Solar cell efficiency tables (version 59)

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Citation Report

#	Article	IF	CITATIONS
1	Crystal Growth Promotion and Defects Healing Enable Minimum Open ircuit Voltage Deficit in Antimony Selenide Solar Cells. Advanced Science, 2022, 9, e2105142.	5.6	85
2	Germanium ion doping of CsPbI ₃ to obtain inorganic perovskite solar cells with low temperature processing. Japanese Journal of Applied Physics, 2022, 61, 020904.	0.8	5
3	Strategies towards Cost Reduction in the Manufacture of Printable Perovskite Solar Modules. Energies, 2022, 15, 641.	1.6	10
4	Dopant-grading proposal for polysilicon passivating contact in crystalline silicon solar cells. Journal of Power Sources, 2022, 522, 231005.	4.0	17
5	Tetramethyl Succinonitrile as a Solid Plasticizer in a Poly(ethylene oxide) 8 â€Lilâ€l 2 Solid Polymer Electrolyte. Macromolecular Rapid Communications, 2022, , 2100764.	2.0	2
6	Highlights of mainstream solar cell efficiencies in 2021. Frontiers in Energy, 2022, 16, 1-8.	1.2	19
7	Silver recovery from amorphous/crystalline silicon heterojunction solar cell by alkaline chemical immersion and pyrolysis. Physica Status Solidi (A) Applications and Materials Science, 0, , .	0.8	0
8	Electron Transport Interface Engineering with Pyridine Functionalized Perylene Diimide-Based Material for Inverted Perovskite Solar Cell. SSRN Electronic Journal, 0, , .	0.4	0
9	Impact of alkaline-earth doping on electronic properties of the photovoltaic perovskite CsSnl ₃ : insights from a DFT perspective. Dalton Transactions, 2022, 51, 6607-6621.	1.6	7
10	Time-resolved photo-assisted Kelvin probe force microscopy on Cu(In,Ga)Se ₂ solar cells. Japanese Journal of Applied Physics, 2022, 61, SL1004.	0.8	2
11	Sputtered WOx thin film as the electron transport layer for efficient perovskite solar cells. Applied Physics A: Materials Science and Processing, 2022, 128, 1.	1.1	9
12	Advances in Organic and Perovskite Photovoltaics Enabling a Greener Internet of Things. Advanced Functional Materials, 2022, 32, .	7.8	24
13	Derived Conduction Band Offset by Photoelectron Yield Spectroscopy and Its Quantitative Number for Efficiency Enhancement of Flexible, Cd-Free, and All-Dry Process Zn _{1–<i>x</i>} Mg _{<i>x</i>} O:Al/Zn _{1–<i>x</i>} Mg _{<i>x</i>} Solar Cells. ACS Applied Electronic Materials, 2022, 4, 2077-2085.	⊃/Cu(ln,Ga	ı)(ຮົ້,Se) <sub:< td=""></sub:<>
14	Design and optimization of highly efficient perovskite/homojunction SnS tandem solar cells using SCAPS-1D. Solar Energy, 2022, 236, 195-205.	2.9	24
15	Estimating the spatial distribution of solar photovoltaic power generation potential on different types of rural rooftops using a deep learning network applied to satellite images. Applied Energy, 2022, 315, 119025.	5.1	42
16	Electron transport interface engineering with pyridine functionalized perylene diimide-based material for inverted perovskite solar cell. Chemical Engineering Journal, 2022, 438, 135410.	6.6	21
17	Photovoltaic technology assessment based on cumulative prospect theory and hybrid information from sustainable perspective. Sustainable Energy Technologies and Assessments, 2022, 52, 102116.	1.7	3
18	A self-consistent interactive model for the study of luminescence coupling in multijunction solar cells. Journal of Applied Physics, 2021, 130, 243103.	1.1	2

# 19	ARTICLE Ultrathin wide band gap kesterites. Faraday Discussions, 0, 239, 38-50.	IF 1.6	Citations
20	Toward Understanding Chalcopyrite Solar Cells via Advanced Characterization Techniques. Advanced Materials Interfaces, 2022, 9, .	1.9	1
21	Investigating the energy-saving performance of a CdTe-based semi-transparent photovoltaic combined hybrid vacuum glazing window system. Energy, 2022, 253, 124019.	4.5	17
22	Ten Years of Sb ₂ Se ₃ Thin Film Solar Cells. Solar Rrl, 2022, 6, .	3.1	50
23	Toward Efficiency Limits of Crystalline Silicon Solar Cells: Recent Progress in Highâ€Efficiency Silicon Heterojunction Solar Cells. Advanced Energy Materials, 2022, 12, .	10.2	41
24	Loss Analysis of High-Efficiency Perovskite/Si Tandem Solar Cells for Large Market Applications. Energy and Power Engineering, 2022, 14, 167-180.	0.5	1
