Feng Gao

List of Publications by Year in Descending Order

224 papers	25,009 citations	73 h-index	156 g-index
240 ext. papers	31,109 ext. citations	15.3 avg, IF	7.59 L-index

#	Paper	IF	Citations
224	Light-Emitting Diodes Based on Two-Dimensional Nanoplatelets. *Energy Material Advances*, **2022**, 2022, 1-24	1	1
223	Facet orientation tailoring via 2D-seed- induced growth enables highly efficient and stable perovskite solar cells. *Joule*, **2022**,	27.8	26
222	Interfacial engineering from material to solvent: A mechanistic understanding on stabilizing Formamidinium lead triiodide perovskite photovoltaics. *Nano Energy*, **2022**, 94, 106924	17.1	3
221	New insights in construction of three-dimensional donor/acceptor interface for high performance perovskite solar cells -- the preparation of wolf tooth stick-like TiO2. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2022**, 128958	5.1	0
220	Mapping the energy level alignment at donor/acceptor interfaces in non-fullerene organic solar cells.. *Nature Communications*, **2022**, 13, 2046	17.4	5
219	Asymmetric electron acceptor enables highly luminescent organic solar cells with certified efficiency over 18.. *Nature Communications*, **2022**, 13, 2598	17.4	18
218	Spacer Cation Alloying in Ruddlesden-Popper Perovskites for Efficient Red Light-Emitting Diodes with Precisely Tunable Wavelengths. *Advanced Materials*, **2021**, 33, e2104381	24	11
217	Critical role of additive-induced molecular interaction on the operational stability of perovskite light-emitting diodes. *Joule*, **2021**, 5, 618-630	27.8	42
216	16% efficiency all-polymer organic solar cells enabled by a finely tuned morphology via the design of ternary blend. *Joule*, **2021**, 5, 914-930	27.8	110
215	High-Performance Noncovalently Fused-Ring Electron Acceptors for Organic Solar Cells Enabled by Noncovalent Intramolecular Interactions and End-Group Engineering. *Angewandte Chemie*, **2021**, 133, 12583-12589	3.6	11
214	High-Performance Noncovalently Fused-Ring Electron Acceptors for Organic Solar Cells Enabled by Noncovalent Intramolecular Interactions and End-Group Engineering. *Angewandte Chemie - International Edition*, **2021**, 60, 12475-12481	16.4	63
213	Non-fullerene acceptors with branched side chains and improved molecular packing to exceed 18% efficiency in organic solar cells. *Nature Energy*, **2021**, 6, 605-613	62.3	457
212	Decoupling the effects of defects on efficiency and stability through phosphonates in stable halide perovskite solar cells. *Joule*, **2021**, 5, 1246-1266	27.8	30
211	Extended Nonfullerene Acceptors for Efficient Organic Solar Cells with a High Open-Circuit Voltage of 0.94 V and a Low Energy Loss of 0.49 eV. *ACS Applied Materials & Interfaces*, **2021**, 13, 22531-22539	9.5	6
210	Accurate photovoltaic measurement of organic cells for indoor applications. *Joule*, **2021**, 5, 1016-1023	27.8	16
209	High-performance all-polymer solar cells enabled by a novel low bandgap non-fully conjugated polymer acceptor. *Science China Chemistry*, **2021**, 64, 1380-1388	7.9	16
208	Color-Stable Blue Light-Emitting Diodes Enabled by Effective Passivation of Mixed Halide Perovskites. *Journal of Physical Chemistry Letters*, **2021**, 12, 6041-6047	6.4	7

207	High-Brightness Perovskite Light-Emitting Diodes Based on FAPbBr3 Nanocrystals with Rationally Designed Aromatic Ligands. *ACS Energy Letters*, **2021**, 6, 2395-2403	20.1	20
206	A unified description of non-radiative voltage losses in organic solar cells. *Nature Energy*, **2021**, 6, 799-806	62.3	70
205	Side-Chain Engineering for Enhancing the Molecular Rigidity and Photovoltaic Performance of Noncovalently Fused-Ring Electron Acceptors. *Angewandte Chemie - International Edition*, **2021**, 60, 17720-17725	16.4	29
204	Impact of Amine Additives on Perovskite Precursor Aging: A Case Study of Light-Emitting Diodes. *Journal of Physical Chemistry Letters*, **2021**, 12, 5836-5843	6.4	3
203	Side-Chain Engineering for Enhancing the Molecular Rigidity and Photovoltaic Performance of Noncovalently Fused-Ring Electron Acceptors. *Angewandte Chemie*, **2021**, 133, 17861-17866	3.6	2
202	Carrier Mobility Dynamics under Actual Working Conditions of Organic Solar Cells. *Journal of Physical Chemistry C*, **2021**, 125, 14567-14575	3.8	0
201	Mechanisms and Suppression of Photoinduced Degradation in Perovskite Solar Cells. *Advanced Energy Materials*, **2021**, 11, 2002326	21.8	53
200	Dynamic Redistribution of Mobile Ions in Perovskite Light-Emitting Diodes. *Advanced Functional Materials*, **2021**, 31, 2007596	15.6	11
199	Fluorinated End Group Enables High-Performance All-Polymer Solar Cells with Near-Infrared Absorption and Enhanced Device Efficiency over 14%. *Advanced Energy Materials*, **2021**, 11, 2003171	21.8	39
198	Carrier Dynamics and Evaluation of Lasing Actions in Halide Perovskites. *Trends in Chemistry*, **2021**, 3, 34-46	14.8	11
197	Metal halide perovskites for light-emitting diodes. *Nature Materials*, **2021**, 20, 10-21	27	322
196	Revealing Morphology Evolution in Highly Efficient Bulk Heterojunction and Pseudo-Planar Heterojunction Solar Cells by Additives Treatment. *Advanced Energy Materials*, **2021**, 11, 2003390	21.8	44
195	. *IEEE Transactions on Computational Imaging*, **2021**, 1-1	4.5	1
194	A universal method for constructing high efficiency organic solar cells with stacked structures. *Energy and Environmental Science*, **2021**, 14, 2314-2321	35.4	37
193	Mixed halide perovskites for spectrally stable and high-efficiency blue light-emitting diodes. *Nature Communications*, **2021**, 12, 361	17.4	119
192	Highly efficient fused ring electron acceptors based on a new undecacyclic core. *Materials Chemistry Frontiers*, **2021**, 5, 2001-2006	7.8	1
191	Phenylalkylammonium passivation enables perovskite light emitting diodes with record high-radiance operational lifetime: the chain length matters. *Nature Communications*, **2021**, 12, 644	17.4	40
190	Optimizing the Charge Carrier and Light Management of Nonfullerene Acceptors for Efficient Organic Solar Cells with Small Nonradiative Energy Losses. *Solar Rrl*, **2021**, 5, 2100008	7.1	6

