

How do I submit a manuscript to progress in photovoltaics?

As of January 29, 2021, all new Progress in Photovoltaics: Research and Applications manuscripts are submitted through the Research Exchange platform. For submissions started prior to January 29, 2021, please visit Manuscript Central to manage or complete your submission.

What is progress in photovoltaics?

Progress in Photovoltaics: Research and Applications is a leading journal in the field of solar energy, focused on research that reports substantial progress in efficiency, energy yield and reliability of solar cells. It aims to reach all interested professionals, researchers, and energy policy-makers.

What are the criterion for submitting a paper in photovoltaics?

Our key criterion is that the papers we publish reflect substantial advancement in the field of photovoltaics. True to the journal's title, the key criterion is that submitted papers should report substantial "progress" in photovoltaics. The full Aims and Scope of Progress in Photovoltaics can be found on the Overview page.

Where can I find the best research papers in photovoltaics?

Through the collaboration, the best research papers from the event will be published in Progress in Photovoltaics, as well as in Solar RRL and Advanced Energy and Sustainability Research, the high-impact, international journals for the latest research in photovoltaic technology, from original research to practical application.

What should I consider when submitting a contribution to progress in photovoltaics?

Prospective authors are encouraged to consider the degree to which their contributions report significant progress in the field and to consider other means of publication for those not meeting the high standard required by Progress in Photovoltaics.

Does progress in photovoltaics share data?

Data Storage and Documentation Progress in Photovoltaics expects data sharing wherever possible, unless this is prevented by ethical, privacy, or confidentiality matters.

Arriaga Arruti et al. investigate and explain the PID mechanism that occurs in SHJ solar cells and modules. High negative biases, under high temperature and humidity conditions (i.e., 85°C/85% RH), enhance the DH-induced degradation-migration of Na⁺ ions and OH⁻ by causing the additional drift of Na⁺ ions coming from the glass. The authors demonstrate that ...

We determined the electrical junction (EJ) locations in Cu(In,Ga)Se₂ (CIGS) and Cu₂ZnSnSe₄ (CZTS) solar cells with ~20-nm accuracy by developing scanning capacitance spectroscopy applicable to the thin-film

devices. We found an n-type CIGS in the region next to the CIGS/CdS interface, and the EJ is at ~40 nm from the interface at the CIGS side, thus a ...

For 95% CO₂ emissions reduction, relative to 1990 level, solar PV generation represents in average 33% of the electricity demand.. Southern European countries install large PV capacities together with electric batteries, while northern countries install onshore and offshore wind capacities and use hydrogen storage and reinforced interconnections to deal with wind ...

1 INTRODUCTION. In 2022, the world reached a cumulative photovoltaic (PV) installed capacity of 1 TW, 1 accounting for >4% of worldwide electricity demand. 2, 3 However, techno-economic roadmaps 4-6 predict that to fulfil the Paris Climate Agreements to mitigate climate change, between 15 TW 6 and >60 TW 2, 7 need to be installed by 2050. Annual ...

A global network of PV manufacturers and laboratories designed a test for LETID detection in PV modules and screened a diverse set of modules for LETID. Results across labs indicate the reproducibility is likely within ±1% of ...

Progress in Photovoltaics: Research and Applications: Volume 32, Issue 6. Pages: 357-422. June 2024. Previous Issue. GO TO SECTION. Export Citation(s) Export Citations. Format. Plain Text. RIS (ProCite, Reference Manager) EndNote. BibTex. Medlars. ... We developed the lithography-free fabrication technique of a local contact interlayer for Si ...

The averaged global photovoltaic (PV) electricity supply share is derived to about 69% in the year 2050, which is the highest ever reported value. The high PV supply share is driven by the fast cost decline of PV and supporting battery technologies, but also by the comparably low cost decline of concentrating solar thermal power and wind energy.

The theoretical limiting-efficiency (η_{lim}) model is improved by mainly revising the Auger ideality factor and the optimal wafer thickness. The η_{lim} of double-side TOPCon and double-side SHJ solar cells are 29.19% and 28.99%, respectively. And the η_{lim} of double-side SHJ solar cells would exceed that of double-side TOPCon solar cells if the recombination ...

Design rules for optimal current matching in multijunction PV devices are formulated, following an exploration of the influence of variations in absorber thickness and thickness variations of different intermediate reflective layers based on silicon-oxide, various transparent conductive oxides, and metallic layers in over 65 all-silicon devices.

The Impact IF 2023 of Progress in Photovoltaics: Research and Applications is 7.51, which is computed in 2024 as per its definition. Progress in Photovoltaics: Research and Applications IF is decreased by a factor of 1.77 and approximate percentage change is -19.07% when compared to preceding year 2022, which shows a

falling trend. The impact IF, also ...

Thin-film silicon solar cells on 1-D and 2-D diffraction gratings are optically modeled with a 3-D FEM-based software. Optimal combinations for period and height in both 1-D and 2-D grating configurations can be indicated, leading to short-circuit current percentage increasing with respect to a flat cell of, respectively, 25.46% and 32.53%.

