	Use of Xâ€Ray Diffraction, Molecular Simulations, and Spectroscopy to Determine the Molecular Packing in a Polymerâ€Fullerene Bimolecular Crystal. Advanced Materials, 2012, 24, 6071-6079.	11.1	126
64	Scalable Ambient Fabrication of High-Performance CsPbI2Br Solar Cells. Joule, 2019, 3, 2485-2502.	11.7	124
65	Doubleâ€Sided Junctions Enable Highâ€Performance Colloidalâ€Quantumâ€Dot Photovoltaics. Advanced Materials, 2016, 28, 4142-4148.	11.1	121
66	A Thieno[3,2â€<i>b</i>][1]benzothiophene Isoindigo Building Block for Additiveâ€•and Annealingâ€Free Highâ€Performance Polymer Solar Cells. Advanced Materials, 2015, 27, 4702-4707.	11.1	120
67	A Au/Cu 2 Oâ€"TiO 2 system for photo-catalytic hydrogen production. A pn-junction effect or a simple case of in situ reduction?. Journal of Catalysis, 2015, 322, 109-117.	3.1	114
68	The Donorâ€"Supply Electrode Enhances Performance in Colloidal Quantum Dot Solar Cells. ACS Nano, 2013, 7, 6111-6116.	7.3	113
69	Efficient inverted bulk-heterojunction solar cells from low-temperature processing of amorphous ZnO buffer layers. Journal of Materials Chemistry A, 2014, 2, 13321.	5.2	113
70	A New Method to Improve Poly(3-hexyl thiophene) (P3HT) Crystalline Behavior: Decreasing Chains Entanglement To Promote Orderâˆ'Disorder Transformation in Solution. Langmuir, 2010, 26, 471-477.	1.6	110
71	Correlation between the sp2-phase nanostructure and the physical properties of unhydrogenated carbon nitride. Journal of Applied Physics, 2005, 98, 044310.	1.1	108
72	In Situ Morphology Studies of the Mechanism for Solution Additive Effects on the Formation of Bulk Heterojunction Films. Advanced Energy Materials, 2015, 5, 1400975.	10.2	102

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73	Vertical Phase Separation in Small Molecule:Polymer Blend Organic Thin Film Transistors Can Be Dynamically Controlled. Advanced Functional Materials, 2016, 26, 1737-1746.	7.8	98
74	Stability and effect of annealing on the optical properties of plasma-deposited Ta2O5 and Nb2O5 films. Thin Solid Films, 2006, 515, 1674-1682.	0.8	97
75	Reâ€evaluating the Role of Sterics and Electronic Coupling in Determining the Openâ€Circuit Voltage of Organic Solar Cells. Advanced Materials, 2013, 25, 6076-6082.	11.1	90
76	Highly Efficient and Reproducible Nonfullerene Solar Cells from Hydrocarbon Solvents. ACS Energy Letters, 2017, 2, 1494-1500.	8.8	89
77	Stretchable and Transparent Conductive PEDOT:PSSâ€Based Electrodes for Organic Photovoltaics and Strain Sensors Applications. Advanced Functional Materials, 2020, 30, 2001251.	7.8	88
78	Effect of Solvent Environment on Colloidalâ€Quantumâ€Dot Solarâ€Cell Manufacturability and Performance. Advanced Materials, 2014, 26, 4717-4723.	11.1	86
79	Highly Efficient Hybrid Photovoltaics Based on Hyperbranched Threeâ€Dimensional TiO₂ Electron Transporting Materials. Advanced Materials, 2015, 27, 2859-2865.	11.1	83
80	In situ UV-visible absorption during spin-coating of organic semiconductors: a new probe for organic electronics and photovoltaics. Journal of Materials Chemistry C, 2014, 2, 3373.	2.7	82
81	Double-layered ZnO nanostructures for efficient perovskite solar cells. Nanoscale, 2014, 6, 14674-14678.	2.8	81
82	Polymer Mainâ€Chain Substitution Effects on the Efficiency of Nonfullerene BHJ Solar Cells. Advanced Energy Materials, 2017, 7, 1700834.	10.2	80