189	Effect of alloying on the dynamics of coherent acoustic phonons in bismuth double perovskite single crystals. *Optics Express*, **2021**, 29, 7948-7955	3.3	2
188	Strong self-trapping by deformation potential limits photovoltaic performance in bismuth double perovskite. *Science Advances*, **2021**, 7,	14.3	30
187	High Efficiency (15.8%) All-Polymer Solar Cells Enabled by a Regioregular Narrow Bandgap Polymer Acceptor. *Journal of the American Chemical Society*, **2021**, 143, 2665-2670	16.4	112
186	Aligning Transition Dipole Moment toward Light Amplification and Polarized Emission in Hybrid Perovskites. *Advanced Optical Materials*, **2021**, 9, 2100984	8.1	0
185	Non-fullerene acceptor photostability and its impact on organic solar cell lifetime. *Cell Reports Physical Science*, **2021**, 2, 100498	6.1	9
184	Advances in solution-processed near-infrared light-emitting diodes. *Nature Photonics*, **2021**, 15, 656-669	33.9	25
183	Mobile ions determine the luminescence yield of perovskite light-emitting diodes under pulsed operation. *Nature Communications*, **2021**, 12, 4899	17.4	9
182	Manipulating crystallization dynamics through chelating molecules for bright perovskite emitters. *Nature Communications*, **2021**, 12, 4831	17.4	16
181	In Situ Optical Studies on Morphology Formation in Organic Photovoltaic Blends.. *Small Methods*, **2021**, 5, e2100585	12.8	6
180	Enhancing the Photovoltaic Performance of Triplet Acceptors Enabled by Side-Chain Engineering. *Solar Rrl*, **2021**, 5, 2100522	7.1	3
179	The role of charge recombination to triplet excitons in organic solar cells. *Nature*, **2021**, 597, 666-671	50.4	48
178	Degradation and self-repairing in perovskite light-emitting diodes. *Matter*, **2021**,	12.7	16
177	Organic nanocrystals induced surface passivation towards high-efficiency and stable perovskite solar cells. *Nano Energy*, **2021**, 89, 106445	17.1	5
176	Reversible Ionic Polarization in Metal Halide Perovskites. *Journal of Physical Chemistry C*, **2021**, 125, 283-289	3.8	2
175	Magnetizing lead-free halide double perovskites. *Science Advances*, **2020**, 6,	14.3	25
174	Emerging Approaches in Enhancing the Efficiency and Stability in Non-Fullerene Organic Solar Cells. *Advanced Energy Materials*, **2020**, 10, 2002746	21.8	58
173	Triplet Acceptors with a D-A Structure and Twisted Conformation for Efficient Organic Solar Cells. *Angewandte Chemie - International Edition*, **2020**, 59, 15043-15049	16.4	45
172	Dimensional Tailoring of Ultrahigh Vacuum Annealing-Assisted Quantum Wells for the Efficiency Enhancement of Perovskite Light-Emitting Diodes. *ACS Applied Materials & Interfaces*, **2020**, 12, 24965-24970	9.5	2

