Xingyu Gao

List of Publications by Year
in descending order

111 papers	8,455 citations	66234 42 h-index	46693 89 g-index
118 all docs	118 docs citations	118 times ranked	8434 citing authors

#	ARTICLE	IF	CITATIONS
1	Thermodynamically stabilized Î²-CsPbI ₃ â€“based perovskite solar cells with efficiencies >18%. Science, 2019, 365, 591-595.	6.0	963
2	Stabilizing black-phase formamidinium perovskite formation at room temperature and high humidity. Science, 2021, 371, 1359-1364.	6.0	508
3	Efficient and stable Ruddlesdenâ€“Popper perovskite solar cell with tailored interlayer molecular interaction. Nature Photonics, 2020, 14, 154-163.	15.6	443
4	Solution-processed perovskite light emitting diodes with efficiency exceeding 15% through additive-controlled nanostructure tailoring. Nature Communications, 2018, 9, 3892.	5.8	379
5	Efficient planar heterojunction perovskite solar cells employing graphene oxide as hole conductor. Nanoscale, 2014, 6, 10505-10510.	2.8	352
6	A stable low-temperature H2-production catalyst by crowding Pt on Î±-MoC. Nature, 2021, 589, 396-401.	13.7	290
7	One-Step Synthesis of SnI₂Â·(DMSO)_{<i>x</i>} Adducts for High-Performance Tin Perovskite Solar Cells. Journal of the American Chemical Society, 2021, 143, 10970-10976.	6.6	280
8	Redâ€Carbonâ€Quantumâ€Dotâ€Doped SnO₂ Composite with Enhanced Electron Mobility for Efficient and Stable Perovskite Solar Cells. Advanced Materials, 2020, 32, e1906374.	11.1	230
9	High Efficiency Pbâ€“In Binary Metal Perovskite Solar Cells. Advanced Materials, 2016, 28, 6695-6703.	11.1	211
10	Copper Salts Doped Spiroâ€OMeTAD for Highâ€Performance Perovskite Solar Cells. Advanced Energy Materials, 2016, 6, 1601156.	10.2	205
11	Structurally Reconstructed CsPbI₂Br Perovskite for Highly Stable and Squareâ€Centimeter Allâ€Inorganic Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1803572.	10.2	192
12	Manipulation of facet orientation in hybrid perovskite polycrystalline films by cation cascade. Nature Communications, 2018, 9, 2793.	5.8	189
13	Interface Modification by Ionic Liquid: A Promising Candidate for Indoor Light Harvesting and Stability Improvement of Planar Perovskite Solar Cells. Advanced Energy Materials, 2018, 8, 1801509.	10.2	184
14	2D Intermediate Suppression for Efficient Ruddlesdenâ€“Popper (RP) Phase Lead-Free Perovskite Solar Cells. ACS Energy Letters, 2019, 4, 1513-1520.	8.8	176
15	Crystalline Liquid-like Behavior: Surface-Induced Secondary Grain Growth of Photovoltaic Perovskite Thin Film. Journal of the American Chemical Society, 2019, 141, 13948-13953.	6.6	163
16	Tailoring Component Interaction for Airâ€Processed Efficient and Stable Allâ€Inorganic Perovskite Photovoltaic. Angewandte Chemie - International Edition, 2020, 59, 13354-13361.	7.2	158
17	Switching of morphotropic phase boundary and large strain response in lead-free ternary (Bi0.5Na0.5)TiO3â€“(K0.5Bi0.5)TiO3â€“(K0.5Na0.5)NbO3 system. Journal of Applied Physics, 2013, 113, .	1.1	143
18	A Universal Strategy to Utilize Polymeric Semiconductors for Perovskite Solar Cells with Enhanced Efficiency and Longevity. Advanced Functional Materials, 2018, 28, 1706377.	7.8	134