25	Study on the Aqueous CdTe Quantum Dots Solar Device Deposited by Blade Coating on Magnesium Zinc Oxide Window Layer. Nanomaterials, 2022, 12, 1523.	1.9	2
26	Multifunctional Polymer Capping Frameworks Enable High-Efficiency and Stable All-Inorganic Perovskite Solar Cells. ACS Applied Energy Materials, 2022, 5, 6432-6441.	2.5	12
27	The Efficiency Prediction of the Laser Charging Based on GA-BP. Energies, 2022, 15, 3143.	1.6	2
28	DMFâ€Based Largeâ€Grain Spanning Cu ₂ ZnSn(S <i>_x</i> ,Se _{1â€} <i>_x</i>) ₄ Device with a PCE of 11.76%. Advanced Science, 2022, 9, e2201241.	5.6	28
29	Highâ€Performance Organic Solar Modules via Bilayerâ€Mergedâ€Annealing Assisted Blade Coating. Advanced Materials, 2022, 34, e2110569.	11.1	38
30	Electrical Transport, Structural, Optical and Thermal Properties of [(1â^'x)Succinonitrile: xPEO]-LiTFSI-Co(bpy)3(TFSI)2-Co(bpy)3(TFSI)3 Solid Redox Mediators. Polymers, 2022, 14, 1870.	2.0	3
31	Reaction Kinetics Analysis of Treatment Process on Light-Induced Degradation for p-Type Passivated Emitter and Rear Contact Solar Cell Module with Gallium Cz-Si Wafer. Energies, 2022, 15, 3563.	1.6	0
32	PTAA as Efficient Hole Transport Materials in Perovskite Solar Cells: A Review. Solar Rrl, 2022, 6, .	3.1	65
33	Scalable processing for realizing 21.7%-efficient all-perovskite tandem solar modules. Science, 2022, 376, 762-767.	6.0	127
34	Developing the Next-Generation Perovskite/Si Tandems: Toward Efficient, Stable, and Commercially Viable Photovoltaics. ACS Applied Materials & Interfaces, 2022, 14, 34262-34268.	4.0	9
35	All Roomâ€Temperatureâ€Processed Carbonâ€Based Flexible Perovskite Solar Cells with TiO ₂ Electron Collection Layer. Energy Technology, 2022, 10, .	1.8	4
36	Pathways to High Efficiency Perovskite Monolithic Solar Modules. , 2022, 1, .		5

#	Article	IF	CITATIONS
37	Reducing the interfacial voltage loss in tin halides perovskite solar cells. Chemical Engineering Journal, 2022, 445, 136769.	6.6	30
38	Photoinduced Cross Linkable Polymerization of Flexible Perovskite Solar Cells and Modules by Incorporating Benzyl Acrylate. Advanced Functional Materials, 2022, 32, .	7.8	32
39	Balance of efficiency and stability of silicon heterojunction solar cells. Solar Energy Materials and Solar Cells, 2022, 243, 111801.	3.0	8
40	Challenges of Scalable Development for Perovskite/Silicon Tandem Solar Cells. ACS Applied Energy Materials, 2022, 5, 6499-6515.	2.5	10
41	Optical Enhancement of Fluorineâ€Đoped Tin Oxide Thin Films using Infrared Picosecond Direct Laser Interference Patterning. Advanced Engineering Materials, 2022, 24, .	1.6	9
42	Photovoltaic performance of bifacial perovskite/c-Si tandem solar cells. Journal of Power Sources, 2022, 540, 231622.	4.0	3
43	Electrodeposition assisted sol-gel process to prepare CZTS thin films. Materials Science in Semiconductor Processing, 2022, 148, 106784.	1.9	4
44	Accelerating research on novel photovoltaic materials. Faraday Discussions, 0, 239, 235-249.	1.6	2
45	Tunable Photovoltaics: Adapting Solar Cell Technologies to Versatile Applications. Advanced Energy Materials, 2022, 12, .	10.2	27
46	ZnO _{1â^'} <i> _x </i> S <i> _x </i> Solid Solution as Potential Buffer Layer Materials for Cu ₂ ZnSnS ₄ â€Based Thin Film Solar Cells: Structural and Interfacial Properties. Advanced Materials Interfaces, 0, , 2200376.	1.9	1
47	Light trapping gratings for solar cells: an analytical period optimization approach. Optics Express, 2022, 30, 24762.	1.7	5
48	Fabrication and Optimization of CdSe Solar Cells for Possible Top Cell of Siliconâ€Based Tandem Devices. Advanced Energy Materials, 2022, 12, .	10.2	12
49	CZTS absorber thin films by spray pyrolysis process. Emergent Materials, 2022, 5, 1699-1704.	3.2	1
50	Effect of ï€-Spacer Length in Novel Xanthene-Linked <scp>l</scp> -(Dâ^'ï€â€"A) ₂ -Type Dianchoring Dyes for Dye-Sensitized Solar Cells. ACS Applied Energy Materials, 2022, 5, 6764-6771.	2.5	2
51	Halide perovskite single crystals: growth, characterization, and stability for optoelectronic applications. Nanoscale, 2022, 14, 9248-9277.	2.8	28