171	Tuning the electron-deficient core of a non-fullerene acceptor to achieve over 17% efficiency in a single-junction organic solar cell. *Energy and Environmental Science*, **2020**, 13, 2459-2466	35.4	199
170	Effect of Crystal Symmetry on the Spin States of Fe and Vibration Modes in Lead-free Double-Perovskite CsAgBi(Fe)Br. *Journal of Physical Chemistry Letters*, **2020**, 11, 4873-4878	6.4	3
169	Triplet Acceptors with a D-A Structure and Twisted Conformation for Efficient Organic Solar Cells. *Angewandte Chemie*, **2020**, 132, 15153-15159	3.6	6
168	Lead-Free Halide Double Perovskite Cs AgBiBr with Decreased Band Gap. *Angewandte Chemie - International Edition*, **2020**, 59, 15191-15194	16.4	44
167	Fine-Tuning Energy Levels via Asymmetric End Groups Enables Polymer Solar Cells with Efficiencies over 17%. *Joule*, **2020**, 4, 1236-1247	27.8	237
166	Lead-Free Halide Double Perovskite Cs2AgBiBr6 with Decreased Band Gap. *Angewandte Chemie*, **2020**, 132, 15303-15306	3.6	13
165	Double Active Layers Constructed with Halide Perovskite and Quantum Dots for Broadband Photodetection. *Advanced Optical Materials*, **2020**, 8, 2000557	8.1	13
164	Bidirectional optical signal transmission between two identical devices using perovskite diodes. *Nature Electronics*, **2020**, 3, 156-164	28.4	56
163	Single-Junction Organic Photovoltaic Cells with Approaching 18% Efficiency. *Advanced Materials*, **2020**, 32, e1908205	24	896
162	Diluted Organic Semiconductors in Photovoltaics. *Solar Rrl*, **2020**, 4, 2000261	7.1	3
161	A piperidinium salt stabilizes efficient metal-halide perovskite solar cells. *Science*, **2020**, 369, 96-102	33.3	231
160	Perovskite-molecule composite thin films for efficient and stable light-emitting diodes. *Nature Communications*, **2020**, 11, 891	17.4	52
159	Efficient and Spectrally Stable Blue Perovskite Light-Emitting Diodes Based on Potassium Passivated Nanocrystals. *Advanced Functional Materials*, **2020**, 30, 1908760	15.6	70
158	Managing grains and interfaces via ligand anchoring enables 22.3%-efficiency inverted perovskite solar cells. *Nature Energy*, **2020**, 5, 131-140	62.3	552
157	Barrierless Free Charge Generation in the High-Performance PM6:Y6 Bulk Heterojunction Non-Fullerene Solar Cell. *Advanced Materials*, **2020**, 32, e1906763	24	169
156	Understanding energetic disorder in electron-deficient-core-based non-fullerene solar cells. *Science China Chemistry*, **2020**, 63, 1159-1168	7.9	52
155	High-Performance Perovskite Light-Emitting Diode with Enhanced Operational Stability Using Lithium Halide Passivation. *Angewandte Chemie*, **2020**, 132, 4128-4134	3.6	6
154	High-Performance Perovskite Light-Emitting Diode with Enhanced Operational Stability Using Lithium Halide Passivation. *Angewandte Chemie - International Edition*, **2020**, 59, 4099-4105	16.4	72

153	Subtle Molecular Tailoring Induces Significant Morphology Optimization Enabling over 16% Efficiency Organic Solar Cells with Efficient Charge Generation. *Advanced Materials*, **2020**, 32, e1906324	24	203
152	Reducing Voltage Losses in the A-DA?D-A Acceptor-Based Organic Solar Cells. *CheM*, **2020**, 6, 2147-2161	16.2	73
151	Deciphering the Role of Chalcogen-Containing Heterocycles in Nonfullerene Acceptors for Organic Solar Cells. *ACS Energy Letters*, **2020**, 5, 3415-3425	20.1	39
150	Ultrathin Single-Crystalline 2D Perovskite Photoconductor for High-Performance Narrowband and Wide Linear Dynamic Range Photodetection. *Small*, **2020**, 16, e2005626	11	8
149	All-Polymer Solar Cells with over 12% Efficiency and a Small Voltage Loss Enabled by a Polymer Acceptor Based on an Extended Fused Ring Core. *Advanced Energy Materials*, **2020**, 10, 2001408	21.8	40
148	Reducing energy loss via tuning energy levels of polymer acceptors for efficient all-polymer solar cells. *Science China Chemistry*, **2020**, 63, 1785-1792	7.9	23
147	Promoting charge separation resulting in ternary organic solar cells efficiency over 17.5%. *Nano Energy*, **2020**, 78, 105272	17.1	80
146	Efficient and High-Luminance Perovskite Light-Emitting Diodes Based on CsPbBr Nanocrystals Synthesized from a Dual-Purpose Organic Lead Source. *Small*, **2020**, 16, e2003939	11	10
145	Effect of the Energy Offset on the Charge Dynamics in Nonfullerene Organic Solar Cells. *ACS Applied Materials & Interfaces*, **2020**, 12, 43984-43991	9.5	10
144	A Narrow-Bandgap n-Type Polymer with an Acceptor-Acceptor Backbone Enabling Efficient All-Polymer Solar Cells. *Advanced Materials*, **2020**, 32, e2004183	24	114
143	Intermediate-phase-assisted low-temperature formation of □CsPbI films for high-efficiency deep-red light-emitting devices. *Nature Communications*, **2020**, 11, 4736	17.4	27
142	Single-emissive-layer all-perovskite white light-emitting diodes employing segregated mixed halide perovskite crystals. *Chemical Science*, **2020**, 11, 11338-11343	9.4	7
141	Near-Infrared Light-Responsive Cu-Doped Cs2AgBiBr6. *Advanced Functional Materials*, **2020**, 30, 2005521	15.6	17
140	Two Compatible Polymer Donors Enabling Ternary Organic Solar Cells with a Small Nonradiative Energy Loss and Broad Composition Tolerance. *Solar Rrl*, **2020**, 4, 2000396	7.1	17
139	Thermal-induced interface degradation in perovskite light-emitting diodes. *Journal of Materials Chemistry C*, **2020**, 8, 15079-15085	7.1	15
138	From Generation to Extraction: A Time-Resolved Investigation of Photophysical Processes in Non-fullerene Organic Solar Cells. *Journal of Physical Chemistry C*, **2020**, 124, 21283-21292	3.8	2
137	Large cation ethylammonium incorporated perovskite for efficient and spectra stable blue light-emitting diodes. *Nature Communications*, **2020**, 11, 4165	17.4	113
136	Recent Progresses on Defect Passivation toward Efficient Perovskite Solar Cells. *Advanced Energy Materials*, **2020**, 10, 1902650	21.8	283