#	Article	IF	Citations
19	Facet orientation tailoring via 2D-seed- induced growth enables highly efficient and stable perovskite solar cells. Joule, 2022, 6, 240-257.	11.7	128
20	Graphdiyne-modified cross-linkable fullerene as an efficient electron-transporting layer in organometal halide perovskite solar cells. Nano Energy, 2018, 43, 47-54.	8.2	126
21	High-Performance Perovskite Solar Cells Engineered by an Ammonia Modified Graphene Oxide Interfacial Layer. ACS Applied Materials & Interfaces, 2016, 8, 14503-14512.	4.0	120
22	Ionic Liquid Stabilizing Highâ€Efficiency Tin Halide Perovskite Solar Cells. Advanced Energy Materials, 2021, 11, 2101539.	10.2	117
23	Passivated perovskite crystallization and stability in organicâ€“inorganic halide solar cells by doping a donor polymer. Journal of Materials Chemistry A, 2017, 5, 2572-2579.	5.2	115
24	Pbâ€“Snâ€“Cu Ternary Organometallic Halide Perovskite Solar Cells. Advanced Materials, 2018, 30, e1800258.	11.1	106
25	Reduced-Dimensional Perovskite Enabled by Organic Diamine for Efficient Photovoltaics. Journal of Physical Chemistry Letters, 2019, 10, 2349-2356.	2.1	104
26	Suppression of Structural Phase Transition in VO2 by Epitaxial Strain in Vicinity of Metal-insulator Transition. Scientific Reports, 2016, 6, 23119.	1.6	102
27	Oriented and Uniform Distribution of Dionâ€“Jacobson Phase Perovskites Controlled by Quantum Well Barrier Thickness. Solar Rrl, 2019, 3, 1900090.	3.1	102
28	Boosting Perovskite Light-Emitting Diode Performance via Tailoring Interfacial Contact. ACS Applied Materials & Interfaces, 2018, 10, 24320-24326.	4.0	96
29	Ultrahigh Density of Gas Molecules Confined in Surface Nanobubbles in Ambient Water. Journal of the American Chemical Society, 2020, 142, 5583-5593.	6.6	88
30	Interfacial Nucleation Seeding for Electroluminescent Manipulation in Blue Perovskite Lightâ€Emitting Diodes. Advanced Functional Materials, 2021, 31, 2103870.	7.8	72
31	Additiveâ€Free, Lowâ€Temperature Crystallization of Stable Î±â€FAPbI₃ Perovskite. Advanced Materials, 2022, 34, e2107850.	11.1	71
32	Enhanced crystallization and stability of perovskites by a cross-linkable fullerene for high-performance solar cells. Journal of Materials Chemistry A, 2016, 4, 15088-15094.	5.2	70
33	Revealing Crystallization Dynamics and the Compositional Control Mechanism of 2D Perovskite Film Growth by In Situ Synchrotron-Based GIXRD. ACS Energy Letters, 2020, 5, 8-16.	8.8	68
34	Passivating Crystal Boundaries with Potassiumâ€Rich Phase in Organic Halide Perovskite. Solar Rrl, 2019, 3, 1900053.	3.1	64
35	Small Moleculeâ€“Polymer Composite Hole-Transporting Layer for Highly Efficient and Stable Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 13240-13246.	4.0	62
36	Enormously improved CH3NH3PbI3 film surface for environmentally stable planar perovskite solar cells with PCE exceeding 19.9%. Nano Energy, 2018, 48, 10-19.	8.2	61