52	A Mini-Review of Building-Integrated Photovoltaic (BIPV) Materials: A Civil Engineer's Perspective. SSRN Electronic Journal, 0, , .	0.4	0
53	Residual strain reduction leads to efficiency and operational stability improvements in flexible perovskite solar cells. Materials Advances, 2022, 3, 6316-6323.	2.6	10
54	Ultrathin GaAs Photovoltaic Arrays Integrated on a 1.4µm Polymer Substrate for High Flexibility, a Lightweight Design, and High Specific Power. Advanced Materials Technologies, 0, , 2200344.	3.0	1

#	Article	IF	CITATIONS
55	Crystallization under control. Nature Energy, 2022, 7, 480-481.	19.8	3
56	Sb ₂ Se ₃ Thinâ€Film Solar Cells Exceeding 10% Power Conversion Efficiency Enabled by Injection Vapor Deposition Technology. Advanced Materials, 2022, 34, .	11.1	101
57	Stable <scp>Methylammoniumâ€Free</scp> pâ€iâ€n Perovskite Solar Cells and <scp>Miniâ€Modules</scp> with Phenothiazine Dimers as Holeâ€Transporting Materials. Energy and Environmental Materials, 2023, 6, .	7.3	2
58	Defectâ€induced current coupling in multiâ€junction solar cells revealed by absolute electroluminescence imaging. Progress in Photovoltaics: Research and Applications, 0, , .	4.4	1
59	Characterization of the Interfacial Defect Layer in Chalcopyrite Solar Cells by Depthâ€Resolved Muon Spin Spectroscopy. Advanced Materials Interfaces, 0, , 2200374.	1.9	2
60	Solar cell efficiency tables (Version 60). Progress in Photovoltaics: Research and Applications, 2022, 30, 687-701.	4.4	406
61	Combinatorial Analysis Methodologies for Accelerated Research: The Case of Chalcogenide Thinâ€Film Photovoltaic Technologies. Solar Rrl, 2022, 6, .	3.1	1
62	Effect of Optical–Electrical–Thermal Coupling on the Performance of High-Concentration Multijunction Solar Cells. Applied Sciences (Switzerland), 2022, 12, 5888.	1.3	2
63	Lead Sequestration from Halide Perovskite Solar Cells with a Low-Cost Thiol-Containing Encapsulant. ACS Applied Materials & Interfaces, 2022, 14, 29766-29772.	4.0	10
64	Estimation of annual energy generation of perovskite/crystalline Si tandem solar cells with different configurations in central part of Japan. Renewable Energy, 2022, 195, 896-905.	4.3	1
65	Insights into <scp> MoS ₂ </scp> and its composites for dyeâ€sensitized solar cells. International Journal of Energy Research, 0, , .	2.2	1
66	Influence of argon pressure on sputter-deposited molybdenum back contacts for flexible Cu(In,Ga)Se2 solar cells on polyimide films. Solar Energy, 2022, 241, 327-334.	2.9	2
67	Construction of multilevel network structured carbon nanofiber counter electrode and back interface engineering in all inorganic HTL–free perovskite solar cells. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 648, 129420.	2.3	3
68	Modification of surface and interface of copper indium gallium selenide thin films with sulfurization. Emerging Materials Research, 2022, 11, 325-330.	0.4	0
69	Unprecedented Wavelength Dependence of an Antimony Chalcohalide Photovoltaic Device. Advanced Functional Materials, 2022, 32, .	7.8	4
70	Controlling Phase Transition toward Future Low-Cost and Eco-friendly Printing of Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2022, 13, 6503-6513.	2.1	9
71	A comparative study of different materials used for solar photovoltaics technology. Materials Today: Proceedings, 2022, 66, 3522-3528.	0.9	5
72	Numerical modeling of ultra-thin CuSbS ₂ heterojunction solar cell with TiO ₂ electron transport and CuAlO ₂ :Mg BSF layers. Optical Materials Express, 2022, 12, 2954.	1.6	16

#	Article	IF	CITATIONS
73	Double Heterojunction Crystalline Silicon Solar Cells: From Doped Silicon to Dopant-Free Passivating Contacts. Photonics, 2022, 9, 477.	0.9	0
74	The design and analysis of the mechanism of multi-layered back-contact buffer for CdTe solar cells. Solar Energy, 2022, 241, 712-719.	2.9	2
75	Spectral Splitting Solar Cells Constructed with InGaP/GaAs Two-Junction Subcells and Infrared PbS Quantum Dot/ZnO Nanowire Subcells. ACS Energy Letters, 2022, 7, 2477-2485.	8.8	7
76	Comment on "Thermodynamic bounds on work extraction from photocells and photosynthesis― European Physical Journal: Special Topics, 0, , .	1.2	0
77	Building perovskite solar cells that last. Science, 2022, 377, 265-266.	6.0	7