135	A disorder-free conformation boosts phonon and charge transfer in an electron-deficient-core-based non-fullerene acceptor. *Journal of Materials Chemistry A*, **2020**, 8, 8566-8574	12	27
134	The atomic-level structure of bandgap engineered double perovskite alloys CsAgIn Fe Cl. *Chemical Science*, **2020**, 12, 1730-1735	9.4	11
133	High-Quality Ruddlesden-Popper Perovskite Films Based on In Situ Formed Organic Spacer Cations. *Advanced Materials*, **2019**, 31, e1904243	24	27
132	A monothiophene unit incorporating both fluoro and ester substitution enabling high-performance donor polymers for non-fullerene solar cells with 16.4% efficiency. *Energy and Environmental Science*, **2019**, 12, 3328-3337	35.4	273
131	Blue perovskite light-emitting diodes: progress, challenges and future directions. *Nanoscale*, **2019**, 11, 2109-2120	7.7	147
130	Thermochromic Lead-Free Halide Double Perovskites. *Advanced Functional Materials*, **2019**, 29, 1807375	15.6	69
129	Efficient and Tunable Electroluminescence from In Situ Synthesized Perovskite Quantum Dots. *Small*, **2019**, 15, e1804947	11	17
128	Enabling low voltage losses and high photocurrent in fullerene-free organic photovoltaics. *Nature Communications*, **2019**, 10, 570	17.4	260
127	Control of Donor□Acceptor Photophysics through Structural Modification of a Twisting Push□Pull Molecule. *Chemistry of Materials*, **2019**, 31, 6860-6869	9.6	11
126	Unveiling the synergistic effect of precursor stoichiometry and interfacial reactions for perovskite light-emitting diodes. *Nature Communications*, **2019**, 10, 2818	17.4	75
125	Diffusion-Limited Crystallization: A Rationale for the Thermal Stability of Non-Fullerene Solar Cells. *ACS Applied Materials & Interfaces*, **2019**, 11, 21766-21774	9.5	56
124	Over 16% efficiency organic photovoltaic cells enabled by a chlorinated acceptor with increased open-circuit voltages. *Nature Communications*, **2019**, 10, 2515	17.4	1093
123	Spectral-Stable Blue Emission from Moisture-Treated Low-Dimensional Lead Bromide-Based Perovskite Films. *ACS Photonics*, **2019**, 6, 1728-1735	6.3	13
122	Surface Chlorination of ZnO for Perovskite Solar Cells with Enhanced Efficiency and Stability. *Solar Rrl*, **2019**, 3, 1900154	7.1	28
121	Bright Free Exciton Electroluminescence from Mn-Doped Two-Dimensional Layered Perovskites. *Journal of Physical Chemistry Letters*, **2019**, 10, 3171-3175	6.4	22
120	The crucial role of end group planarity for fused-ring electron acceptors in organic solar cells. *Materials Chemistry Frontiers*, **2019**, 3, 1642-1652	7.8	9
119	14.7% Efficiency Organic Photovoltaic Cells Enabled by Active Materials with a Large Electrostatic Potential Difference. *Journal of the American Chemical Society*, **2019**, 141, 7743-7750	16.4	244
118	Stable, High-Sensitivity and Fast-Response Photodetectors Based on Lead-Free Cs2AgBiBr6 Double Perovskite Films. *Advanced Optical Materials*, **2019**, 7, 1801732	8.1	77