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37	Origin of High Efficiency and Long-Term Stability in Ionic Liquid Perovskite Photovoltaic. Research, 2020, 2020, 2616345.	2.8	59
38	Fullâ€Dimensional Grain Boundary Stress Release for Flexible Perovskite Indoor Photovoltaics. Advanced Materials, 2022, 34, e2200320.	11.1	55
39	Annealing Induced Re-crystallization in CH3NH3PbI3â^'xClx for High Performance Perovskite Solar Cells. Scientific Reports, 2017, 7, 46724.	1.6	53
40	Interfacial electronic structures revealed at the rubrene/CH₃NH₃PbI₃ interface. Physical Chemistry Chemical Physics, 2017, 19, 6546-6553.	1.3	50
41	Large Strain Response in 0.99(<scp><scp>Bi</scp></scp>_{0.5}<scp><scp>Na</scp></scp>_{0.4}<scp><scp>K</scp></scp><sub>0.1</s Leadâ€Free Ceramics Induced by the Change of <scp><scp>K</scp></scp>/<scp><scp>Na</scp></scp> Ratio in (<scp><scp>K</scp></scp>_{<i>x</i>}<scp><scp>Na</scp></scp>_{1â^'<i>x</i>})<scp><sc. Journal of the American Ceramic Society, 2013, 96, 3133-3140.	1.9	49
42	Alternative Type Two-Dimensionalâ€"Three-Dimensional Lead Halide Perovskite with Inorganic Sodium Ions as a Spacer for High-Performance Light-Emitting Diodes. ACS Nano, 2019, 13, 1645-1654.	7.3	43
43	Enhanced Crystalline Phase Purity of CH₃NH₃PbI_{3â€"<i>x</i>}Cl<i>_x</i> Film for High-Efficiency Hysteresis-Free Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 23141-23151.	4.0	41
44	On-surface manipulation of atom substitution between cobalt phthalocyanine and the Cu(111) substrate. RSC Advances, 2017, 7, 13827-13835.	1.7	40
45	Graphene oxide as an additive to improve perovskite film crystallization and morphology forÂhigh-efficiency solar cells. RSC Advances, 2018, 8, 987-993.	1.7	39
46	Multifunctional potassium thiocyanate interlayer for eco-friendly tin perovskite indoor and outdoor photovoltaics. Chemical Engineering Journal, 2022, 433, 133832.	6.6	39
47	Electric-field assisted perovskite crystallization for high-performance solar cells. Journal of Materials Chemistry A, 2018, 6, 1161-1170.	5.2	37
48	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.	5.2	37
49	Intergranular Stress Induced Phase Transition in CaZrO₃ Modified KNNâ€Based Leadâ€Free Piezoelectrics. Journal of the American Ceramic Society, 2015, 98, 1372-1376.	1.9	36
50	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
51	Unraveling the Role of Crystallization Dynamics on Luminescence Characteristics of Perovskite Lightâ€Emitting Diodes. Laser and Photonics Reviews, 2021, 15, 2100023.	4.4	36
52	Coffeeâ€Stainâ€Free Perovskite Film for Efficient Printed Lightâ€Emitting Diode. Advanced Optical Materials, 2021, 9, 2100553.	3.6	36
53	Iodomethane-Mediated Organometal Halide Perovskite with Record Photoluminescence Lifetime. ACS Applied Materials & Interfaces, 2016, 8, 23181-23189.	4.0	35
54	Direct experimental evidence of physical origin of electronic phase separation in manganites. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 7090-7094.	3.3	35

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55	Ternary Twoâ€Step Sequential Deposition Induced Perovskite Orientational Crystallization for Highâ€Performance Photovoltaic Devices. Advanced Energy Materials, 2021, 11, 2101538.	10.2	35
56	Interfacial â€œAnchoring Effectâ€Enables Efficient Largeâ€Area Skyâ€Blue Perovskite Lightâ€Emitting Diodes. Advanced Science, 2021, 8, e2102213.	5.6	35
57	Highâ€Performance Organic Solar Cells Based on a Nonâ€Fullerene Acceptor with a Spiro Core. Chemistry - an Asian Journal, 2017, 12, 721-725.	1.7	33
58	Epitaxial Growth of Highly Oriented Metallic MoO₂@MoS₂ Nanorods on C-sapphire. Journal of Physical Chemistry C, 2018, 122, 1860-1866.	1.5	33
59	In situ observation of Î´ phase suppression by lattice strain in all-inorganic perovskite solar cells. Nano Energy, 2020, 73, 104803.	8.2	32
60	Thermal-induced interface degradation in perovskite light-emitting diodes. Journal of Materials Chemistry C, 2020, 8, 15079-15085.	2.7	30
61	Minimizing Optical Energy Losses for Longâ€Lifetime Perovskite Lightâ€Emitting Diodes. Advanced Functional Materials, 2021, 31, 2105813.	7.8	28
62	Efficient Perovskite Lightâ€Emitting Diodes via Tuning Nanoplatelet Distribution and Crystallinity Orientation. Advanced Materials Interfaces, 2018, 5, 1801030.	1.9	26
63	Efficient and stable Ruddlesden-Popper layered tin-based perovskite solar cells enabled by ionic liquid-bulky spacers. Science China Chemistry, 2021, 64, 1577-1585.	4.2	26
64	Colossal positive magnetoresistance in surface-passivated oxygen-deficient strontium titanite. Scientific Reports, 2015, 5, 10255.	1.6	25
65	Interfacial Engineering of Cu₂O Passivating Contact for Efficient Crystalline Silicon Solar Cells with an Al₂O₃ Passivation Layer. ACS Applied Materials & Interfaces, 2021, 13, 28415-28423.	4.0	25
66	Structure, Optical Absorption, and Performance of Organic Solar Cells Improved by Gold Nanoparticles in Buffer Layers. ACS Applied Materials & Interfaces, 2015, 7, 24430-24437.	4.0	24
67	Thickness effects on the epitaxial strain states and phase transformations in (001)-VO2/TiO2 thin films. Journal of Applied Physics, 2019, 125, .	1.1	24
68	Unveiling Crystal Orientation in Quasiâ€2D Perovskite Films by In Situ GIWAXS for Highâ€Performance Photovoltaics. Small, 2021, 17, e2100972.	5.2	23
69	Electric field induced monoclinic phase in (Na0.52K0.48)(Nb1âˆ’ySby)O3 ceramics close to the rhombohedral-orthorhombic polymorphic phase boundary. Applied Physics Letters, 2013, 103, .	1.5	22
70	Surface-induced phase engineering and defect passivation of perovskite nanograins for efficient red light-emitting diodes. Nanoscale, 2021, 13, 340-348.	2.8	22
71	High-Light-Tolerance PbI₂ Boosting the Stability and Efficiency of Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 24692-24701.	4.0	21
72	Nanoplatelet modulation in 2D/3D perovskite targeting efficient light-emitting diodes. Nanoscale, 2018, 10, 19322-19329.	2.8	20

