Cong Chen

List of Publications by Year
in descending order

86 papers	5,898 citations	71097 41 h-index	74160 75 g-index
87 all docs	87 docs citations	87 times ranked	6283 citing authors

#	ARTICLE	IF	CITATIONS
1	Carrier lifetimes of >1 Î¼s in Sn-Pb perovskites enable efficient all-perovskite tandem solar cells. Science, 2019, 364, 475-479.	12.6	781
2	Efficient two-terminal all-perovskite tandem solar cells enabled by high-quality low-bandgap absorber layers. Nature Energy, 2018, 3, 1093-1100.	39.5	422
3	Effective Carrierâ€Concentration Tuning of SnO₂ Quantum Dot Electronâ€Selective Layers for Highâ€Performance Planar Perovskite Solar Cells. Advanced Materials, 2018, 30, e1706023.	21.0	333
4	Four-Terminal All-Perovskite Tandem Solar Cells Achieving Power Conversion Efficiencies Exceeding 23%. ACS Energy Letters, 2018, 3, 305-306.	17.4	219
5	Trap State Passivation by Rational Ligand Molecule Engineering toward Efficient and Stable Perovskite Solar Cells Exceeding 23% Efficiency. Advanced Energy Materials, 2021, 11, 2100529.	19.5	201
6	CsPbBr3 perovskite nanoparticles as additive for environmentally stable perovskite solar cells with 20.46% efficiency. Nano Energy, 2019, 59, 517-526.	16.0	165
7	Low-bandgap mixed tinâ€“lead iodide perovskites with reduced methylammonium for simultaneous enhancement of solar cell efficiency and stability. Nature Energy, 2020, 5, 768-776.	39.5	165
8	Fully Highâ€Temperatureâ€Processed SnO₂ as Blocking Layer and Scaffold for Efficient, Stable, and Hysteresisâ€Free Mesoporous Perovskite Solar Cells. Advanced Functional Materials, 2018, 28, 1706276.	14.9	143
9	Arylammonium-Assisted Reduction of the Open-Circuit Voltage Deficit in Wide-Bandgap Perovskite Solar Cells: The Role of Suppressed Ion Migration. ACS Energy Letters, 2020, 5, 2560-2568.	17.4	131
10	Self-Powered All-Inorganic Perovskite Microcrystal Photodetectors with High Detectivity. Journal of Physical Chemistry Letters, 2018, 9, 2043-2048.	4.6	123
11	Longâ€Lasting Nanophosphors Applied to UVâ€Resistant and Energy Storage Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1700758.	19.5	117
12	Wide-bandgap organicâ€“inorganic hybrid and all-inorganic perovskite solar cells and their application in all-perovskite tandem solar cells. Energy and Environmental Science, 2021, 14, 5723-5759.	30.8	114
13	Roles of MACl in Sequentially Deposited Bromineâ€Free Perovskite Absorbers for Efficient Solar Cells. Advanced Materials, 2021, 33, e2007126.	21.0	112
14	Enhanced Performance of Perovskite Solar Cells with Zinc Chloride Additives. ACS Applied Materials & Interfaces, 2017, 9, 42875-42882.	8.0	104
15	Narrow-Bandgap Mixed Lead/Tin-Based 2D Dionâ€“Jacobson Perovskites Boost the Performance of Solar Cells. Journal of the American Chemical Society, 2020, 142, 15049-15057.	13.7	103
16	APTES-functionalized thin-walled porous WO₃ nanotubes for highly selective sensing of NO₂ in a polluted environment. Journal of Materials Chemistry A, 2018, 6, 10976-10989.	10.3	100
17	Dual Interfacial Modification Engineering with 2D MXene Quantum Dots and Copper Sulphide Nanocrystals Enabled Highâ€Performance Perovskite Solar Cells. Advanced Functional Materials, 2020, 30, 2003295.	14.9	100
18	Engineered IrO₂@NiO Coreâ€“Shell Nanowires for Sensitive Non-enzymatic Detection of Trace Glucose in Saliva. Analytical Chemistry, 2016, 88, 12346-12353.	6.5	94