117	Metal Doping/Alloying of Cesium Lead Halide Perovskite Nanocrystals and their Applications in Light-Emitting Diodes with Enhanced Efficiency and Stability. *Israel Journal of Chemistry*, **2019**, 59, 695-707	2.4	15
116	A New Acceptor for Highly Efficient Organic Solar Cells. *Joule*, **2019**, 3, 908-909	27.8	23
115	Fundamentals of Solar Cells and Light-Emitting Diodes **2019**, 1-35		2
114	Structural and Functional Diversity in Lead-Free Halide Perovskite Materials. *Advanced Materials*, **2019**, 31, e1900326	24	116
113	Rational molecular passivation for high-performance perovskite light-emitting diodes. *Nature Photonics*, **2019**, 13, 418-424	33.9	638
112	Sulfur vs. tellurium: the heteroatom effects on the nonfullerene acceptors. *Science China Chemistry*, **2019**, 62, 897-903	7.9	9
111	Recent progress toward perovskite light-emitting diodes with enhanced spectral and operational stability. *Materials Today Nano*, **2019**, 5, 100028	9.7	73
110	Stable and bright formamidinium-based perovskite light-emitting diodes with high energy conversion efficiency. *Nature Communications*, **2019**, 10, 3624	17.4	68
109	Modulating Structure Ordering via Side-Chain Engineering of Thieno[3,4-]thiophene-Based Electron Acceptors for Efficient Organic Solar Cells with Reduced Energy Losses. *ACS Applied Materials & Interfaces*, **2019**, 11, 35193-35200	9.5	5
108	Wide-gap non-fullerene acceptor enabling high-performance organic photovoltaic cells for indoor applications. *Nature Energy*, **2019**, 4, 768-775	62.3	256
107	Realizing Efficient Charge/Energy Transfer and Charge Extraction in Fullerene-Free Organic Photovoltaics via a Versatile Third Component. *Nano Letters*, **2019**, 19, 5053-5061	11.5	34
106	Planar perovskite solar cells with long-term stability using ionic liquid additives. *Nature*, **2019**, 571, 245-250	50.4	697
105	Toward Quantitative Near Infrared Brain Functional Imaging: Lock-In Photon Counting Instrumentation Combined With Tomographic Reconstruction. *IEEE Access*, **2019**, 7, 86829-86842	3.5	5
104	Sparsity-regularized approaches to directly reconstructing hemodynamic response in brain functional diffuse optical tomography. *Applied Optics*, **2019**, 58, 863-870	1.7	3
103	A Kalman-based tomographic scheme for directly reconstructing activation levels of brain function. *Optics Express*, **2019**, 27, 3229-3246	3.3	10
102	Pulsed Terahertz Emission from Solution-Processed Lead Iodide Perovskite Films. *ACS Photonics*, **2019**, 6, 1175-1181	6.3	17
101	Reliability of charge carrier recombination data determined with charge extraction methods. *Journal of Applied Physics*, **2019**, 126, 205501	2.5	9
100	All-small-molecule organic solar cells with over 14% efficiency by optimizing hierarchical morphologies. *Nature Communications*, **2019**, 10, 5393	17.4	185

99	Experimentally Validated Hopping-Transport Model for Energetically Disordered Organic Semiconductors. *Physical Review Applied*, **2019**, 12,	4.3	18
98	Efficient CsPbBr3 Perovskite Light-Emitting Diodes Enabled by Synergetic Morphology Control. *Advanced Optical Materials*, **2019**, 7, 1801534	8.1	89
97	Defect Passivation for Red Perovskite Light-Emitting Diodes with Improved Brightness and Stability. *Journal of Physical Chemistry Letters*, **2019**, 10, 380-385	6.4	43
96	Balanced Partnership between Donor and Acceptor Components in Nonfullerene Organic Solar Cells with >12% Efficiency. *Advanced Materials*, **2018**, 30, e1706363	24	148
95	Critical Role of Molecular Electrostatic Potential on Charge Generation in Organic Solar Cells. *Chinese Journal of Chemistry*, **2018**, 36, 491-494	4.9	125
94	Oxygen- and Water-Induced Energetics Degradation in Organometal Halide Perovskites. *ACS Applied Materials & Interfaces*, **2018**, 10, 16225-16230	9.5	48
93	Organic-Inorganic Hybrid Ruddlesden-Popper Perovskites: An Emerging Paradigm for High-Performance Light-Emitting Diodes. *Journal of Physical Chemistry Letters*, **2018**, 9, 2251-2258	6.4	47
92	The progress and prospects of non-fullerene acceptors in ternary blend organic solar cells. *Materials Horizons*, **2018**, 5, 206-221	14.4	100
91	Minimising efficiency roll-off in high-brightness perovskite light-emitting diodes. *Nature Communications*, **2018**, 9, 608	17.4	248
90	Organic solar cells based on non-fullerene acceptors. *Nature Materials*, **2018**, 17, 119-128	27	1743
89	Enhanced photocatalytic efficiency of CN/BiFeO heterojunctions: the synergistic effects of band alignment and ferroelectricity. *Physical Chemistry Chemical Physics*, **2018**, 20, 3648-3657	3.6	37
88	Long Electron-Hole Diffusion Length in High-Quality Lead-Free Double Perovskite Films. *Advanced Materials*, **2018**, 30, e1706246	24	175
87	Precisely Controlling the Grain Sizes with an Ammonium Hypophosphite Additive for High-Performance Perovskite Solar Cells. *Advanced Functional Materials*, **2018**, 28, 1802320	15.6	53
86	High Performance and Stable All-Inorganic Metal Halide Perovskite-Based Photodetectors for Optical Communication Applications. *Advanced Materials*, **2018**, 30, e1803422	24	224
85	Optical Gaps of Organic Solar Cells as a Reference for Comparing Voltage Losses. *Advanced Energy Materials*, **2018**, 8, 1801352	21.8	211
84	Design rules for minimizing voltage losses in high-efficiency organic solar cells. *Nature Materials*, **2018**, 17, 703-709	27	500
83	Aligned and Graded Type-II Ruddlesden–Popper Perovskite Films for Efficient Solar Cells. *Advanced Energy Materials*, **2018**, 8, 1800185	21.8	184
82	Room-temperature film formation of metal halide perovskites on n-type metal oxides: the catalysis of ZnO on perovskite crystallization. *Chemical Communications*, **2018**, 54, 6887-6890	5.8	6

