Zhengshan J Yu

List of Publications by Year
in descending order

50 papers	5,431 citations	257450 24 h-index	265206 42 g-index
50 all docs	50 docs citations	50 times ranked	5852 citing authors

#	Article	IF	Citations
1	Application of spectral beam splitting using Wavelength-Selective filters for Photovoltaic/Concentrated solar power hybrid plants. Applied Thermal Engineering, 2022, 201, 117823.	6.0	13
2	Parametric study about performances of a solar photovoltaic/thermal hybrid using a spectral beam splitting technique. Journal of Renewable and Sustainable Energy, 2022, 14, .	2.0	2
3	Reducing sputter induced stress and damage for efficient perovskite/silicon tandem solar cells. Journal of Materials Chemistry A, 2022, 10, 1343-1349.	10.3	27
4	Defect engineering in wide-bandgap perovskites for efficient perovskiteâ€“silicon tandem solar cells. Nature Photonics, 2022, 16, 588-594.	31.4	112
5	Defect engineering of pâ€type silicon heterojunction solar cells fabricated using commercialâ€grade lowâ€lifetime silicon wafers. Progress in Photovoltaics: Research and Applications, 2021, 29, 1165-1179.	8.1	16
6	Aluminumâ€“silicon interdiffusion in silicon heterojunction solar cells with a-Si:H(i)/a-Si:H(n/p)/Al rear contacts. Journal Physics D: Applied Physics, 2021, 54, 134002.	2.8	7
7	Progress with Defect Engineering in Silicon Heterojunction Solar Cells. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100170.	2.4	16
8	Power Losses in the Front Transparent Conductive Oxide Layer of Silicon Heterojunction Solar Cells: Design Guide for Single-Junction and Four-Terminal Tandem Applications. IEEE Journal of Photovoltaics, 2020, 10, 326-334.	2.5	2
9	Contact Resistivity of the p-Type Amorphous Silicon Hole Contact in Silicon Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2020, 10, 54-62.	2.5	34
10	Predicted Power Output of Silicon-Based Bifacial Tandem Photovoltaic Systems. Joule, 2020, 4, 580-596.	24.0	46
11	Sub-micrometer random-pyramid texturing of silicon solar wafers with excellent surface passivation and low reflectance. Solar Energy Materials and Solar Cells, 2020, 218, 110761.	6.2	24
12	Current-Matched IIIâ€“V/Si Epitaxial Tandem Solar Cells with 25.0% Efficiency. Cell Reports Physical Science, 2020, 1, 100208.	5.6	36
13	Simplified interconnection structure based on C60/SnO2-x for all-perovskite tandem solar cells. Nature Energy, 2020, 5, 657-665.	39.5	186
14	Resolving spatial and energetic distributions of trap states in metal halide perovskite solar cells. Science, 2020, 367, 1352-1358.	12.6	699
15	Triple-halide wideâ€“band gap perovskites with suppressed phase segregation for efficient tandems. Science, 2020, 367, 1097-1104.	12.6	669
16	Overcoming Redox Reactions at Perovskite-Nickel Oxide Interfaces to Boost Voltages in Perovskite Solar Cells. Joule, 2020, 4, 1759-1775.	24.0	284
17	Blade-Coated Perovskites on Textured Silicon for 26%-Efficient Monolithic Perovskite/Silicon Tandem Solar Cells. Joule, 2020, 4, 850-864.	24.0	281
18	Manufacturable Perovskite/Silicon Tandems with Solution-Processed Perovskites on Textured Silicon Bottom Cells. , 2020, , .		0