78	Critical factors and parameters for hybrid Photovoltaic-Thermoelectric systems; review. Applied Thermal Engineering, 2022, 215, 118977.	3.0	24
79	Photonic Luminescent Solar Concentrator Design for High Efficiency, Low Cost Multijunction Photovoltaics. Frontiers in Photonics, 0, 3, .	1.1	4
80	Unveiling microscopic carrier loss mechanisms in 12% efficient Cu2ZnSnSe4 solar cells. Nature Energy, 2022, 7, 754-764.	19.8	57
81	Raytracing Modelling of Infrared Light Management Using Molybdenum Disulfide (MoS2) as a Back-Reflector Layer in a Silicon Heterojunction Solar Cell (SHJ). Materials, 2022, 15, 5024.	1.3	2
82	Micro/Nanostructures for Light Trapping in Monocrystalline Silicon Solar Cells. Journal of Nanomaterials, 2022, 2022, 1-40.	1.5	8
83	Direct Determination of the Steady State and Timeâ€Resolved Quasiâ€Fermi Level Separation in Organic Solar Cells from Electroluminescence Measurements. Advanced Optical Materials, 2022, 10, .	3.6	2
84	Cu ₂ ZnSnS ₄ thin-film solar cells by a closed tube sulfurization under saturated sulfur vapor pressure. Japanese Journal of Applied Physics, 0, , .	0.8	0
85	Morphology and Crystal Structure of Cu2NiSn(S,Se)4 Thin Films Obtained by an Electrodeposition-Annealing Process. Coatings, 2022, 12, 1198.	1.2	3
86	Unraveling the Formation Mechanism of the 2D/3D Perovskite Heterostructure for Perovskite Solar Cells Using Multi-Method Characterization. Journal of Physical Chemistry C, 2022, 126, 13527-13538.	1.5	3
87	Attitude Determination in Space with Ambient Light Sensors using Machine Learning for Solar Cell Characterization. Solar Rrl, 2022, 6, .	3.1	2
88	Progress of Solution-Processed Metal Oxides as Charge Transport Layers towards Efficient and Stable Perovskite Solar Cells and Modules. Materials Today Nano, 2022, , 100252.	2.3	2
89	Ultralong Charge Carrier Recombination Time in Methylammonium Lead Halide Perovskites. ACS Photonics, 2022, 9, 3341-3350.	3.2	1
90	Enhanced shift current bulk photovoltaic effect in ferroelectric Rashba semiconductor α-GeTe: ab initio study from three- to two-dimensional van der Waals layered structures. Journal of Physics Condensed Matter, 2022, 34, 435404.	0.7	1

	Сітатіс	on Report	
#	Article	IF	CITATIONS
91	Molecular Interaction Modulates Crystallization and Defects of Perovskite Films for High-Performance Solar Cells. ACS Applied Energy Materials, 2022, 5, 10572-10580.	2.5	2
92	Enhanced Performance of Ternary CuGaSe ₂ Thinâ€Film Photovoltaic Solar Cells and Photoelectrochemical Water Splitting Hydrogen Evolution with Modified p–n Heterointerfaces. Advanced Materials Interfaces, 2022, 9, .	1.9	12
93	Peptide Materials in Dye Sensitized Solar Cells. Energies, 2022, 15, 5632.	1.6	2
94	Liquid crystal semiconductor C6TBTAPH2 for hole transport materials in pervoskite solar cells: Fabrication, characterization, and simulation. Optical Materials, 2022, 132, 112820.	1.7	1
95	Photovoltaic photographs. Solar Energy Materials and Solar Cells, 2022, 246, 111917.	3.0	1
96	Gain and loss energy generation of perovskite/sc-Si tandem solar cells with series and parallel configurations compared with sc-Si solar cell under real environmental factors based on detailed balance limit. Optical Materials, 2022, 132, 112789.	1.7	0
97	Forecasting solar-to-hydrogen and solar-to-methane energy conversion efficiency using Si and IMM PV-modules: A case-study in Japan. Journal of Power Sources, 2022, 546, 231991.	4.0	4
98	Growth interruption strategies for interface optimization in GaAsSb/GaAsN type-II superlattices. Applied Surface Science, 2022, 604, 154596.	3.1	2
99	Hole-Doping to a Cu(I)-Based Semiconductor with an Isovalent Cation: Utilizing a Complex Defect as a Shallow Acceptor. Journal of the American Chemical Society, 2022, 144, 16572-16578.	6.6	15
100	Comparative performance analysis of photo-supercapacitor based on silicon, dye-sensitized and perovskite solar cells: Towards indoor applications. Solar Energy Materials and Solar Cells, 2022, 247, 111966.	3.0	5
101	Photovoltaic performance of flexible perovskite solar cells under bending state. Solar Energy, 2022, 245, 146-152.	2.9	12