81	Defects engineering for high-performance perovskite solar cells. *Npj Flexible Electronics*, **2018**, 2,	10.7	207
80	Efficient perovskite light-emitting diodes based on a solution-processed tin dioxide electron transport layer. *Journal of Materials Chemistry C*, **2018**, 6, 6996-7002	7.1	16
79	A Near-Infrared Photoactive Morphology Modifier Leads to Significant Current Improvement and Energy Loss Mitigation for Ternary Organic Solar Cells. *Advanced Science*, **2018**, 5, 1800755	13.6	85
78	Efficient light-emitting diodes based on in-situ self-assembled perovskite nanocrystals. *Journal of Photonics for Energy*, **2018**, 8, 1	1.2	2
77	Fullerene-Based Materials for Photovoltaic Applications: Toward Efficient, Hysteresis-Free, and Stable Perovskite Solar Cells. *Advanced Electronic Materials*, **2018**, 4, 1700435	6.4	74
76	Simultaneously Achieved High Open-Circuit Voltage and Efficient Charge Generation by Fine-Tuning Charge-Transfer Driving Force in Nonfullerene Polymer Solar Cells. *Advanced Functional Materials*, **2018**, 28, 1704507	15.6	147
75	Efficient Nonfullerene Organic Solar Cells with Small Driving Forces for Both Hole and Electron Transfer. *Advanced Materials*, **2018**, 30, e1804215	24	116
74	Suppression of Recombination Energy Losses by Decreasing the Energetic Offsets in Perylene Diimide-Based Nonfullerene Organic Solar Cells. *ACS Energy Letters*, **2018**, 3, 2729-2735	20.1	41
73	Oriented Quasi-2D Perovskites for High Performance Optoelectronic Devices. *Advanced Materials*, **2018**, 30, e1804771	24	195
72	Ultra-Bright Near-Infrared Perovskite Light-Emitting Diodes with Reduced Efficiency Roll-off. *Scientific Reports*, **2018**, 8, 15496	4.9	33
71	Efficient non-fullerene organic solar cells employing sequentially deposited donor–acceptor layers. *Journal of Materials Chemistry A*, **2018**, 6, 18225-18233	13	36
70	Charge Generation via Relaxed Charge-Transfer States in Organic Photovoltaics by an Energy-Disorder-Driven Entropy Gain. *Journal of Physical Chemistry C*, **2018**, 122, 12640-12646	3.8	19
69	Light-induced degradation of fullerenes in organic solar cells: a case study on TQ1:PC71BM. *Journal of Materials Chemistry A*, **2018**, 6, 11884-11889	13	19
68	Optical Energy Losses in Organic–Inorganic Hybrid Perovskite Light-Emitting Diodes. *Advanced Optical Materials*, **2018**, 6, 1800667	8.1	66
67	Fluorination vs. chlorination: a case study on high performance organic photovoltaic materials. *Science China Chemistry*, **2018**, 61, 1328-1337	7.9	142
66	A minimal non-radiative recombination loss for efficient non-fullerene all-small-molecule organic solar cells with a low energy loss of 0.54 eV and high open-circuit voltage of 1.15 V. *Journal of Materials Chemistry A*, **2018**, 6, 13918-13924	13	42
65	Colloidal metal oxide nanocrystals as charge transporting layers for solution-processed light-emitting diodes and solar cells. *Chemical Society Reviews*, **2017**, 46, 1730-1759	58.5	77
64	Reproducible Planar Heterojunction Solar Cells Based on One-Step Solution-Processed Methylammonium Lead Halide Perovskites. *Chemistry of Materials*, **2017**, 29, 462-473	9.6	32