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19	Probing the origins of photodegradation in organicâ€“inorganic metal halide perovskites with time-resolved mass spectrometry. Sustainable Energy and Fuels, 2018, 2, 2460-2467.	4.9	84
20	Pb-Based Perovskite Solar Cells and the Underlying Pollution behind Clean Energy: Dynamic Leaching of Toxic Substances from Discarded Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2020, 11, 2812-2817.	4.6	84
21	Photon management to reduce energy loss in perovskite solar cells. Chemical Society Reviews, 2021, 50, 7250-7329.	38.1	83
22	Stabilizing Perovskite Precursor by Synergy of Functional Groups for NiO_{<i>x</i>}â€Based Inverted Solar Cells with 23.5â€‰% Efficiency. Angewandte Chemie - International Edition, 2022, 61, .	13.8	82
23	Radio Frequency Magnetron Sputtering Deposition of TiO2 Thin Films and Their Perovskite Solar Cell Applications. Scientific Reports, 2016, 5, 17684.	3.3	81
24	Enhanced Performance and Photostability of Perovskite Solar Cells by Introduction of Fluorescent Carbon Dots. ACS Applied Materials & Interfaces, 2017, 9, 14518-14524.	8.0	76
25	Efficient and Stable Nonfullereneâ€Graded Heterojunction Inverted Perovskite Solar Cells with Inorganic Ga₂O₃ Tunneling Protective Nanolayer. Advanced Functional Materials, 2018, 28, 1804128.	14.9	76
26	Highly Efficient and Stable Planar Perovskite Solar Cells With Largeâ€Scale Manufacture of Eâ€Beam Evaporated SnO₂ Toward Commercialization. Solar Rrl, 2017, 1, 1700118.	5.8	75
27	High-Performance Rigid and Flexible Perovskite Solar Cells with Low-Temperature Solution-Processable Binary Metal Oxide Hole-Transporting Materials. Solar Rrl, 2017, 1, 1700058.	5.8	69
28	Interface modification of sputtered NiO_x as the hole-transporting layer for efficient inverted planar perovskite solar cells. Journal of Materials Chemistry C, 2020, 8, 1972-1980.	5.5	66
29	Dye Sensitization and Local Surface Plasmon Resonance-Enhanced Upconversion Luminescence for Efficient Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 24737-24746.	8.0	65
30	Highly enhanced long time stability of perovskite solar cells by involving a hydrophobic hole modification layer. Nano Energy, 2017, 32, 165-173.	16.0	63
31	Carrier Interfacial Engineering by Bismuth Modification for Efficient and Thermoresistant Perovskite Solar Cells. Advanced Energy Materials, 2018, 8, 1703659.	19.5	59
32	Dual interfacial modifications by conjugated small-molecules and lanthanides doping for full functional perovskite solar cells. Nano Energy, 2018, 53, 849-862.	16.0	59
33	Doping in inorganic perovskite for photovoltaic application. Nano Energy, 2020, 78, 105354.	16.0	53
34	Synergistic Effects of Multifunctional Lanthanides Doped CsPbBrCl₂ Quantum Dots for Efficient and Stable MAPbI₃ Perovskite Solar Cells. Advanced Functional Materials, 2022, 32, .	14.9	53
35	Urbach Energy and Open-Circuit Voltage Deficit for Mixed Anionâ€“Cation Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 7796-7804.	8.0	53
36	Passivating buried interface with multifunctional novel ionic liquid containing simultaneously fluorinated anion and cation yielding stable perovskite solar cells over 23% efficiency. Journal of Energy Chemistry, 2022, 69, 659-666.	12.9	52