102	Reassessment of silicon heterojunction cell performance under operating conditions. Solar Energy Materials and Solar Cells, 2022, 247, 111951.	3.0	2
103	Correlation between detailed balance limit and actual environmental factors for perovskite/crystalline Si tandem solar cells with different structures. Materials Science in Semiconductor Processing, 2022, 152, 107085.	1.9	2
104	Non-stoichiometric effect and disorder in as-prepared Cu2ZnSnS4 films deposited at different temperatures by ultrasonic spray pyrolysis. Materials Science in Semiconductor Processing, 2022, 152, 107120.	1.9	4
105	A first principle comparison of arsenic-based double halide perovskite materials for photovoltaic and optoelectronic application. Journal of Solid State Chemistry, 2022, 316, 123557.	1.4	3
106	Biexciton dynamics in halide perovskite nanocrystals. Physical Chemistry Chemical Physics, 2022, 24, 22405-22425.	1.3	12
107	A Comparison of Spectrum-Splitting Configurations for High-Efficiency Photovoltaic Systems With Perovskite Cells. IEEE Journal of Photovoltaics, 2022, 12, 1477-1486.	1.5	1
108	Preparation of band-gap-grading Cu ₂ ZnSn(S,Se) ₄ thin-film solar cells by post-sulfo-selenization treatment. Journal of Materials Chemistry C, 2022, 10, 15638-15646.	2.7	6

#	Article	IF	CITATIONS
109	Emerging Metal-Halide Perovskite Materials for Enhanced Solar Cells and Light-Emitting Applications. Engineering Materials, 2022, , 45-85.	0.3	1
110	Electronic structure, defect properties, and optimization of the band gap of the earth-abundant and low-toxicity photovoltaic absorber Cu ₃ SbS ₄ . Physical Chemistry Chemical Physics, 2022, 24, 25258-25269.	1.3	3
111	Modulating the deep-level defects and charge extraction for efficient perovskite solar cells with high fill factor over 86%. Energy and Environmental Science, 2022, 15, 4813-4822.	15.6	54
112	[SMe ₃] ₂ [Bi ₂ Ag ₂ I ₁₀], a silver iodido bismuthate with an unusually small band gap. Dalton Transactions, 2022, 51, 13771-13778.	1.6	5
113	Defects passivation by solution-processed titanium doping strategy towards high efficiency kesterite solar cells. Chemical Engineering Journal, 2023, 451, 139109.	6.6	25
114	Effect of Post-thermal Annealing on the Structural, Morphological, and Optical Properties of RF-sputtered In2S3 Thin Films. Gazi University Journal of Science, 0, , .	0.6	0
115	Investigation of Ag(Ga,In)Se2 as thin-film solar cell absorbers: A first-principles study. Science China: Physics, Mechanics and Astronomy, 2022, 65, .	2.0	5
116	FlexTrail Printing as Direct Metallization with Low Silver Consumption for Silicon Heterojunction Solar Cells: Evaluation of Solar Cell and Module Performance. Energy Technology, 2022, 10, .	1.8	2
117	Single-Crystal Hybrid Lead Halide Perovskites: Growth, Properties, and Device Integration for Solar Cell Application. Crystal Growth and Design, 2022, 22, 6338-6362.	1.4	7
118	Structural, Thermal, and Electrical Properties of Poly(Ethylene Oxide)—Tetramethyl Succinonitrile Blend for Redox Mediators. Polymers, 2022, 14, 3728.	2.0	0
119	Electric Power and Current Collection in Semiconductor Devices with Suppressed Electron–Hole Recombination. ACS Energy Letters, 2022, 7, 3557-3563.	8.8	3
120	Copper-Arsenic-Sulfide Thin-Films from Local Raw Materials Deposited via RF Co-Sputtering for Photovoltaics. Nanomaterials, 2022, 12, 3268.	1.9	1
121	Microenvironment Created by SnSe ₂ Vapor and Preâ€Selenization to Stabilize the Surface and Back Contact in Kesterite Solar Cells. Small, 2022, 18, .	5.2	7
122	Recent progress in defect engineering for kesterite solar cells. Science China: Physics, Mechanics and Astronomy, 2023, 66, .	2.0	4
123	Recent advances in cuprous oxide thin film based photovoltaics. Materials Today Sustainability, 2022, 20, 100244.	1.9	4
124	Recent Progress in Large-Area Perovskite Photovoltaic Modules. Transactions of Tianjin University, 2022, 28, 323-340.	3.3	10
125	Solid-State Nuclear Magnetic Resonance of Triple-Cation Mixed-Halide Perovskites. Journal of Physical Chemistry Letters, 2022, 13, 9517-9525.	2.1	2
126	Elemental de-mixing-induced epitaxial kesterite/CdS interface enabling 13%-efficiency kesterite solar cells. Nature Energy, 2022, 7, 966-977.	19.8	116