63	Efficient Semitransparent Organic Solar Cells with Tunable Color enabled by an Ultralow-Bandgap Nonfullerene Acceptor. *Advanced Materials*, **2017**, 29, 1703080	24	276
62	Inhomogeneous degradation in metal halide perovskites. *Applied Physics Letters*, **2017**, 111, 073302	3.4	17
61	Mapping Polymer Donors toward High-Efficiency Fullerene Free Organic Solar Cells. *Advanced Materials*, **2017**, 29, 1604155	24	335
60	Approximately 800-nm-Thick Pinhole-Free Perovskite Films via Facile Solvent Retarding Process for Efficient Planar Solar Cells. *ACS Applied Materials & Interfaces*, **2016**, 8, 34446-34454	9.5	29
59	Fast charge separation in a non-fullerene organic solar cell with a small driving force. *Nature Energy*, **2016**, 1,	62.3	967
58	Band structure engineering in organic semiconductors. *Science*, **2016**, 352, 1446-9	33.3	186
57	High-Efficiency Flexible Solar Cells Based on Organometal Halide Perovskites. *Advanced Materials*, **2016**, 28, 4532-40	24	86
56	Colloidal metal halide perovskite nanocrystals: synthesis, characterization, and applications. *Journal of Materials Chemistry C*, **2016**, 4, 3898-3904	7.1	151
55	Non-fullerene acceptor with low energy loss and high external quantum efficiency: towards high performance polymer solar cells. *Journal of Materials Chemistry A*, **2016**, 4, 5890-5897	13	202
54	Inverted all-polymer solar cells based on a quinoxaline□thiophene/naphthalene-diimide polymer blend improved by annealing. *Journal of Materials Chemistry A*, **2016**, 4, 3835-3843	13	51
53	Morphology, Temperature, and Field Dependence of Charge Separation in High-Efficiency Solar Cells Based on Alternating Polyquinoxaline Copolymer. *Journal of Physical Chemistry C*, **2016**, 120, 4219-4226	3.8	19
52	Fullerene-Free Polymer Solar Cells with over 11% Efficiency and Excellent Thermal Stability. *Advanced Materials*, **2016**, 28, 4734-9	24	1507
51	Highly Efficient Perovskite Nanocrystal Light-Emitting Diodes Enabled by a Universal Crosslinking Method. *Advanced Materials*, **2016**, 28, 3528-34	24	651
50	Perovskite light-emitting diodes based on solution-processed self-organized multiple quantum wells. *Nature Photonics*, **2016**, 10, 699-704	33.9	1206
49	Extended Intermolecular Interactions Governing Photocurrent-Voltage Relations in Ternary Organic Solar Cells. *Journal of Physical Chemistry Letters*, **2016**, 7, 3936-3944	6.4	9
48	A dual ternary system for highly efficient ITO-free inverted polymer solar cells. *Journal of Materials Chemistry A*, **2015**, 3, 18365-18371	13	21
47	Electrophoretic deposited oxide thin films as charge transporting interlayers for solution-processed optoelectronic devices: the case of ZnO nanocrystals. *RSC Advances*, **2015**, 5, 8216-8222	3.7	8
46	Critical role of the external bias in improving the performance of polymer solar cells with a small molecule electrolyte interlayer. *Journal of Materials Chemistry A*, **2015**, 3, 504-508	13	14

45	Ethanedithiol Treatment of Solution-Processed ZnO Thin Films: Controlling the Intragap States of Electron Transporting Interlayers for Efficient and Stable Inverted Organic Photovoltaics. *Advanced Energy Materials*, **2015**, 5, 1401606	21.8	121
44	Energetics at Doped Conjugated Polymer/Electrode Interfaces. *Advanced Materials Interfaces*, **2015**, 2, 1400403	4.6	23
43	Effects of side groups on the kinetics of charge carrier recombination in dye molecule-doped multilayer organic light-emitting diodes. *Journal of Materials Chemistry C*, **2015**, 3, 46-50	7.1	3
42	Regular Energetics at Conjugated Electrolyte/Electrode Modifier for Organic Electronics and their Implications on Design Rules. *Advanced Materials Interfaces*, **2015**, 2, 1500204	4.6	33
41	The Effect of Processing Additives on Energetic Disorder in Highly Efficient Organic Photovoltaics: A Case Study on PBDTTT-C-T:PC71 BM. *Advanced Materials*, **2015**, 27, 3868-73	24	41
40	Temperature dependence of charge carrier generation in organic photovoltaics. *Physical Review Letters*, **2015**, 114, 128701	7.4	84
39	Morphological Control for Highly Efficient Inverted Polymer Solar Cells Via the Backbone Design of Cathode Interlayer Materials. *Advanced Energy Materials*, **2014**, 4, 1400359	21.8	93
38	Trap-induced losses in hybrid photovoltaics. *ACS Nano*, **2014**, 8, 3213-21	16.7	69
37	Low-Temperature Combustion-Synthesized Nickel Oxide Thin Films as Hole-Transport Interlayers for Solution-Processed Optoelectronic Devices. *Advanced Energy Materials*, **2014**, 4, 1301460	21.8	97
36	Charge generation in polymer-fullerene bulk-heterojunction solar cells. *Physical Chemistry Chemical Physics*, **2014**, 16, 20291-304	3.6	166
35	Effects of ultraviolet soaking on surface electronic structures of solution processed ZnO nanoparticle films in polymer solar cells. *Journal of Materials Chemistry A*, **2014**, 2, 17676-17682	13	39
34	A new tetracyclic lactam building block for thick, broad-bandgap photovoltaics. *Journal of the American Chemical Society*, **2014**, 136, 11578-81	16.4	67
33	Synthesis of unstable colloidal inorganic nanocrystals through the introduction of a protecting ligand. *Nano Letters*, **2014**, 14, 3117-23	11.5	33
32	Disodium edetate as a promising interfacial material for inverted organic solar cells and the device performance optimization. *ACS Applied Materials & Interfaces*, **2014**, 6, 20569-73	9.5	19
31	The renaissance of hybrid solar cells: progresses, challenges, and perspectives. *Energy and Environmental Science*, **2013**, 6, 2020	35.4	102
30	Control of exciton spin statistics through spin polarization in organic optoelectronic devices. *Nature Communications*, **2012**, 3, 1191	17.4	69
29	Quantifying Loss Mechanisms in Polymer:Fullerene Photovoltaic Devices. *Advanced Energy Materials*, **2012**, 2, 956-961	21.8	18
28	Formation of Well-Ordered Heterojunctions in Polymer:PCBM Photovoltaic Devices. *Advanced Functional Materials*, **2011**, 21, 139-146	15.6	76