83	Indium Oxide Thin-Film Transistors Processed at Low Temperature via Ultrasonic Spray Pyrolysis. ACS Applied Materials & Interfaces, 2015, 7, 782-790.	4.0	79
84	Overcoming the Ambient Manufacturabilityâ€Scalabilityâ€Performance Bottleneck in Colloidal Quantum Dot Photovoltaics. Advanced Materials, 2018, 30, e1801661.	11.1	79
85	Organic Gelators as Growth Control Agents for Stable and Reproducible Hybrid Perovskiteâ€Based Solar Cells. Advanced Energy Materials, 2017, 7, 1602600.	10.2	78
86	Sub-15-nm patterning of asymmetric metal electrodes and devices by adhesion lithography. Nature Communications, 2014, 5, 3933.	5.8	77
87	Crossover from band-like to thermally activated charge transport in organic transistors due to strain-induced traps. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E6739-E6748.	3.3	77
88	A universal co-solvent dilution strategy enables facile and cost-effective fabrication of perovskite photovoltaics. Nature Communications, 2022, 13, 89.	5.8	77
89	The synthesis and properties of nanoscale ionic materials. Applied Organometallic Chemistry, 2010, 24, 581-589.	1.7	76
90	Functional Two-Dimensional Coordination Polymeric Layer as a Charge Barrier in Liâ€“S Batteries. ACS Nano, 2018, 12, 836-843.	7.3	76

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91	Kinetic Stabilization of the Solâ€“Gel State in Perovskites Enables Facile Processing of Highâ€Efficiency Solar Cells. Advanced Materials, 2019, 31, e1808357.	11.1	76
92	Entanglements in marginal solutions: a means of tuning pre-aggregation of conjugated polymers with positive implications for charge transport. Journal of Materials Chemistry C, 2015, 3, 7394-7404.	2.7	75
93	A scalable synthesis of highly stable and water dispersible Ag44(SR)30 nanoclusters. Journal of Materials Chemistry A, 2013, 1, 10148.	5.2	74
94	Look fast: Crystallization of conjugated molecules during solution shearing probed <i>inâ€situ</i> and in real time by Xâ€ray scattering. Physica Status Solidi - Rapid Research Letters, 2013, 7, 177-179.	1.2	73
95	A Solutionâ€Doped Polymer Semiconductor:Insulator Blend for Thermoelectrics. Advanced Science, 2017, 4, 1600203.	5.6	72
96	Conducting and Stretchable PEDOT:PSS Electrodes: Role of Additives on Self-Assembly, Morphology, and Transport. ACS Applied Materials & Interfaces, 2019, 11, 17570-17582.	4.0	72
97	Contactâ€Induced Nucleation in Highâ€Performance Bottomâ€Contact Organic Thin Film Transistors Manufactured by Largeâ€Area Compatible Solution Processing. Advanced Functional Materials, 2016, 26, 2371-2378.	7.8	71
98	Direct Structural Mapping of Organic Fieldâ€Effect Transistors Reveals Bottlenecks to Carrier Transport. Advanced Materials, 2012, 24, 5553-5558.	11.1	70
99	Metal-Free, Single-Polymer Device Exhibits Resistive Memory Effect. ACS Nano, 2013, 7, 10518-10524.	7.3	70
100	Optimizing Morphology to Trade Off Charge Transport and Mechanical Properties of Stretchable Conjugated Polymer Films. Macromolecules, 2021, 54, 3907-3926.	2.2	70
101	Ambient blade coating of mixed cation, mixed halide perovskites without dripping: <i>in situ</i> investigation and highly efficient solar cells. Journal of Materials Chemistry A, 2020, 8, 1095-1104.	5.2	68
102	The Impact of Molecular pâ€Doping on Charge Transport in Highâ€Mobility Smallâ€Molecule/Polymer Blend Organic Transistors. Advanced Electronic Materials, 2018, 4, 1700464.	2.6	63
