Jun Peng

List of Publications by Year
in descending order

54 papers	5,239 citations	109137 35 h-index	189595 50 g-index
54 all docs	54 docs citations	54 times ranked	6008 citing authors

#	Article	IF	Citations
1	Origin of Efficiency and Stability Enhancement in Highâ€Performing Mixed Dimensional 2Dâ€3D Perovskite Solar Cells: A Review. Advanced Functional Materials, 2022, 32, 2009164.	7.8	96
2	Centimetre-scale perovskite solar cells with fill factors of more than 86 per cent. Nature, 2022, 601, 573-578.	13.7	137
3	Light-induced activation of boron doping in hydrogenated amorphous silicon for over 25% efficiency silicon solar cells. Nature Energy, 2022, 7, 427-437.	19.8	50
4	Above 23% Efficiency by Binary Surface Passivation of Perovskite Solar Cells Using Guanidinium and Octylammonium Spacer Cations. Solar Rrl, 2022, 6, .	3.1	22
5	27.6% Perovskite/câ€Si Tandem Solar Cells Using Industrial Fabricated TOPCon Device. Advanced Energy Materials, 2022, 12, .	10.2	22
6	The Importance of Schottky Barrier Height in Plasmonically Enhanced Hotâ€Electron Devices. Advanced Optical Materials, 2021, 9, 2001121.	3.6	7
7	Anion Exchangeâ€Induced Crystal Engineering via Hotâ€Pressing Sublimation Affording Highly Efficient and Stable Perovskite Solar Cells. Solar Rrl, 2021, 5, 2000729.	3.1	6
8	Nanoscale localized contacts for high fill factors in polymer-passivated perovskite solar cells. Science, 2021, 371, 390-395.	6.0	270
9	Efficient and stable wide bandgap perovskite solar cells through surface passivation with long alkyl chain organic cations. Journal of Materials Chemistry A, 2021, 9, 18454-18465.	5.2	32
10	Combined Bulk and Surface Passivation in Dimensionally Engineered 2Dâ€3D Perovskite Films via Chlorine Diffusion. Advanced Functional Materials, 2021, 31, 2104251.	7.8	37
11	Doubleâ€Sided Surface Passivation of 3D Perovskite Film for Highâ€Efficiency Mixedâ€Dimensional Perovskite Solar Cells. Advanced Functional Materials, 2020, 30, 1907962.	7.8	130
12	Monolithic Perovskite/Si Tandem Solar Cells: Pathways to Over 30% Efficiency. Advanced Energy Materials, 2020, 10, 1902840.	10.2	87
13	Spatially and Spectrally Resolved Absorptivity: New Approach for Degradation Studies in Perovskite and Perovskite/Silicon Tandem Solar Cells. Advanced Energy Materials, 2020, 10, 1902901.	10.2	9
14	A solvent-based surface cleaning and passivation technique for suppressing ionic defects in high-mobility perovskite field-effect transistors. Nature Electronics, 2020, 3, 694-703.	13.1	99
15	In Situ Formation of Mixedâ€Dimensional Surface Passivation Layers in Perovskite Solar Cells with Dualâ€Isomer Alkylammonium Cations. Small, 2020, 16, e2005022.	5.2	34
16	Tandem Solar Cells: Spatially and Spectrally Resolved Absorptivity: New Approach for Degradation Studies in Perovskite and Perovskite/Silicon Tandem Solar Cells (Adv. Energy Mater. 4/2020). Advanced Energy Materials, 2020, 10, 2070016.	10.2	0
17	Damp-Heat-Stable, High-Efficiency, Industrial-Size Silicon Heterojunction Solar Cells. Joule, 2020, 4, 913-927.	11.7	48
18	High Efficiency Perovskiteâ€Silicon Tandem Solar Cells: Effect of Surface Coating versus Bulk Incorporation of 2D Perovskite. Advanced Energy Materials, 2020, 10, 1903553.	10.2	110

