Solar energy mater sol cells

What is solar energy materials & solar cells?

An International Journal Devoted to Photovoltaic, Photothermal, and Photochemical Solar Energy Conversion Solar Energy Materials & Solar Cells is intended as a vehicle for the dissemination of research results on materials science and technology related to photovoltaic, photothermal and photoelectrochemical solar energy conversion.

What is the impact factor of solar energy materials and solar cells?

Sol. Energy Mater. Sol. Cells Solar Energy Materials and Solar Cells is a scientific journal published by Elsevier covering research related to solar energy materials and solar cells. According to the Journal Citation Reports,Solar Energy Materials and Solar Cells has a 2020 impact factor of 7.267.

What is a solar cell?

Solar Cells, covering single crystal, polycrystalline and amorphous materials utilising homojunctions and heterojunctions, Schottky barriers, liquid junctions and their applications. Also of interest is analysis of component materials, individual cells and complete systems, including their economic aspects.

How efficient are silicon solar cells?

The efficiency of silicon solar cells has a large influence on the cost of most photovoltaics panels. Here,researchers from Kaneka present a silicon heterojunction with interdigitated back contacts reaching an efficiency of 26.3%and provide a detailed loss analysis to guide further developments.

Are solar cells reversible?

The solar cells undergo thermally-driven,moisture-mediated reversible transitionsbetween a transparent non-perovskite phase (81.7% visible transparency) with low power output and a deeply coloured perovskite phase (35.4% visible transparency) with high power output.

Can silicon solar cells improve photoconversion efficiency?

Nature Energy 2, Article number: 17032 (2017) Cite this article Improving the photoconversion efficiency of silicon solar cells is crucial to further the deployment of renewable electricity.

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Thin-film photovoltaic devices are often based on toxic or rare materials. Here, Wang et& nbsp;al.& nbsp;grow oriented Sb2Se3 thin film on a ZnO buffer layer, and fabricate solar cells with a ...

As the application of these materials to c-Si solar cells is a very young field of research, efficiencies achieved so far have not been able to keep up with the efficiencies obtained with poly-Si-based selective contacts. ... Sol. Energy Mater. Sol. Cells, 65 (2001), pp. 239-248. View PDF View article View in Scopus Google Scholar [2] R.S ...

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For this reason, already from the 1960s, space industry looked into the introduction of thin film CuS 2, CdS, and CdTe solar cells on the increasingly energy-demanding communications satellites, ... Sol. Energy Mater. Sol. Cells, 95 (2011), pp. 1253-1267, 10.1016/j.solmat.2011.01.036. View PDF View article View in Scopus Google Scholar [13]

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