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73	Unexpected Outstanding Room Temperature Spin Transport Verified in Organicâ€“Inorganic Hybrid Perovskite Film. Journal of Physical Chemistry Letters, 2019, 10, 4422-4428.	2.1	20
74	Designing Ionic Liquids as the Solvent for Efficient and Stable Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 22870-22878.	4.0	18
75	Origin of Magnetism in Hydrothermally Aged 2-Line Ferrihydrite Suspensions. Environmental Science & Technology, 2017, 51, 2643-2651.	4.6	16
76	Enhanced efficiency of printable mesoscopic perovskite solar cells using ionic liquid additives. Chemical Communications, 2021, 57, 4027-4030.	2.2	16
77	Hydroxylâ€Rich <scp>d</scp>â€Sorbitol to Address Transport Layer/Perovskite Interfacial Issues toward Highly Efficient and Stable 2D/3D Tinâ€Based Perovskite Solar Cells. Advanced Optical Materials, 2021, 9, 2100755.	3.6	16
78	Chiral cation promoted interfacial charge extraction for efficient tin-based perovskite solar cells. Journal of Energy Chemistry, 2022, 68, 789-796.	7.1	16
79	Improved V₂O_X Passivating Contact for <i>p</i>â€Type Crystalline Silicon Solar Cells by Oxygen Vacancy Modulation with a SiO_X Tunnel Layer. Advanced Materials Interfaces, 2021, 8, 2100989.	1.9	16
80	Lead Oxalate-Induced Nucleation Retardation for High-Performance Indoor and Outdoor Perovskite Photovoltaics. ACS Applied Materials & Interfaces, 2020, 12, 836-843.	4.0	15
81	Tailoring Component Interaction for Airâ€Processed Efficient and Stable Allâ€Inorganic Perovskite Photovoltaic. Angewandte Chemie, 2020, 132, 13456-13463.	1.6	15
82	Selfâ€Polymerization of Monomer and Induced Interactions with Perovskite for Highly Performed and Stable Perovskite Solar Cells. Advanced Functional Materials, 2022, 32, 2105290.	7.8	14
83	Thickness-driven first-order phase transitions in manganite ultrathin films. Physical Review B, 2019, 99, .	1.1	12
84	Chemical interaction dictated energy level alignment at the N,Nâ€²-dipentyl-3,4,9,10-perylenedicarboximide/CH3NH3PbI3 interface. Applied Physics Letters, 2018, 113, .	1.5	11
85	Efficient organic solar cells with the active layer fabricated from glovebox to ambient condition. Applied Physics Letters, 2020, 117, 133301.	1.5	11
86	Hierarchically Manipulated Charge Recombination for Mitigating Energy Loss in CsPbI2Br Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 41596-41604.	4.0	11
87	Side chain engineering of naphthalene diimideâ€“bithiopheneâ€based polymer acceptors in allâ€polymer solar cells. Journal of Polymer Science Part A, 2017, 55, 3679-3689.	2.5	10
88	Enhancement of exciton separation in indoor perovskite photovoltaics by employing conjugated organic chromophores. Journal of Power Sources, 2022, 520, 230785.	4.0	10
89	The Evidence of Giant Surface Flexoelectric Field in (111) Oriented BiFeO₃ Thin Film. ACS Applied Materials & Interfaces, 2017, 9, 5600-5606.	4.0	9
90	Improved Phase Stability and Enhanced Luminescence of Calcite Phase LuBO₃:Ce³⁺ through Ga³⁺ Incorporation. Inorganic Chemistry, 2020, 59, 14513-14525.	1.9	9