103	Effects of High Temperature and Thermal Cycling on the Performance of Perovskite Solar Cells: Acceleration of Charge Recombination and Deterioration of Charge Extraction. ACS Applied Materials & Interfaces, 2017, 9, 35018-35029.	4.0	62
104	Film Formation Control for High Performance Dionâ€“Jacobson 2D Perovskite Solar Cells. Advanced Energy Materials, 2021, 11, 2002733.	10.2	62
105	Quasi Two-Dimensional Dye-Sensitized In₂O₃ Phototransistors for Ultrahigh Responsivity and Photosensitivity Photodetector Applications. ACS Applied Materials & Interfaces, 2016, 8, 4894-4902.	4.0	61
106	The quantum-confined Stark effect in layered hybrid perovskites mediated by orientational polarizability of confined dipoles. Nature Communications, 2018, 9, 4214.	5.8	61
107	Colloidal Quantum Dot Photovoltaics: Current Progress and Path to Gigawatt Scale Enabled by Smart Manufacturing. ACS Energy Letters, 2020, 5, 3069-3100.	8.8	61
108	Post-deposition reorganization of pentacene films deposited on low-energy surfaces. Journal of Materials Chemistry, 2009, 19, 5580.	6.7	60

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109	Double Charged Surface Layers in Lead Halide Perovskite Crystals. Nano Letters, 2017, 17, 2021-2027.	4.5	60
110	Additive-assisted supramolecular manipulation of polymer:fullerene blend phase morphologies and its influence on photophysical processes. Materials Horizons, 2014, 1, 270-279.	6.4	58
111	Late stage crystallization and healing during spin-coating enhance carrier transport in small-molecule organic semiconductors. Journal of Materials Chemistry C, 2014, 2, 5681-5689.	2.7	58
112	Highly efficient polymer solar cells with printed photoactive layer: rational process transfer from spin-coating. Journal of Materials Chemistry A, 2016, 4, 16036-16046.	5.2	57
113	KO^{<i>t</i>}Bu-Initiated Aryl Câ€“H Iodination: A Powerful Tool for the Synthesis of High Electron Affinity Compounds. Journal of the American Chemical Society, 2016, 138, 3946-3949.	6.6	57
114	Synergistic Impact of Solvent and Polymer Additives on the Film Formation of Small Molecule Blend Films for Bulk Heterojunction Solar Cells. Advanced Energy Materials, 2015, 5, 1501121.	10.2	56
115	Toward Additiveâ€Free Smallâ€Molecule Organic Solar Cells: Roles of the Donor Crystallization Pathway and Dynamics. Advanced Materials, 2015, 27, 7285-7292.	11.1	56
116	Growth of vacuum evaporated ultraporous silicon studied with spectroscopic ellipsometry and scanning electron microscopy. Journal of Applied Physics, 2005, 97, 013511.	1.1	55
117	Environmental impact of the production of graphene oxide and reduced graphene oxide. SN Applied Sciences, 2019, 1, 1.	1.5	55
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	Coreâ€“shell heterostructured metal oxide arrays enable superior light-harvesting and hysteresis-free mesoscopic perovskite solar cells. Nanoscale, 2015, 7, 12812-12819.	2.8	51
121	Pushing the Limits of Flexibility and Stretchability of Solar Cells: A Review. Advanced Materials, 2021, 33, e2101469.	11.1	51
122	Radio Frequency Coplanar ZnO Schottky Nanodiodes Processed from Solution on Plastic Substrates. Small, 2016, 12, 1993-2000.	5.2	48
123	Balancing crop production and energy harvesting in organic solar-powered greenhouses. Cell Reports Physical Science, 2021, 2, 100381.	2.8	48
124	Pulsed laser deposition of PLZT films: structural and optical characterization. Applied Surface Science, 2004, 226, 347-354.	3.1	47