#	Article	IF	Citations
19	Diffusion profiles beneath silicon heterojunction contacts reduce contact resistivity and increase efficiency. , 2020, , .		0
20	20%-efficient epitaxial GaAsP/Si tandem solar cells. Solar Energy Materials and Solar Cells, 2019, 202, 110144.	6.2	33
21	GaAs/silicon PVMirror tandem photovoltaic miniâ€module with 29.6% efficiency with respect to the outdoor global irradiance. Progress in Photovoltaics: Research and Applications, 2019, 27, 469-475.	8.1	9
22	Pâ€type Upgraded Metallurgicalâ€Grade Multicrystalline Silicon Heterojunction Solar Cells with Openâ€Circuit Voltages over 690â€‰mV. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900319.	1.8	9
23	Series Resistance Measurements of Perovskite Solar Cells Using J_{sc}â€“V_{oc} Measurements. Solar Rrl, 2019, 3, 1800378.	5.8	61
24	Sputtered Aluminum Oxide and p⁺ Amorphous Silicon Back-Contact for Improved Hole Extraction in Polycrystalline CdSe_xTe_{1-x} and CdTe Photovoltaics. , 2019, , .		2
25	Origins of hydrogen that passivates bulk defects in silicon heterojunction solar cells. Applied Physics Letters, 2019, 115, .	3.3	15
26	Grain Engineering for Perovskite/Silicon Monolithic Tandem Solar Cells with Efficiency of 25.4%. Joule, 2019, 3, 177-190.	24.0	329
27	Controlling Thin-Film Stress and Wrinkling during Perovskite Film Formation. ACS Energy Letters, 2018, 3, 1225-1232.	17.4	148
28	Properties and Imaging of Thick Doped Amorphous Silicon in Direct Contact with Aluminum For Use in Silicon Heterojunction Solar Cells. , 2018, , .		0
29	< 700 mV Open-Circuit Voltages on Defect-Engineered P-type Silicon Heterojunction Solar Cells on Czochralski and Multicrystalline Wafers. , 2018, , .		5
30	Techno-economic viability of silicon-based tandem photovoltaic modules in the United States. Nature Energy, 2018, 3, 747-753.	39.5	86
31	Minimizing Current and Voltage Losses to Reach 25% Efficient Monolithic Two-Terminal Perovskiteâ€“Silicon Tandem Solar Cells. ACS Energy Letters, 2018, 3, 2173-2180.	17.4	194
32	Optical modeling of wide-bandgap perovskite and perovskite/silicon tandem solar cells using complex refractive indices for arbitrary-bandgap perovskite absorbers. Optics Express, 2018, 26, 27441.	3.4	102
33	23.6%-efficient monolithic perovskite/silicon tandem solar cells with improved stability. Nature Energy, 2017, 2, .	39.5	1,204
34	Silicon heterojunction solar cells with effectively transparent front contacts. Sustainable Energy and Fuels, 2017, 1, 593-598.	4.9	34
35	Lowâ€refractiveâ€index nanoparticle interlayers to reduce parasitic absorption in metallic rear reflectors of solar cells. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1700179.	1.8	12
36	15.3%-Efficient GaAsP Solar Cells on GaP/Si Templates. ACS Energy Letters, 2017, 2, 1911-1918.	17.4	44

#	Article	IF	Citations
37	PVMirrors: Hybrid PV/CSP collectors that enable lower LCOEs. AIP Conference Proceedings, 2017, , .	0.4	8
38	Improved light management in planar silicon and perovskite solar cells using PDMS scattering layer. Solar Energy Materials and Solar Cells, 2017, 173, 59-65.	6.2	82
39	Modeling of GaAs/Silicon PVMirror tandem system: A case study. , 2016, , .		1
40	Silicon wafers with optically specular surfaces formed by chemical polishing. Journal of Materials Science: Materials in Electronics, 2016, 27, 10270-10275.	2.2	10
41	Efficient Semitransparent Perovskite Solar Cells for 23.0%â€Efficiency Perovskite/Silicon Fourâ€Terminal Tandem Cells. Advanced Energy Materials, 2016, 6, 1601128.	19.5	240
42	Selecting tandem partners for silicon solar cells. Nature Energy, 2016, 1, .	39.5	229
43	Tandem Solar Cells with Infrared-Tuned Silicon Bottom Cells. , 2016, , .		1
44	Evaluation of spectrum-splitting dichroic mirrors for PV mirror tandem solar cells. , 2015, , .		10
45	PVMirror: A New Concept for Tandem Solar Cells and Hybrid Solar Converters. IEEE Journal of Photovoltaics, 2015, 5, 1791-1799.	2.5	57
46	Low temperature characteristic of ITO/SiO_x/c-Si heterojunction solar cell. Journal Physics D: Applied Physics, 2015, 48, 355101.	2.8	16
47	Effect of rapid thermal annealing on the compositional ratio and interface of Cu(In,Ga)Se2 solar cells by XPS. Applied Surface Science, 2013, 264, 459-463.	6.1	9
48	Investigation of ultraviolet response enhanced PV cell with silicon-based SINP configuration. Science China Technological Sciences, 2010, 53, 1028-1037.	4.0	4
49	Influence of surface passivation on the minority carrier lifetime, Fe-B pair density and recombination center concentration. Science Bulletin, 2010, 55, 1828-1833.	1.7	4
50	Realization and characterization of an SIS heterojunction. Superlattices and Microstructures, 2009, 46, 664-671.	3.1	19