Feng Gao

List of Publications by Year
in descending order

110 papers	16,927 citations	41627 51 h-index	28425 109 g-index
110 all docs	110 docs citations	110 times ranked	16331 citing authors

#	Article	IF	Citations
1	Tailoring Phase Purity in the 2D/3D Perovskite Heterostructures Using Lattice Mismatch. ACS Energy Letters, 2022, 7, 550-559.	8.8	23
2	Emerging materials for circularly polarized light detection. Journal of Materials Chemistry C, 2022, 10, 2400-2410.	2.7	34
3	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.	2.3	4
4	Chirality Induced Crystal Structural Difference in Metal Halide Composites. Advanced Optical Materials, 2022, 10, .	3.6	6
5	Accelerated aging of all-inorganic, interface-stabilized perovskite solar cells. Science, 2022, 377, 307-310.	6.0	121
6	The atomic-level structure of bandgap engineered double perovskite alloys Cs₂AgIn_{1â^'x}Fe_xCl₆. Chemical Science, 2021, 12, 1730-1735.	3.7	34
7	Metal halide perovskites for light-emitting diodes. Nature Materials, 2021, 20, 10-21.	13.3	800
8	Combining Two-Layer Semi-Three-Dimensional Reconstruction and Multi-Wavelength Image Fusion for Functional Diffuse Optical Tomography. IEEE Transactions on Computational Imaging, 2021, 7, 1055-1068.	2.6	4
9	A universal method for constructing high efficiency organic solar cells with stacked structures. Energy and Environmental Science, 2021, 14, 2314-2321.	15.6	75
10	Phenylalkylammonium passivation enables perovskite light emitting diodes with record high-radiance operational lifetime: the chain length matters. Nature Communications, 2021, 12, 644.	5.8	109
11	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.	6.6	245
12	Preparation of Low Grain Boundary Perovskite Crystals with Excellent Performance: The Inhibition of Ammonium Iodide. ACS Omega, 2021, 6, 12858-12865.	1.6	5
13	Ï€-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.	4.0	22
14	Carrier Mobility Dynamics under Actual Working Conditions of Organic Solar Cells. Journal of Physical Chemistry C, 2021, 125, 14567-14575.	1.5	3
15	Aligning Transition Dipole Moment toward Light Amplification and Polarized Emission in Hybrid Perovskites. Advanced Optical Materials, 2021, 9, 2100984.	3.6	4
16	Advances in solution-processed near-infrared light-emitting diodes. Nature Photonics, 2021, 15, 656-669.	15.6	136
17	Mobile ions determine the luminescence yield of perovskite light-emitting diodes under pulsed operation. Nature Communications, 2021, 12, 4899.	5.8	30
18	Leadâ€Free Double Perovskite Cs₂AgBiBr₆: Fundamentals, Applications, and Perspectives. Advanced Functional Materials, 2021, 31, 2105898.	7.8	166

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19	Reversible Ionic Polarization in Metal Halide Perovskites. Journal of Physical Chemistry C, 2021, 125, 283-289.	1.5	2
20	Spacer Cation Alloying in Ruddlesdenâ€“Popper Perovskites for Efficient Red Lightâ€Emitting Diodes with Precisely Tunable Wavelengths. Advanced Materials, 2021, 33, e2104381.	11.1	41
21	Promoting charge separation resulting in ternary organic solar cells efficiency over 17.5%. Nano Energy, 2020, 78, 105272.	8.2	132
22	Single-emissive-layer all-perovskite white light-emitting diodes employing segregated mixed halide perovskite crystals. Chemical Science, 2020, 11, 11338-11343.	3.7	18
23	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.	1.5	8
24	Emerging Approaches in Enhancing the Efficiency and Stability in Nonâ€Fullerene Organic Solar Cells. Advanced Energy Materials, 2020, 10, 2002746.	10.2	124
25	Efficiency enhancement of perovskite solar cells based on graphene-CuInS2 quantum dots composite: The roles for fast electron injection and light harvests. Applied Surface Science, 2020, 528, 146560.	3.1	15
26	Barrierless Free Charge Generation in the Highâ€Performance PM6:Y6 Bulk Heterojunction Nonâ€Fullerene Solar Cell. Advanced Materials, 2020, 32, e1906763.	11.1	258
27	Wide-gap non-fullerene acceptor enabling high-performance organic photovoltaic cells for indoor applications. Nature Energy, 2019, 4, 768-775.	19.8	407
28	Ultrafast long-range spin-funneling in solution-processed Ruddlesdenâ€“Popper halide perovskites. Nature Communications, 2019, 10, 3456.	5.8	38
29	Differentiating between ageing times of typical Chinese liquors by steady-state microelectrode voltammetry. Microchemical Journal, 2019, 151, 104244.	2.3	7
30	Efficient perovskite solar cells enabled by ion-modulated grain boundary passivation with a fill factor exceeding 84%. Journal of Materials Chemistry A, 2019, 7, 22359-22365.	5.2	33
31	Blue perovskite light-emitting diodes: progress, challenges and future directions. Nanoscale, 2019, 11, 2109-2120.	2.8	211
32	Control of Donorâ€“Acceptor Photophysics through Structural Modification of a â€œTwistingâ€• Pushâ€“Pull Molecule. Chemistry of Materials, 2019, 31, 6860-6869.	3.2	15
33	The crucial role of end group planarity for fused-ring electron acceptors in organic solar cells. Materials Chemistry Frontiers, 2019, 3, 1642-1652.	3.2	12
34	Structural and Functional Diversity in Leadâ€Free Halide Perovskite Materials. Advanced Materials, 2019, 31, e1900326.	11.1	198
35	Stability Improvement of Perovskite Solar Cells for Application of CuInS₂ Quantum Dot-Modified TiO₂ Nanoarrays. ACS Omega, 2019, 4, 3432-3438.	1.6	19
36	Reliability of charge carrier recombination data determined with charge extraction methods. Journal of Applied Physics, 2019, 126, .	1.1	13