Front contacts on CIGS modules enhance the module performance. The performance index I V-R is introduced to quantify the compromise between the thermal damages of CIGS modules and the lateral electrode resistance. The application of ultralow-temperature pastes seems to be promising for front contacts on CIGS modules leading to low thermal ...

Know all about Progress in Photovoltaics: Research and Applications - Impact factor, Acceptance rate, Scite Analysis, H-index, SNIP Score, ISSN, Citescor, SCImago Journal Ranking (SJR), ...

PV is diverse in its science base ranging from semiconductor and PV device physics to optics and the materials sciences. The journal publishes articles that connect this science base to PV science and technology. The intent is to publish original research results that are of primary interest to the photovoltaic specialist.

Arriaga Arruti et al. investigate and explain the PID mechanism that occurs in SHJ solar cells and modules. High negative biases, under high temperature and humidity conditions (i.e., 85°C/85% RH), enhance the DH ...

We investigated the influences of front contact layers composed of transparent conducting oxide and oxide semiconductor layers on the performances of Cu(In,Ga)Se₂ solar cells. After annealing under illumination, the solar cells with KF and NaF postdeposition treatments exhibited metastable increases in open-circuit voltage, fill factor, and the resulting ...

In this research, we are presenting outdoor measurements of a full-size bifacial perovskite on silicon (Pero/Si) tandem module. Focusing on the qualitative characteristics of a bifacial Pero/Si tandem module, we provide consistent explanations for different spectral and temperature effects affecting the performance of the module under real-world conditions.

Progress in . Photovoltaics. Editor-in-Chief o A highly ranked journal - currently 9/103 in Energy & Fuels - with an Impact Factor of 7.776* o A distinguished, international editorial board, with Editor-in-Chief Martin A. Green o The home of the widely referenced solar cell efficiency tables and novel, progressive research o

Here, Kesterite solar cells are designed and simulated where CuSbS₂ as BSF, and Ag₂S and In₂Se₃ as buffer layers are used. With In₂Se₃, J_{sc} of 30.274 mA/cm², FF of 89.15%, PCE of 31.67%, and V_{oc} of 1.173 V. With the Ag₂S buffer layer, PCE is 31.02%, FF is 88.61%, J_{sc} is 30.245 mA/cm², and V_{oc} is

1.157 V. Results show improved performance ...

We demonstrated significant improvement in efficiency (particularly in the V_{oc} and J_{sc}) for CuSbS₂ solar cells by post-heat treatment of the CuSbS₂/CdS heterojunction. The underlying correlation between post ...

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We have integrated large silver nanoparticles in the back reflector of n-i-p a-Si:H solar cells. These particles lead to an increase of 2 mA/cm² in short circuit current density compared to co-deposited cells without nanoparticles. The increase in short circuit current density is strongly correlated with the enhanced cell absorption in the long wavelengths.

The full Aims and Scope of Progress in Photovoltaics can be found on the Overview page. Read 5 reasons why you should submit your research to Progress in Photovoltaics - a prestigious ...

Progress in Photovoltaics offers a prestigious forum for reporting advances in this rapidly developing technology, aiming to reach all interested professionals, researchers and energy policy-makers. ... It seemed that some reviewer have not even read the manuscript and just have given their review by primary quick view. 4.0. Very good process ...

The manuscript is a digest, which puts forward findings from previous research papers, combined with new proposals. Approaches comprise two full models' derivation for photovoltaic (PV) systems energy conversion predictability. It brings in several models for key physical observables formulated as functions of the operating conditions.

Design rules for optimal current matching in multijunction PV devices are formulated, following an exploration of the influence of variations in absorber thickness and thickness variations of different intermediate reflective ...

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We developed the alternative electron-selective SrF_x and SrF_x/LiF contacts for c-Si solar cells. The PCE of 20.1% is achieved in the SrF_x-based device. Moreover, in an n-Si/SrF_x/LiF/Al contact, the diffusion of Li in SrF_x film may facilitate electron transport, and hence, a champion PCE of 21.1% is attained.

Cu(In,Ga)Se₂ formation, Ga segregation and cation ordering during fast selenisation of Cu-In-Ga precursor films in elemental Se vapour are investigated by a combination of in situ and ex situ methods. Ga accumulation at the back occurs by outdiffusion of In and Cu out of the metallic layer. It was found that cation ordering determines the minimum ...

In this context, the European Union (EU) and China play a key role, being two important PV value chain players committed to reaching carbon neutrality by 2050 [1] and 2060 [2], respectively. China is a global leader in PV manufacturing, with production concentrated mainly in the provinces of Xinjiang and Jiangsu, where coal accounts for more than 75% of the annual ...

Bifacial amorphous Si quintuple-junction solar cells for IoT devices with high open-circuit voltage of 3.5V under low illuminance Makoto Konagai, Ryo Sasaki Case study of MW-sized power generation at St. Eustatius island combining photovoltaics, battery storage, and gensets Enrique Garralaga Rojas, Hamed Sadri, Wiebke Krueger

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