#	Article	IF	Citations
19	Polysilicon Passivating Contacts for Silicon Solar Cells: Interface Passivation and Carrier Transport Mechanism. ACS Applied Energy Materials, 2019, 2, 4609-4617.	2.5	41
20	Multi-cation Synergy Suppresses Phase Segregation in Mixed-Halide Perovskites. Joule, 2019, 3, 1746-1764.	11.7	159
21	Dual-Function Electron-Conductive, Hole-Blocking Titanium Nitride Contacts for Efficient Silicon Solar Cells. Joule, 2019, 3, 1314-1327.	11.7	91
22	Perovskite Solar Cells: Imaging Spatial Variations of Optical Bandgaps in Perovskite Solar Cells (Adv.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	10.2	5
23	Highly stable carbon-based perovskite solar cell with a record efficiency of over 18% via hole transport engineering. Journal of Materials Science and Technology, 2019, 35, 987-993.	5.6	123
24	Interfacial Dynamics and Contact Passivation in Perovskite Solar Cells. Advanced Electronic Materials, 2019, 5, 1800500.	2.6	25
25	Imaging Spatial Variations of Optical Bandgaps in Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1802790.	10.2	18
26	Tantalum Nitride Electronâ€Selective Contact for Crystalline Silicon Solar Cells. Advanced Energy Materials, 2018, 8, 1800608.	10.2	112
27	Metal halide perovskite: a game-changer for photovoltaics and solar devices via a tandem design. Science and Technology of Advanced Materials, 2018, 19, 53-75.	2.8	28
28	Mechanically-stacked perovskite/CIGS tandem solar cells with efficiency of 23.9% and reduced oxygen sensitivity. Energy and Environmental Science, 2018, 11, 394-406.	15.6	209
29	On the Use of Luminescence Intensity Images for Quantified Characterization of Perovskite Solar Cells: Spatial Distribution of Series Resistance. Advanced Energy Materials, 2018, 8, 1701522.	10.2	29
30	Tantalum Oxide Electron-Selective Heterocontacts for Silicon Photovoltaics and Photoelectrochemical Water Reduction. ACS Energy Letters, 2018, 3, 125-131.	8.8	127
31	In situ recombination junction between p-Si and TiO ₂ enables high-efficiency monolithic perovskite/Si tandem cells. Science Advances, 2018, 4, eaau9711.	4.7	122
32	The two faces of capacitance: New interpretations for electrical impedance measurements of perovskite solar cells and their relation to hysteresis. Journal of Applied Physics, 2018, 124, .	1.1	110
33	Impact of Light on the Thermal Stability of Perovskite Solar Cells and Development of Stable Semi-transparent Cells. , 2018, , .		2
34	A Universal Doubleâ€Side Passivation for High Openâ€Circuit Voltage in Perovskite Solar Cells: Role of Carbonyl Groups in Poly(methyl methacrylate). Advanced Energy Materials, 2018, 8, 1801208.	10.2	387
35	Perovskite Solar Cells Employing Copper Phthalocyanine Hole-Transport Material with an Efficiency over 20% and Excellent Thermal Stability. ACS Energy Letters, 2018, 3, 2441-2448.	8.8	90
36	Light and elevated temperature induced degradation (LeTID) in perovskite solar cells and development of stable semi-transparent cells. Solar Energy Materials and Solar Cells, 2018, 188, 27-36.	3.0	43

#	Article	IF	Citations
37	Temperature and Humidity Stable Alkali/Alkalineâ€Earth Metal Carbonates as Electron Heterocontacts for Silicon Photovoltaics. Advanced Energy Materials, 2018, 8, 1800743.	10.2	35
38	Zirconium oxide surface passivation of crystalline silicon. Applied Physics Letters, 2018, 112, .	1.5	19
39	Improved Reproducibility for Perovskite Solar Cells with 1 cm² Active Area by a Modified Two-Step Process. ACS Applied Materials & Interfaces, 2017, 9, 5974-5981.	4.0	41
40	Inverted Hysteresis in CH₃NH₃PbI₃ Solar Cells: Role of Stoichiometry and Band Alignment. Journal of Physical Chemistry Letters, 2017, 8, 2672-2680.	2.1	71
41	Rubidium Multication Perovskite with Optimized Bandgap for Perovskiteâ€Silicon Tandem with over 26% Efficiency. Advanced Energy Materials, 2017, 7, 1700228.	10.2	443
42	Monolithic perovskite/silicon-homojunction tandem solar cell with over 22% efficiency. Energy and Environmental Science, 2017, 10, 2472-2479.	15.6	178
43	Light and Electrically Induced Phase Segregation and Its Impact on the Stability of Quadruple Cation High Bandgap Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 26859-26866.	4.0	114
44	Identifying the Cause of Voltage and Fill Factor Losses in Perovskite Solar Cells by Using Luminescence Measurements. Energy Technology, 2017, 5, 1827-1835.	1.8	103
45	Interface passivation using ultrathin polymerâ€"fullerene films for high-efficiency perovskite solar cells with negligible hysteresis. Energy and Environmental Science, 2017, 10, 1792-1800.	15.6	381
46	Efficient Indiumâ€Doped TiO<i>_x</i> Electron Transport Layers for Highâ€Performance Perovskite Solar Cells and Perovskiteâ€Silicon Tandems. Advanced Energy Materials, 2017, 7, 1601768.	10.2	167
47	Conductive and Stable Magnesium Oxide Electronâ€Selective Contacts for Efficient Silicon Solar Cells. Advanced Energy Materials, 2017, 7, 1601863.	10.2	174
48	Efficient electron contacts for n-type silicon solar cells using Magnesium metal, oxide, and fluoride. , 2017, , .		0
49	Survey of dopant-free carrier-selective contacts for silicon solar cells. , 2016, , .		12
50	A magnesium/amorphous silicon passivating contact for <i>n</i>-type crystalline silicon solar cells. Applied Physics Letters, 2016, 109, .	1.5	44
51	On the Origin of Hysteresis in Perovskite Solar Cells. Advanced Functional Materials, 2016, 26, 6807-6813.	7.8	74
52	Structural engineering using rubidium iodide as a dopant under excess lead iodide conditions for high efficiency and stable perovskites. Nano Energy, 2016, 30, 330-340.	8.2	133
53	Sequential Deposition of CH₃NH₃PbI₃ on Planar NiO Film for Efficient Planar Perovskite Solar Cells. ACS Photonics, 2014, 1, 547-553.	3.2	245
54	Greatly Reduced Processing Temperature for a Solutionâ€Processed NiO_{<i>x</i>} Buffer Layer in Polymer Solar Cells. Advanced Energy Materials, 2013, 3, 1614-1622.	10.2	88