27	Comparison of the Operation of Polymer/Fullerene, Polymer/Polymer, and Polymer/Nanocrystal Solar Cells: A Transient Photocurrent and Photovoltage Study. *Advanced Functional Materials*, **2011**, 21, 1419-1431	15.6	206
26	Conjugated zwitterionic polyelectrolyte as the charge injection layer for high-performance polymer light-emitting diodes. *Journal of the American Chemical Society*, **2011**, 133, 683-5	16.4	174
25	Enhanced charge transport by incorporating additional thiophene units in the poly(fluorene-thienyl-benzothiadiazole) polymer. *Organic Electronics*, **2011**, 12, 461-471	3.5	18
24	Entirely solution-processed write-once-read-many-times memory devices and their operation mechanism. *Organic Electronics*, **2011**, 12, 1271-1274	3.5	28
23	Low-power write-once-read-many-times memory devices. *Applied Physics Letters*, **2010**, 97, 053301	3.4	28
22	Formation of nanopatterned polymer blends in photovoltaic devices. *Nano Letters*, **2010**, 10, 1302-7	11.5	236
21	Memristive devices based on solution-processed ZnO nanocrystals. *Physica Status Solidi (A) Applications and Materials Science*, **2010**, 207, 484-487	1.6	32
20	Steplike magnetocapacitance and dielectric relaxation in spin frustrated Ca3Co2O6. *Journal of Applied Physics*, **2008**, 104, 054111	2.5	8
19	Visible-Light Photocatalytic Properties of Weak Magnetic BiFeO3 Nanoparticles. *Advanced Materials*, **2007**, 19, 2889-2892	24	745
18	Effects of substrate temperature on Bi0.8La0.2FeO3 thin films prepared by pulsed laser deposition. *Thin Solid Films*, **2007**, 515, 5366-5373	2.2	12
17	Synthesis and magnetic properties of Pr0.57Ca0.43MnO3 nanoparticles. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2007**, 136, 96-100	3.1	18
16	Application of weak ferromagnetic BiFeO3 films as the photoelectrode material under visible-light irradiation. *Applied Physics Letters*, **2007**, 91, 022114	3.4	58
15	Preparation of aligned Ca3Co2O6 nanorods and their steplike magnetization. *Applied Physics Letters*, **2007**, 91, 042505	3.4	21
14	Charge order suppression and weak ferromagnetism in La1−xSr2+xFeO3 nanoparticles. *Applied Physics Letters*, **2007**, 91, 072504	3.4	31
13	Charge-order breaking and ferromagnetism in La0.4Ca0.6MnO3 nanoparticles. *Applied Physics Letters*, **2007**, 91, 032502	3.4	92
12	Surface phase separation in nanosized charge-ordered manganites. *Applied Physics Letters*, **2007**, 90, 082508	3.4	108
11	Thermal stability and interfacial properties of ZrAlxSiyOz films prepared by pulse-laser deposition. *Journal of Applied Physics*, **2006**, 100, 074109	2.5	1
10	PHASE SEPARATION ENHANCED INTERFACIAL REACTIONS IN COMPLEX HIGH-k DIELECTRIC FILMS. *Integrated Ferroelectrics*, **2006**, 86, 13-19	0.8	1

9	Preparation and photoabsorption characterization of BiFeO3 nanowires. *Applied Physics Letters*, **2006**, 89, 102506	3.4	305
8	Semi-three-dimensional algorithm for time-resolved diffuse optical tomography by use of the generalized pulse spectrum technique. *Applied Optics*, **2002**, 41, 7346-58	1.7	25
7	Facet Orientation and Intermediate Phase Regulation via a Green Antisolvent for High-Performance Perovskite Solar Cells. *Solar Rrl*,2100973	7.1	0
6	High-Performance All-Small-Molecule Organic Solar Cells Enabled by Regio-Isomerization of Noncovalently Conformational Locks. *Advanced Functional Materials*,2112433	15.6	8
5	Mechanism study on organic ternary photovoltaics with 18.3% certified efficiency: from molecule to device. *Energy and Environmental Science*,	35.4	13
4	Tailoring Phase Purity in the 2D/3D Perovskite Heterostructures Using Lattice Mismatch. *ACS Energy Letters*,550-559	20.1	6
3	A guest-assisted molecular-organization approach for >17% efficiency organic solar cells using environmentally friendly solvents. *Nature Energy*,	62.3	54
2	All-polymer solar cells with over 16% efficiency and enhanced stability enabled by compatible solvent and polymer additives. *Aggregate*,e58	22.9	31
1	Lead-Free Double Perovskite Cs2AgBiBr6: Fundamentals, Applications, and Perspectives. *Advanced Functional Materials*,2105898	15.6	35