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37	Incorporation of High-Mobility and Room-Temperature-Deposited Cu_{<i>x</i>}S as a Hole Transport Layer for Efficient and Stable Organo-Lead Halide Perovskite Solar Cells. Solar Rrl, 2017, 1, 1700038.	5.8	51
38	Interfacial Engineering and Photon Downshifting of CsPbBr₃ Nanocrystals for Efficient, Stable, and Colorful Vapor Phase Perovskite Solar Cells. Advanced Science, 2019, 6, 1802046.	11.2	51
39	Pressure-Assisted Annealing Strategy for High-Performance Self-Powered All-Inorganic Perovskite Microcrystal Photodetectors. Journal of Physical Chemistry Letters, 2018, 9, 4714-4719.	4.6	50
40	Efficient rare earth co-doped TiO2 electron transport layer for high-performance perovskite solar cells. Journal of Colloid and Interface Science, 2019, 553, 14-21.	9.4	48
41	Considerably enhanced perovskite solar cells via the introduction of metallic nanostructures. Journal of Materials Chemistry A, 2017, 5, 6515-6521.	10.3	42
42	Enhancing Photostability of Perovskite Solar Cells by Eu(TTA)₂(Phen)MAA Interfacial Modification. ACS Applied Materials & Interfaces, 2019, 11, 11481-11487.	8.0	41
43	Suppressing the Phase Segregation with Potassium for Highly Efficient and Photostable Inverted Wide-Band Gap Halide Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 48458-48466.	8.0	41
44	Improving Performance and Stability of Planar Perovskite Solar Cells through Grain Boundary Passivation with Block Copolymers. Solar Rrl, 2019, 3, 1900078.	5.8	40
45	Lowâ€Temperatureâ€Processed WO_{<i>x</i>} as Electron Transfer Layer for Planar Perovskite Solar Cells Exceeding 20% Efficiency. Solar Rrl, 2020, 4, 1900499.	5.8	36
46	Dual Functions of Crystallization Control and Defect Passivation Enabled by an Ionic Compensation Strategy for Stable and High-Efficient Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 3631-3641.	8.0	36
47	Erbium-ytterbium codoped waveguide amplifier fabricated with solution-processable complex. Applied Physics Letters, 2009, 94, .	3.3	35
48	Zwitterionic Ionic Liquid Confer Defect Tolerance, High Conductivity, and Hydrophobicity toward Efficient Perovskite Solar Cells Exceeding 22% Efficiency. Solar Rrl, 2021, 5, 2100352.	5.8	35
49	Grain boundary defect passivation by in situ formed wide-bandgap lead sulfate for efficient and stable perovskite solar cells. Chemical Engineering Journal, 2021, 426, 130685.	12.7	34
50	Improving Efficiency and Light Stability of Perovskite Solar Cells by Incorporating YVO₄:Eu₃⁺, Bi₃⁺ Nanophosphor into the Mesoporous TiO₂ Layer. ACS Applied Energy Materials, 2018, 1, 2096-2102.	5.1	32
51	Optimizing electron density of nickel sulfide electrocatalysts through sulfur vacancy engineering for alkaline hydrogen evolution. Journal of Materials Chemistry A, 2020, 8, 18207-18214.	10.3	31
52	High Remaining Factors in the Photovoltaic Performance of Perovskite Solar Cells after High-Fluence Electron Beam Irradiations. Journal of Physical Chemistry C, 2020, 124, 1330-1336.	3.1	30
53	A Cu₃PS₄ nanoparticle hole selective layer for efficient inverted perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 4604-4610.	10.3	29
54	Lowâ€Temperature Electron Beam Deposition of Znâ€SnO_{<i>x</i>} for Stable and Flexible Perovskite Solar Cells. Solar Rrl, 2020, 4, 1900266.	5.8	27

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55	Correlating Hysteresis and Stability with Organic Cation Composition in the Two-Step Solution-Processed Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 10588-10596.	8.0	27
56	Chemical inhibition of reversible decomposition for efficient and super-stable perovskite solar cells. Nano Energy, 2020, 68, 104315.	16.0	25
57	Strontium titanate nanoparticles as the photoanode for CdS quantum dot sensitized solar cells. RSC Advances, 2015, 5, 4844-4852.	3.6	23
58	A dithieno[3,2-b:2â€²,3â€²-d]pyrrole-cored four-arm hole transporting material for over 19% efficiency dopant-free perovskite solar cells. Journal of Materials Chemistry C, 2019, 7, 9455-9459.	5.5	23
59	CdS/CdSe quantum dots and ZnPc dye co-sensitized solar cells with Au nanoparticles/graphene oxide as efficient modified layer. Journal of Colloid and Interface Science, 2016, 480, 49-56.	9.4	22
60	Dysprosium, Holmium and Erbium ions doped Indium Oxide nanotubes as photoanodes for dye sensitized solar cells and improved device performance. Journal of Colloid and Interface Science, 2015, 440, 162-167.	9.4	21
61	High-Rubidiumâ€“Formamidinium-Ratio Perovskites for High-Performance Photodetection with Enhanced Stability. ACS Applied Materials & Interfaces, 2019, 11, 39875-39881.	8.0	21
62	Efficient and stable perovskite solar cells through e-beam preparation of cerium doped TiO2 electron transport layer, ultraviolet conversion layer CsPbBr3 and the encapsulation layer Al2O3. Solar Energy, 2020, 198, 187-193.	6.1	21
63	Doping in Semiconductor Oxidesâ€Based Electron Transport Materials for Perovskite Solar Cells Application. Solar Rrl, 2021, 5, 2000605.	5.8	19
64	Ion migration suppression mechanism via 4-sulfobenzoic acid monopotassium salt for 22.7% stable perovskite solar cells. Science China Materials, 2022, 65, 3368-3381.	6.3	19
65	Improved Interface Charge Extraction by Double Electron Transport Layers for Highâ€Efficient Planar Perovskite Solar Cells. Solar Rrl, 2019, 3, 1900314.	5.8	18
66	Multifunctional Reductive Molecular Modulator toward Efficient and Stable Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100320.	5.8	18
67	Unraveling the Dual-Functional Mechanism of Light Absorption and Hole Transport of Cu₂Cd<i>_x</i>Zn_{1â€“<i>x</i>}SnS₄ for Achieving Efficient and Stable Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 17509-17518.	8.0	17
68	Assessing the true power of bifacial perovskite solar cells under concurrent bifacial illumination. Sustainable Energy and Fuels, 2021, 5, 2865-2870.	4.9	17
69	Reconfiguration of Interfacial and Bulk Energy Band Structure for Highâ€Performance Organic and Thermalâ€“Stability Enhanced Perovskite Solar Cells. Solar Rrl, 2020, 4, 1900482.	5.8	16
70	Surface treatment via Li-bis-(trifluoromethanesulfonyl) imide to eliminate the hysteresis and enhance the efficiency of inverted perovskite solar cells. Journal of Materials Chemistry C, 2017, 5, 10280-10287.	5.5	15
71	Charge Compensating Defects in Methylammonium Lead Iodide Perovskite Suppressed by Formamidinium Inclusion. Journal of Physical Chemistry Letters, 2020, 11, 121-128.	4.6	15
72	In Situ Electrochemically Formed Ag/NiOOH/Ni₃S₂ Heterostructure Electrocatalysts with Exceptional Performance toward Oxygen Evolution Reaction. ACS Sustainable Chemistry and Engineering, 2022, 10, 5976-5985.	6.7	15