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37	Defect Passivation for Red Perovskite Light-Emitting Diodes with Improved Brightness and Stability. Journal of Physical Chemistry Letters, 2019, 10, 380-385.	2.1	55
38	Balanced Partnership between Donor and Acceptor Components in Nonfullerene Organic Solar Cells with >12% Efficiency. Advanced Materials, 2018, 30, e1706363.	11.1	172
39	Oxygen- and Water-Induced Energetics Degradation in Organometal Halide Perovskites. ACS Applied Materials & Interfaces, 2018, 10, 16225-16230.	4.0	66
40	Organicâ€“Inorganic Hybrid Ruddlesdenâ€“Popper Perovskites: An Emerging Paradigm for High-Performance Light-Emitting Diodes. Journal of Physical Chemistry Letters, 2018, 9, 2251-2258.	2.1	59
41	The progress and prospects of non-fullerene acceptors in ternary blend organic solar cells. Materials Horizons, 2018, 5, 206-221.	6.4	122
42	Minimising efficiency roll-off in high-brightness perovskite light-emitting diodes. Nature Communications, 2018, 9, 608.	5.8	322
43	Organic solar cells based on non-fullerene acceptors. Nature Materials, 2018, 17, 119-128.	13.3	2,315
44	Long Electronâ€“Hole Diffusion Length in Highâ€Quality Leadâ€Free Double Perovskite Films. Advanced Materials, 2018, 30, e1706246.	11.1	242
45	Performance enhancement of perovskite solar cells by employing TiO2 nanorod arrays decorated with CuInS2 quantum dots. Journal of Colloid and Interface Science, 2018, 513, 693-699.	5.0	32
46	Fullereneâ€Based Materials for Photovoltaic Applications: Toward Efficient, Hysteresisâ€Free, and Stable Perovskite Solar Cells. Advanced Electronic Materials, 2018, 4, 1700435.	2.6	101
47	Simultaneously Achieved High Openâ€Circuit Voltage and Efficient Charge Generation by Fineâ€Tuning Chargeâ€Transfer Driving Force in Nonfullerene Polymer Solar Cells. Advanced Functional Materials, 2018, 28, 1704507.	7.8	180
48	Ultra-Bright Near-Infrared Perovskite Light-Emitting Diodes with Reduced Efficiency Roll-off. Scientific Reports, 2018, 8, 15496.	1.6	42
49	Optical Energy Losses in Organicâ€“Inorganic Hybrid Perovskite Lightâ€Emitting Diodes. Advanced Optical Materials, 2018, 6, 1800667.	3.6	91
50	A minimal non-radiative recombination loss for efficient non-fullerene all-small-molecule organic solar cells with a low energy loss of 0.54ÂeV and high open-circuit voltage of 1.15 V. Journal of Materials Chemistry A, 2018, 6, 13918-13924.	5.2	62
51	High Performance and Stable Allâ€Inorganic Metal Halide Perovskiteâ€Based Photodetectors for Optical Communication Applications. Advanced Materials, 2018, 30, e1803422.	11.1	342
52	Optical Gaps of Organic Solar Cells as a Reference for Comparing Voltage Losses. Advanced Energy Materials, 2018, 8, 1801352.	10.2	319
53	Electronic phase engineering induced thermoelectric enhancement in manganites. Journal of Applied Physics, 2018, 124, 034501.	1.1	1
54	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.	2.2	11