125	Improved Morphology and Efficiency of nâ€“iâ€“p Planar Perovskite Solar Cells by Processing with Glycol Ether Additives. ACS Energy Letters, 2017, 2, 1960-1968.	8.8	47
126	Heterogeneous Nucleation Promotes Carrier Transport in Solutionâ€Processed Organic Fieldâ€Effect Transistors. Advanced Functional Materials, 2013, 23, 291-297.	7.8	46

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127	On the relation between chemical composition and optical properties of detonation nanodiamonds. Carbon, 2015, 94, 79-84.	5.4	45
128	Direct Correlation of Charge Transfer Absorption with Molecular Donor:Acceptor Interfacial Area via Photothermal Deflection Spectroscopy. Journal of the American Chemical Society, 2015, 137, 5256-5259.	6.6	45
129	The Roles of Structural Order and Intermolecular Interactions in Determining Ionization Energies and Chargeâ€Transfer State Energies in Organic Semiconductors. Advanced Energy Materials, 2016, 6, 1601211.	10.2	45
130	Microwave-synthesized tin oxide nanocrystals for low-temperature solution-processed planar junction organo-halide perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 7759-7763.	5.2	45
131	Molecular Doping of the Hole-Transporting Layer for Efficient, Single-Step-Deposited Colloidal Quantum Dot Photovoltaics. ACS Energy Letters, 2017, 2, 1952-1959.	8.8	45
132	Impact of the Solvation State of Lead Iodide on Its Twoâ€Step Conversion to MAPbI₃: An In Situ Investigation. Advanced Functional Materials, 2019, 29, 1807544.	7.8	45
133	Stable 2D Alternating Cation Perovskite Solar Cells with Power Conversion Efficiency >19% via Solvent Engineering. Solar Rrl, 2021, 5, 2100286.	3.1	45
134	Solvent Vapor Annealing in the Molecular Regime Drastically Improves Carrier Transport in Small-Molecule Thin-Film Transistors. ACS Applied Materials & Interfaces, 2013, 5, 2325-2330.	4.0	44
135	Study of TiO2 film growth mechanisms in low-pressure plasma by in situ real-time spectroscopic ellipsometry. Thin Solid Films, 2004, 447-448, 40-45.	0.8	43
136	Rational Design of Organic Semiconductors for Texture Control and Selfâ€Patterning on Halogenated Surfaces. Advanced Functional Materials, 2014, 24, 5052-5058.	7.8	43
137	Hybrid tandem solar cells with depleted-heterojunction quantum dot and polymer bulk heterojunction subcells. Nano Energy, 2015, 17, 196-205.	8.2	43
138	Bromination of Graphene: A New Route to Making High Performance Transparent Conducting Electrodes with Low Optical Losses. ACS Applied Materials & Interfaces, 2015, 7, 17692-17699.	4.0	41
139	Highly efficient organic solar cells based on a robust room-temperature solution-processed copper iodide hole transporter. Nano Energy, 2015, 16, 458-469.	8.2	41
140	Electrical limit of silver nanowire electrodes: Direct measurement of the nanowire junction resistance. Applied Physics Letters, 2016, 108, .	1.5	41
141	Bismuthâ€Based Perovskiteâ€Inspired Solar Cells: In Situ Diagnostics Reveal Similarities and Differences in the Film Formation of Bismuthâ€and Leadâ€Based Films. Solar Rrl, 2019, 3, 1800305.	3.1	41
142	Critical Role of Polymer Aggregation and Miscibility in Nonfullereneâ€Based Organic Photovoltaics. Advanced Energy Materials, 2020, 10, 1902430.	10.2	41
143	Roomâ€Temperature Partial Conversion of Î±â€FAPbI₃Perovskite Phase via PbI₂Solvation Enables Highâ€Performance Solar Cells. Advanced Functional Materials, 2020, 30, 1907442.	7.8	41
