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	Rubidium Multication Perovskite with Optimized Bandgap for Perovskiteâ€Silicon Tandem with over 26% Efficiency. Advanced Energy Materials, 2017, 7, 1700228.	10.2	443
2	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
3	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
4	Nanoscale localized contacts for high fill factors in polymer-passivated perovskite solar cells. Science, 2021, 371, 390-395.	6.0	270
5	Sequential Deposition of CH₃NH₃PbI₃ on Planar NiO Film for Efficient Planar Perovskite Solar Cells. ACS Photonics, 2014, 1, 547-553.	3.2	245
6	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
7	Monolithic perovskite/silicon-homojunction tandem solar cell with over 22% efficiency. Energy and Environmental Science, 2017, 10, 2472-2479.	15.6	178
8	Conductive and Stable Magnesium Oxide Electronâ€Selective Contacts for Efficient Silicon Solar Cells. Advanced Energy Materials, 2017, 7, 1601863.	10.2	174
9	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
10	Multi-cation Synergy Suppresses Phase Segregation in Mixed-Halide Perovskites. Joule, 2019, 3, 1746-1764.	11.7	159
11	Centimetre-scale perovskite solar cells with fill factors of more than 86 per cent. Nature, 2022, 601, 573-578.	13.7	137
12	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
13	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
14	Tantalum Oxide Electron-Selective Heterocontacts for Silicon Photovoltaics and Photoelectrochemical Water Reduction. ACS Energy Letters, 2018, 3, 125-131.	8.8	127
15	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
16	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
17	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
18	Tantalum Nitride Electronâ€Selective Contact for Crystalline Silicon Solar Cells. Advanced Energy Materials, 2018, 8, 1800608.	10.2	112

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19	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
20	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
21	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
22	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
23	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
24	Dual-Function Electron-Conductive, Hole-Blocking Titanium Nitride Contacts for Efficient Silicon Solar Cells. Joule, 2019, 3, 1314-1327.	11.7	91
25	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
26	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
27	Monolithic Perovskite/Si Tandem Solar Cells: Pathways to Over 30% Efficiency. Advanced Energy Materials, 2020, 10, 1902840.	10.2	87
28	On the Origin of Hysteresis in Perovskite Solar Cells. Advanced Functional Materials, 2016, 26, 6807-6813.	7.8	74
29	Inverted Hysteresis in CH₃NH₃PbI₃ Solar Cells: Role of Stoichiometry and Band Alignment. Journal of Physical Chemistry Letters, 2017, 8, 2672-2680.	2.1	71
30	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
31	Damp-Heat-Stable, High-Efficiency, Industrial-Size Silicon Heterojunction Solar Cells. Joule, 2020, 4, 913-927.	11.7	48
32	A magnesium/amorphous silicon passivating contact for <i>n</i>-type crystalline silicon solar cells. Applied Physics Letters, 2016, 109, .	1.5	44
33	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
34	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
35	Polysilicon Passivating Contacts for Silicon Solar Cells: Interface Passivation and Carrier Transport Mechanism. ACS Applied Energy Materials, 2019, 2, 4609-4617.	2.5	41
36	Combined Bulk and Surface Passivation in Dimensionally Engineered 2Dâ€3D Perovskite Films via Chlorine Diffusion. Advanced Functional Materials, 2021, 31, 2104251.	7.8	37

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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	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
39	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
40	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
41	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
42	Interfacial Dynamics and Contact Passivation in Perovskite Solar Cells. Advanced Electronic Materials, 2019, 5, 1800500.	2.6	25
43	Above 23% Efficiency by Binary Surface Passivation of Perovskite Solar Cells Using Guanidinium and Octylammonium Spacer Cations. Solar Rrl, 2022, 6, .	3.1	22
44	27.6% Perovskite/câ€Si Tandem Solar Cells Using Industrial Fabricated TOPCon Device. Advanced Energy Materials, 2022, 12, .	10.2	22
45	Zirconium oxide surface passivation of crystalline silicon. Applied Physics Letters, 2018, 112, .	1.5	19
46	Imaging Spatial Variations of Optical Bandgaps in Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1802790.	10.2	18
47	Survey of dopant-free carrier-selective contacts for silicon solar cells. , 2016, , .		12
48	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
49	The Importance of Schottky Barrier Height in Plasmonically Enhanced Hotâ€Electron Devices. Advanced Optical Materials, 2021, 9, 2001121.	3.6	7
50	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
51	Perovskite Solar Cells: Imaging Spatial Variations of Optical Bandgaps in Perovskite Solar Cells (Adv.) Tj ETQq1 1 0.784314 rgBT /Overlo	10.2	5
52	Impact of Light on the Thermal Stability of Perovskite Solar Cells and Development of Stable Semi-transparent Cells. , 2018, , .		2
53	Efficient electron contacts for n-type silicon solar cells using Magnesium metal, oxide, and fluoride. , 2017, , .		0
54	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