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55	Tetrathienyl-functionalized red- and NIR-absorbing BODIPY dyes appending various peripheral substituents. Organic and Biomolecular Chemistry, 2017, 15, 1393-1399.	1.5	15
56	Bug mapping and fitness testing of chemically synthesized chromosome X. Science, 2017, 355, .	6.0	173
57	Colloidal metal oxide nanocrystals as charge transporting layers for solution-processed light-emitting diodes and solar cells. Chemical Society Reviews, 2017, 46, 1730-1759.	18.7	99
58	Comparative genomics and metabolomics analyses of the adaptation mechanism in Ketogulonicigenium vulgare-Bacillus thuringiensis consortium. Scientific Reports, 2017, 7, 46759.	1.6	11
59	Complete genome sequencing and antibiotics biosynthesis pathways analysis of Streptomyces lydicus 103. Scientific Reports, 2017, 7, 44786.	1.6	15
60	Reproducible Planar Heterojunction Solar Cells Based on One-Step Solution-Processed Methylammonium Lead Halide Perovskites. Chemistry of Materials, 2017, 29, 462-473.	3.2	35
61	Efficient Semitransparent Organic Solar Cells with Tunable Color enabled by an Ultralowâ€Bandgap Nonfullerene Acceptor. Advanced Materials, 2017, 29, 1703080.	11.1	325
62	Inhomogeneous degradation in metal halide perovskites. Applied Physics Letters, 2017, 111, .	1.5	19
63	Mapping Polymer Donors toward Highâ€Efficiency Fullerene Free Organic Solar Cells. Advanced Materials, 2017, 29, 1604155.	11.1	360
64	Fullereneâ€Free Polymer Solar Cells with over 11% Efficiency and Excellent Thermal Stability. Advanced Materials, 2016, 28, 4734-4739.	11.1	1,698
65	Comparative genomics analysis of the companion mechanisms of Bacillus thuringiensis Bc601 and Bacillus endophyticus Hbe603 in bacterial consortium. Scientific Reports, 2016, 6, 28794.	1.6	15
66	Complete Genome Sequence of the Industrial Bacterium Ketogulonicigenium vulgare SKV. Genome Announcements, 2016, 4, .	0.8	5
67	Highly Efficient Perovskite Nanocrystal Lightâ€Emitting Diodes Enabled by a Universal Crosslinking Method. Advanced Materials, 2016, 28, 3528-3534.	11.1	782
68	Perovskite light-emitting diodes based on solution-processed self-organized multiple quantum wells. Nature Photonics, 2016, 10, 699-704.	15.6	1,535
69	Extended Intermolecular Interactions Governing Photocurrentâ€“Voltage Relations in Ternary Organic Solar Cells. Journal of Physical Chemistry Letters, 2016, 7, 3936-3944.	2.1	11
70	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.	4.0	36
71	Fast charge separation in a non-fullerene organic solar cell with a small driving force. Nature Energy, 2016, 1, .	19.8	1,167
72	Insights into mutualism mechanism and versatile metabolism of Ketogulonicigenium vulgare Hbe602 based on comparative genomics and metabolomics studies. Scientific Reports, 2016, 6, 23068.	1.6	23