144	Impact of Molecular Orientation and Spontaneous Interfacial Mixing on the Performance of Organic Solar Cells. Chemistry of Materials, 2015, 27, 5597-5604.	3.2	40

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145	Remote Molecular Doping of Colloidal Quantum Dot Photovoltaics. ACS Energy Letters, 2016, 1, 922-930.	8.8	40
146	Hybrid Tandem Quantum Dot/Organic Solar Cells with Enhanced Photocurrent and Efficiency via Ink and Interlayer Engineering. ACS Energy Letters, 2018, 3, 1307-1314.	8.8	40
147	Highâ€Performance Quantumâ€Dot Solids via Elemental Sulfur Synthesis. Advanced Materials, 2014, 26, 3513-3519.	11.1	39
148	Ligand-Size Related Dimensionality Control in Metal Halide Perovskites. ACS Energy Letters, 2019, 4, 1830-1838.	8.8	38
149	Mesostructured Fullerene Electrodes for Highly Efficient nâ€“iâ€“p Perovskite Solar Cells. ACS Energy Letters, 2016, 1, 1049-1056.	8.8	37
150	Signatures of Quantized Energy States in Solutionâ€Processed Ultrathin Layers of Metalâ€Oxide Semiconductors and Their Devices. Advanced Functional Materials, 2015, 25, 1727-1736.	7.8	36
151	Novel Bimodal Silver Nanowire Network as Top Electrodes for Reproducible and Highâ€Efficiency Semitransparent Organic Photovoltaics. Solar Rrl, 2020, 4, 2000328.	3.1	36
152	Openâ€Circuit Voltage in Organic Solar Cells: The Impacts of Donor Semicrystallinity and Coexistence of Multiple Interfacial Chargeâ€Transfer Bands. Advanced Energy Materials, 2017, 7, 1601995.	10.2	35
153	Programmable and coherent crystallization of semiconductors. Science Advances, 2017, 3, e1602462.	4.7	35
154	Solution Coating of Superior Largeâ€Area Flexible Perovskite Thin Films with Controlled Crystal Packing. Advanced Optical Materials, 2017, 5, 1700102.	3.6	34
155	Solutionâ€Processed In₂O₃/ZnO Heterojunction Electron Transport Layers for Efficient Organic Bulk Heterojunction and Inorganic Colloidal Quantumâ€Dot Solar Cells. Solar Rrl, 2018, 2, 1800076.	3.1	34
156	Synthesis of Copper Hydroxide Branched Nanocages and Their Transformation to Copper Oxide. Journal of Physical Chemistry C, 2014, 118, 19374-19379.	1.5	33
157	Impressive near-infrared brightness and singlet oxygen generation from strategic lanthanideâ€“porphyrin double-decker complexes in aqueous solution. Light: Science and Applications, 2019, 8, 46.	7.7	33
158	Materials processing strategies for colloidal quantum dot solar cells: advances, present-day limitations, and pathways to improvement. MRS Communications, 2013, 3, 83-90.	0.8	32
159	Wide and Tunable Bandgap MAPbBr_{3âˆ’<i>x</i>}Cl_{<i>x</i>} Hybrid Perovskites with Enhanced Phase Stability: In Situ Investigation and Photovoltaic Devices. Solar Rrl, 2021, 5, 2000718.	3.1	32
160	Effective Phaseâ€Alignment for 2D Halide Perovskites Incorporating Symmetric Diammonium Ion for Photovoltaics. Advanced Science, 2021, 8, e2001433.	5.6	32
161	Real time monitoring of pentacene growth on SiO2 from a supersonic source. Applied Physics Letters, 2008, 92, 253304.	1.5	31
162	Solvent vapor annealing of an insoluble molecular semiconductor. Journal of Materials Chemistry, 2010, 20, 2623.	6.7	30

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163	In Situ Study of Molecular Aggregation in Conjugated Polymer/Elastomer Blends toward Stretchable Electronics. Macromolecules, 2022, 55, 297-308.	2.2	30
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