# 127	ARTICLE Improvement of hetero-interface engineering by partial substitution of Zn in Cu ₂ ZnSnS ₄ -based solar cells. EPJ Photovoltaics, 2022, 13, 24.	IF 0.8	Citations
128	Atomic Layer Grown Zinc–Tin Oxide as an Alternative Buffer Layer for Cu ₂ ZnSnS ₄ -Based Thin Film Solar Cells: Influence of Absorber Surface Treatment on Buffer Layer Growth. ACS Applied Energy Materials, 2022, 5, 13971-13980.	2.5	3
129	Achievement of 25.54% power conversion efficiency by optimization of current losses at the front side of silicon heterojunction solar cells. Progress in Photovoltaics: Research and Applications, 2023, 31, 449-460.	4.4	7
130	Constructing Efficient Hole Transport Material through π-Conjunction Extension for Perovskite Solar Cell. ACS Applied Energy Materials, 2022, 5, 13261-13268.	2.5	5
131	How Should Researchers Measure Perovskiteâ€Based Monolithic Multijunction Solar Cells' Performance? A Calibration Lab's Perspective. Solar Rrl, 2022, 6, .	3.1	4
132	Heterojunctions fabricated by surface activated bonding–dependence of their nanostructural and electrical characteristics on thermal process. Japanese Journal of Applied Physics, 2022, 61, 120101.	0.8	2
133	One-step synthesis of SiO2 nanomesh for antireflection and self-cleaning of solar cell. Journal of Colloid and Interface Science, 2023, 630, 795-803.	5.0	3
134	Photovoltaic performance of novel Perovskite/organic integrated solar cells with High Efficiency and high stability. Wuli Xuebao/Acta Physica Sinica, 2023, .	0.2	0
135	Chlorine Doped n-Type CdTe Solar Cells. , 2022, , .		1
136	Revealing Sub-Cell Degradation of Multi-Junction Solar Cells by Absolute Electroluminescence Imaging. , 2022, , .		0
137	Cu(In,Ga)(S,Se) ₂ Solar Cell with Zn(O,S,OH) <i>_x</i> Buffer on Stainless Steel Utilizing Zn _{1–<i>x</i>} Mg <i>_x</i> O and Zn _{1–<i>x</i>} Mg <i>_x</i> Otal. ACS Applied Energy Materials, 2022, 5, 14262-14270.	2.5	2
138	Gradient Conduction Band Energy Engineering Driven Highâ€Efficiency Solutionâ€Processed Cu ₂ ZnSn(S,Se) ₄ /Zn _x Cd _{1–x} S Solar Cells. Advanced Functional Materials, 2023, 33, .	7.8	11
139	Impact of dynamic co-evaporation schemes on the growth of methylammonium lead iodide absorbers for inverted solar cells. Scientific Reports, 2022, 12, .	1.6	2
140	Recent Advancements in Tin Halide Perovskite-Based Solar Cells and Thermoelectric Devices. Nanomaterials, 2022, 12, 4055.	1.9	5
141	A holistic and state-of-the-art review of nanotechnology in solar cells. Sustainable Energy Technologies and Assessments, 2022, 54, 102864.	1.7	6
142	Environment-friendly copper-based chalcogenide thin film solar cells: status and perspectives. Materials Horizons, 2023, 10, 313-339.	6.4	11
143	Spectral-splitting concentrator agrivoltaics for higher hybrid solar energy conversion efficiency. Energy Conversion and Management, 2023, 276, 116567.	4.4	7
144	Design and synthesis of multifaceted dicyanomethylene rhodanine linked thiophene: a SnO _{<i>x</i>} –perovskite dual interface modifier facilitating enhanced device performance through improved Fermi level alignment, defect passivation and reduced energy loss. Sustainable Energy and Fuels. 2023. 7. 735-751.	2.5	2

#	Article	IF	CITATIONS
145	Distinction of mechanisms causing experimental degradation of perovskite solar cells by simulating associated pathways. Energy and Environmental Science, 2023, 16, 190-200.	15.6	2
146	Exploring the effect of oxygen environment on the Mo/CdTe/CdSe solar cell substrate configuration. Materials Science in Semiconductor Processing, 2023, 156, 107267.	1.9	1
147	SiN _x and AlO _x Nanolayers in Hole Selective Passivating Contacts for High Efficiency Silicon Solar Cells. IEEE Journal of Photovoltaics, 2023, 13, 22-32.	1.5	2
148	Innovative PV Technologies for reducing electricity costs. IOP Conference Series: Materials Science and Engineering, 2022, 1265, 012002.	0.3	1
149	Recent Applications of Antireflection Coatings in Solar Cells. Photonics, 2022, 9, 906.	0.9	13
150	Boosting radiation of stacked halide layer for perovskite solar cells with efficiency over 25%. Joule, 2023, 7, 112-127.	11.7	27