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73	Optical and Electronic Losses Arising from Physically Mixed Interfacial Layers in Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 4923-4934.	8.0	14
74	Selfâ€Formed Multifunctional Grain Boundary Passivation Layer Achieving 22.4% Efficient and Stable Perovskite Solar Cells. Solar Rrl, 2022, 6, .	5.8	13
75	Revealing the Mechanism of Ï€ Aromatic Molecule as an Effective Passivator and Stabilizer in Highly Efficient Wideâ€Bandgap Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100249.	5.8	11
76	Hybrid 3D Nanostructure-Based Hole Transport Layer for Highly Efficient Inverted Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 16611-16619.	8.0	10
77	Impact of Humidity and Temperature on the Stability of the Optical Properties and Structure of MAPbI3, MA0.7FA0.3PbI3 and (FAPbI3)0.95(MAPbBr3)0.05 Perovskite Thin Films. Materials, 2021, 14, 4054.	2.9	10
78	Demonstration of Optical Gain at 1550 nm in Erbiumâ€"Ytterbium Co-Doped Polymer Waveguide Amplifier. Journal of Nanoscience and Nanotechnology, 2010, 10, 1947-1950.	0.9	8
79	A simple synthesis of transparent and highly conducting p-type Cu_xAl_{1âˆ'x}S_y nanocomposite thin films as the hole transporting layer for organic solar cells. RSC Advances, 2018, 8, 16887-16896.	3.6	7
80	Functionalizing phenethylammonium by methoxy to achieve low-dimensional interface defects passivation for efficient and stable perovskite solar cells. Nanotechnology, 2022, 33, 065201.	2.6	7
81	3-Ammonium Propionic Acid: A Cation Tailoring Crystal Structure of Hybrid Perovskite for Improving Photovoltaic Performance. ACS Applied Energy Materials, 2021, 4, 14662-14670.	5.1	6
82	Monolithic Two-Terminal All-Perovskite Tandem Solar Cells with Power Conversion Efficiency Exceeding 21%. , 2019, , .		3
83	Highly efficient and stable perovskite solar cells based on Eâ€beam evaporated SnO2 and rational interface defects passivation. Nano Select, 0, , .	3.7	3
84	Stabilizing Perovskite Precursor by Synergy of Functional Groups for NiOxâ€Based Inverted Solar Cells with 23.5% Efficiency. Angewandte Chemie, 0, , .	2.0	3
85	Organic ionic plastic crystals: A promising additive for achieving efficient and stable CsPbI2Br perovskite solar cells. Journal of Physics and Chemistry of Solids, 2022, 168, 110798.	4.0	2
86	Regulable DNAâ€"Protein Interactions in Vitro and Vivo at Epigenetic DNA Marks. CCS Chemistry, 0, , 54-63.	7.8	0