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73	Band structure engineering in organic semiconductors. Science, 2016, 352, 1446-1449.	6.0	239
74	Highâ€Efficiency Flexible Solar Cells Based on Organometal Halide Perovskites. Advanced Materials, 2016, 28, 4532-4540.	11.1	102
75	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.	5.2	219
76	Inverted all-polymer solar cells based on a quinoxalineâ€“thiophene/naphthalene-diimide polymer blend improved by annealing. Journal of Materials Chemistry A, 2016, 4, 3835-3843.	5.2	57
77	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.	1.5	22
78	Regular Energetics at Conjugated Electrolyte/Electrode Modifier for Organic Electronics and their Implications on Design Rules. Advanced Materials Interfaces, 2015, 2, 1500204.	1.9	34
79	The Effect of Processing Additives on Energetic Disorder in Highly Efficient Organic Photovoltaics: A Case Study on PBDTTTâ€Câ€T:PC₇₁BM. Advanced Materials, 2015, 27, 3868-3873.	11.1	46
80	Temperature Dependence of Charge Carrier Generation in Organic Photovoltaics. Physical Review Letters, 2015, 114, 128701.	2.9	96
81	The effect of external electric field on the performance of perovskite solar cells. Organic Electronics, 2015, 18, 107-112.	1.4	32
82	A dual ternary system for highly efficient ITO-free inverted polymer solar cells. Journal of Materials Chemistry A, 2015, 3, 18365-18371.	5.2	23
83	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.	1.7	9
84	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.	5.2	15
85	Ethanedithiol Treatment of Solutionâ€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.	10.2	157
86	Energetics at Doped Conjugated Polymer/Electrode Interfaces. Advanced Materials Interfaces, 2015, 2, 1400403.	1.9	28
87	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.	2.7	4
88	Disodium Edetate As a Promising Interfacial Material for Inverted Organic Solar Cells and the Device Performance Optimization. ACS Applied Materials & Interfaces, 2014, 6, 20569-20573.	4.0	23
89	Morphological Control for Highly Efficient Inverted Polymer Solar Cells Via the Backbone Design of Cathode Interlayer Materials. Advanced Energy Materials, 2014, 4, 1400359.	10.2	98
90	Trap-Induced Losses in Hybrid Photovoltaics. ACS Nano, 2014, 8, 3213-3221.	7.3	84

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91	Lowâ€Temperature Combustionâ€Synthesized Nickel Oxide Thin Films as Holeâ€Transport Interlayers for Solutionâ€Processed Optoelectronic Devices. Advanced Energy Materials, 2014, 4, 1301460.	10.2	110
92	Neat C₆₀:C₇₀ buckminsterfullerene mixtures enhance polymer solar cell performance. Journal of Materials Chemistry A, 2014, 2, 14354-14359.	5.2	25
93	Charge generation in polymerâ€“fullerene bulk-heterojunction solar cells. Physical Chemistry Chemical Physics, 2014, 16, 20291-20304.	1.3	190
94	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.	5.2	48
95	A New Tetracyclic Lactam Building Block for Thick, Broad-Bandgap Photovoltaics. Journal of the American Chemical Society, 2014, 136, 11578-11581.	6.6	73
96	Synthesis of Unstable Colloidal Inorganic Nanocrystals through the Introduction of a Protecting Ligand. Nano Letters, 2014, 14, 3117-3123.	4.5	40
97	Solution-processed bulk-heterojunction organic solar cells employing Ir complexes as electron donors. Journal of Materials Chemistry A, 2014, 2, 12390.	5.2	22
98	Incorporating CuInS2 quantum dots into polymer/oxide-nanoarray system for efficient hybrid solar cells. Solar Energy Materials and Solar Cells, 2013, 114, 43-53.	3.0	28
99	The renaissance of hybrid solar cells: progresses, challenges, and perspectives. Energy and Environmental Science, 2013, 6, 2020.	15.6	108
100	Carbazole Functionalized Isocyanide Brushes in Heterojunction Photovoltaic Devices. Journal of Nanoscience and Nanotechnology, 2012, 12, 503-507.	0.9	2
101	Control of exciton spin statistics through spin polarization in organic optoelectronic devices. Nature Communications, 2012, 3, 1191.	5.8	85
102	Quantifying Loss Mechanisms in Polymer:Fullerene Photovoltaic Devices. Advanced Energy Materials, 2012, 2, 956-961.	10.2	18
103	Formation of Wellâ€Ordered Heterojunctions in Polymer:PCBM Photovoltaic Devices. Advanced Functional Materials, 2011, 21, 139-146.	7.8	78
104	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.	7.8	241
105	Enhanced charge transport by incorporating additional thiophene units in the poly(fluorene-thienyl-benzothiadiazole) polymer. Organic Electronics, 2011, 12, 461-471.	1.4	21
106	Entirely solution-processed write-once-read-many-times memory devices and their operation mechanism. Organic Electronics, 2011, 12, 1271-1274.	1.4	28
107	Sequential Polymer Precipitation of Coreâ€“Shell Microstructured Composites with Giant Permittivity. Macromolecular Rapid Communications, 2010, 31, 484-489.	2.0	6
108	Memristive devices based on solutionâ€processed ZnO nanocrystals. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 484-487.	0.8	38

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109	SELF-ASSEMBLED CORE-SHELL POLYMER DIELECTRIC PREPARED BY SOLUTION CASTING PROCESS. Integrated Ferroelectrics, 2010, 113, 1-8.	0.3	0
110	Formation of Nanopatterned Polymer Blends in Photovoltaic Devices. Nano Letters, 2010, 10, 1302-1307.	4.5	248