151	Synthesis, Structure, and Characterization of 4,4′-(Anthracene-9,10-diylbis(ethyne-2,1-diyl))bis(1-methyl-1-pyridinium) Bismuth Iodide (C ₃₀ H ₂₂ N ₂) ₃ Bi ₄ I ₁₈ , an Air, Water, and Thermally Stable OD Hybrid Perovskite with High Photoluminescence Efficiency. Crystal	1.4	5
152	Growth and Design, 2022, 22, 7426-7433. Promoting carrier collection by DMF/DMSO binary solvent for efficient kesterite solar cells. Chemical Engineering Journal, 2023, 455, 140596.	6.6	13
153	Onsite and intersite electronic correlations in the Hubbard model for halide perovskites. Physical Review B, 2022, 106, .	1.1	8
154	Minimizing the Ohmic Resistance of Wideâ€Bandgap Perovskite for Semitransparent and Tandem Solar Cells. Solar Rrl, 0, , 2200877.	3.1	0
155	Development of Group III–V Colloidal Quantum Dots for Optoelectronic Applications. ACS Energy Letters, 2023, 8, 447-456.	8.8	18
156	Stress Analysis of Flexible GaInP/GaAs/InGaAs Solar Cells Based on Cu Thinâ€Film Substrates. Advanced Energy and Sustainability Research, 2023, 4, .	2.8	3
157	Machine learning framework for the analysis and prediction of energy loss for non-fullerene organic solar cells. Solar Energy, 2023, 250, 119-127.	2.9	6
158	Understanding Silicon Heterojunction Solar Cells with ncâ€SiC/SiO ₂ as an Alternate Transparent Passivating Front Contact and Computational Design Optimization. Solar Rrl, 0, , .	3.1	0
159	Epitaxy and characterization of InP/InGaAs tandem solar cells grown by MOVPE on InP and Si substrates. EPJ Photovoltaics, 2023, 14, 1.	0.8	1
160	Solar Hydrogen. Advanced Energy Materials, 2023, 13, .	10.2	34
161	Parylene-Sealed Perovskite Nanocrystals Down-Shifting Layer for Luminescent Spectral Matching in Thin Film Photovoltaics. Nanomaterials, 2023, 13, 210.	1.9	3
162	CuSCN Modified Back Contacts for High Performance CZTSSe Solar Cells. Advanced Functional Materials, 2023, 33, .	7.8	10

#	Article	IF	CITATIONS
163	Manipulating Organic Semiconductor Morphology with Visible Light. Advanced Functional Materials, 2023, 33, .	7.8	6
164	Organic ammonium iodide salts as passivation for buried interface enables efficient and stable NiO _{<i>x</i>} based p-i-n perovskite solar cells. Journal of Materials Chemistry C, 0, , .	2.7	2
165	Novel Materials and Processes for Photovoltaic Technology. Energies, 2023, 16, 425.	1.6	1
166	Theoretical study of highly efficient all-inorganic Sb2S3-on-Si monolithically integrated (2-T) and mechanically stacked (4-T) tandem solar cells using SCAPS-1D. Environmental Science and Pollution Research, 2023, 30, 98747-98759.	2.7	2
167	Inverted lattice-matched GaInP/GaAs/GaInNAsSb triple-junction solar cells. , 2023, , 265-291.		0
168	Laser doping selective emitter with thin borosilicate glass layer for n-type TOPCon c-Si solar cells. Solar Energy Materials and Solar Cells, 2023, 253, 112230.	3.0	7
169	Lattice matched III–V materials on Si via Si1â^'Ge buffer layer. , 2023, , 85-102.		0
170	Roadmap on commercialization of metal halide perovskite photovoltaics. JPhys Materials, 2023, 6, 032501.	1.8	16
171	Buried Interface Passivation of Perovskite Solar Cells by Atomic Layer Deposition of Al ₂ O ₃ . ACS Energy Letters, 2023, 8, 2058-2065.	8.8	6
172	Building energy conservation potentials of semi-transparent CdTe integrated photovoltaic window systems in Bangladesh context. Renewable Energy, 2023, 207, 512-530.	4.3	7
173	Defect tolerant Cs2SnI6 double perovskite thin films with ultrahigh carrier lifetime for high efficiency solar cells. Materials Chemistry and Physics, 2023, 301, 127632.	2.0	3
174	A direct correlation between structural and morphological defects of TiO2 thin films on FTO substrates and photovoltaic performance of planar perovskite solar cells. Materials Science in Semiconductor Processing, 2023, 161, 107452.	1.9	5
175	Factors Affecting the Performance of HJT Silicon Solar Cells in the Intrinsic and Emitter Layers: A Review. Transactions on Electrical and Electronic Materials, 2023, 24, 123-131.	1.0	2
176	Key bottlenecks and distinct contradictions in fast commercialization of perovskite solar cells. Materials Futures, 2023, 2, 012103.	3.1	17