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91	Interaction of the Cation and Vacancy in Hybrid Perovskites Induced by Light Illumination. ACS Applied Materials & Interfaces, 2020, 12, 42369-42377.	4.0	9
92	Insight into the Enhanced Charge Transport in Quasi-2D Perovskite via Fluorination of Ammonium Cations for Photovoltaic Applications. ACS Applied Materials & Interfaces, 2022, 14, 7917-7925.	4.0	9
93	Revealing the crystal phases of primary particles formed during the coprecipitation of iron oxides. Chemical Communications, 2022, 58, 5749-5752.	2.2	8
94	Unveiling the critical role of ammonium bromide in blue emissive perovskite films. Nanoscale, 2021, 13, 13497-13505.	2.8	7
95	Perovskite Solar Cells: High Efficiency Pbâ€"In Binary Metal Perovskite Solar Cells (Adv. Mater. 31/2016). Advanced Materials, 2016, 28, 6767-6767.	11.1	5
96	Highly oriented perovskites for efficient light-emitting diodes with balanced charge transport. Organic Electronics, 2020, 77, 105529.	1.4	5
97	Impacts of MAPbBr3 Additive on Crystallization Kinetics of FAPbI3 Perovskite for High Performance Solar Cells. Coatings, 2021, 11, 545.	1.2	5
98	Status of the crystallography beamlines at SSRF. European Physical Journal Plus, 2015, 130, 1.	1.2	4
99	Induced charge transfer bridge by non-fullerene surface treatment for high-performance perovskite solar cells. Applied Physics Letters, 2019, 115, .	1.5	4
100	In Situ Studies of 30% Li-Doped Bi₂₅FeO₄₀ Conversion Type Lithium Battery Electrodes. ACS Omega, 2019, 4, 2344-2352.	1.6	4
101	Interfacial Nucleation Seeding for Electroluminescent Manipulation in Blue Perovskite Lightâ€Emitting Diodes (Adv. Funct. Mater. 45/2021). Advanced Functional Materials, 2021, 31, 2170331.	7.8	4
102	Exploration of the Defect Passivation in Perovskite Materials Using Organic Spacer Cations. Advanced Materials Interfaces, 2022, 9, .	1.9	4
103	Transfer printing of magnetic structures with enhanced performance using a new type of water-soluble sacrificial layer. RSC Advances, 2015, 5, 56959-56966.	1.7	3
104	Furrowed hole-transport layer using argon plasma in an inverted perovskite solar cell. New Journal of Chemistry, 2019, 43, 14625-14633.	1.4	3
105	The influence of Sc substitution on the crystal structure and scintillation properties of LuBO₃:Ce³⁺ based on a combinatorial materials chip and high-throughput XRD. Journal of Materials Chemistry C, 2021, 9, 8666-8673.	2.7	3
106	Stabilization of Intrinsic Ions in Perovskite Solar Cells by Employment of a Bipolar Star-Shaped Organic Molecule as a Charge Transport Buffer. ACS Applied Energy Materials, 2020, 3, 10632-10641.	2.5	2
107	A Study of Interfacial Electronic Structure at the CuPc/CsPbI2Br Interface. Crystals, 2021, 11, 547.	1.0	2
108	Decisive Role of Elevated Mobility in X55 and X60 Hole Transport Layers for High-Performance Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 7681-7690.	2.5	2

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109	An Asymmetric Molecular Design Strategy for Organic Field-Effect Transistors with High Consistency of Performance. ACS Applied Electronic Materials, 2019, 1, 1233-1242.	2.0	1
110	Significant enhancement of scintillation performance by inducing oxygen vacancies in alkali metal ion (A⁺ = Li⁺, Na⁺, K⁺)-incorporated (Lu,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 697 Td	1.6	1
111	Frontispiece: Irreversible Denaturation of Proteins through Aluminumâ€Induced Formation of Backbone Ring Structures. Angewandte Chemie - International Edition, 2014, 53, .	7.2	0