177	ZnOâ€Đoped In ₂ O ₃ Front Transparent Contact Enables >24.0% Silicon Heterojunction Solar Cells. Energy Technology, 2023, 11, .	1.8	4
179	Recent Development of Solar Cells and Photovoltaic System. Vacuum and Surface Science, 2023, 66, 78-85.	0.0	0
180	A review on energy conversion using hybrid photovoltaic and thermoelectric systems. Journal of Power Sources, 2023, 562, 232785.	4.0	40
181	Perspectives for the conversion of perovskite indoor photovoltaics into IoT reality. Nanoscale, 2023, 15, 5167-5180.	2.8	4

#	Article	IF	CITATIONS
182	4,4′-(Anthracene-9,10-diylbis(ethyne-2,1-diyl))bis(1-methyl-1-pyridinium) Lead Iodide C ₃₀ H ₂₂ N ₂ Pb ₂ I ₆ : A Highly Luminescent, Chemically and Thermally Stable One-Dimensional Hybrid Iodoplumbate. Chemistry of Materials, 2023, 35, 1818-1826.	3.2	2
183	Defect Engineering in Earthâ€Abundant Cu ₂ ZnSnSe ₄ Absorber Using Efficient Alkali Doping for Flexible and Tandem Solar Cell Applications. Energy and Environmental Materials, 0, ,	7.3	0
184	Highly Efficient Bifacial Silicon/Silicon Tandem Solar Cells. IEEE Access, 2023, 11, 21326-21331.	2.6	2
185	Laser-Patterned Alumina Mask and Mask-Less Dry Etch of Si for Light Trapping with Photonic Crystal Structures. Micromachines, 2023, 14, 550.	1.4	1
186	A review on photovoltaic combined vacuum glazing: Recent advancement and prospects. Energy and Buildings, 2023, 286, 112939.	3.1	5
187	Performance Optimization of CuSbS2 Photovoltaics Based on Comparison Between Experimental and Theoretical Base Model Results. Journal of Electronic Materials, 2023, 52, 3303-3310.	1.0	1
188	<i>In Situ</i> and <i>Operando</i> Characterizations of Metal Halide Perovskite and Solar Cells: Insights from Lab-Sized Devices to Upscaling Processes. Chemical Reviews, 2023, 123, 3160-3236.	23.0	15
189	Potential of Iron Oxides in Photovoltaic Technology. Crystal Growth and Design, 2023, 23, 3034-3055.	1.4	2
190	Nature of contaminants introduced in silicon wafers during molecular beam epitaxy chamber annealing. AIP Advances, 2023, 13, 035325.	0.6	1
191	Cost benefits of Silâ^'xGex for III-V growth. , 2023, , 149-180.		0
192	Probing the Interplay between Mo Back Contact Layer Deposition Condition and MoSe2 Layer Formation at the CIGSe/Mo Hetero-Interface. Materials, 2023, 16, 2497.	1.3	3
193	Photonically Cured Solution-Processed SnO ₂ Thin Films for High-Efficiency and Stable Perovskite Solar Cells and Minimodules. ACS Applied Energy Materials, 2023, 6, 3996-4006.	2.5	0
194	Review on Chemical Stability of Lead Halide Perovskite Solar Cells. Nano-Micro Letters, 2023, 15, .	14.4	29
195	An improved model for available solar energy on Mars: Optimizing solar panel orientation to assess potential spacecraft landing sites. Advances in Space Research, 2023, , .	1.2	0
196	Surface Cleaning and Passivation Technologies for the Fabrication of High-Efficiency Silicon Heterojunction Solar Cells. Materials, 2023, 16, 3144.	1.3	0
197	Seedâ€Assisted Growth of Tin Oxide Transport Layer for Efficient Perovskite Solar Cells. Solar Rrl, 2023, 7, .	3.1	3
198	Progress and prospectives of solution-processed kesterite absorbers for photovoltaic applications. Nanoscale, 2023, 15, 8900-8924.	2.8	5
212	Sputtered NiOx as a Hole Transport Layer in n-i-p Perovskite Solar Cells Manufactured on Steel Substrate. , 2022, , .		0

#	Article	IF	CITATIONS
214	Gas immersion laser doping: n++ phosphorus doping on p+ Cz-Si wafers with a highly doped p++ emitter. AIP Conference Proceedings, 2023, , .	0.3	0
218	Synergy of 3D and 2D Perovskites for Durable, Efficient Solar Cells and Beyond. Chemical Reviews, 2023, 123, 9565-9652.	23.0	21
244	Elemental Vapor Transport Deposition of CdSe _x Te _{1-x} Thin Films for n-Type CdTe Solar Cells. , 2023, , .		0
245	Effect of Arsenic Doping in Polycrystalline Thin Film CdTe Solar Cells. , 2023, , .		0
246	Investigation of Varying Se Vapor Pressure During Deposition of CdSeTe Thin Film PV Devices. , 2023, , .		0
249	Pressure Dependent Structural, Electronic and Optical Properties of Cs ₂ AgBil ₆ : A First-Principles Study. , 2023, , .		0
251	Multiple Exciton Generation in MoS2 Nanostructures: A Density Functional Theory Study. Springer Proceedings in Materials, 2024, , 397-405.	0.1	0