

In summary, we present efficient planar perovskite solar cells using sol-gel ...

Aside from conversion of sunlight to electricity, all solar cells generate and dissipate heat, thereby increasing the module temperature above the environment ...

We investigated how ambient humidity affects MAPbBr₃ solar cell efficiency and stability. Maintaining 25% RH enhanced film properties, reducing defects and ...

Fabricating high-efficiency MAPbBr₃ solar cells is challenging due to substantial recombination losses within the perovskite layer and at interfaces with charge transport layers. ...

In summary, we present efficient planar perovskite solar cells using sol-gel processed Zr/TiO₂ films as the compact ETL under the controlled humidity. The Zr/TiO₂ film ...

Correction for "Enhancing organic solar cell lifetime through humidity control using BCF in PM6: Y6 active layers" by Kaike Pacheco et al., Sustainable Energy Fuels, 2024, ...

Excessive dust accumulation results in deterioration of solar cell's quality and fill factor. Dust promotes dust, so that the performance of PV modules declines exponentially with ...

a Device structure of the quasi-2D perovskite solar cells; b J-V curves for the PEA-2D and iso-BA-2D perovskite solar cells prepared by natural drying, and N₂ blow-drying ...

Correction: Enhancing organic solar cell lifetime through humidity control using BCF in PM6: Y6 active layers. Kaike Pacheco * a, Jo Paulo Araujo Souza a, Marlus Koehler ...

By manipulating the environmental humidity during fabrication, we effectively adjusted the composition of NiO_x and suppressed the interface reaction, resulting in reduced open-circuit ...

Studies have shown that cell work in high air temperature and high humidity conditions causes a significant reduction in cell efficiency. High relative humidity also has ...

Understanding the Basics of PV Solar Cells. Photovoltaic (PV) solar cells are at the heart of solar energy conversion. ... Quality Control and Testing in Solar Manufacturing. ... Testing: A critical ...

High-performing organic solar cells (OSCs) being processed in ambient ...

High-performing organic solar cells (OSCs) being processed in ambient conditions and possessing long-term stability are desired toward commercialization. Here, ...

Enhancing the longevity of efficient organic solar cells (OSCs) remains a central focus in contemporary research. Many strategies have been explored, including material ...

Corrosion control in solar cell technology is therefore of paramount importance. By implementing effective corrosion prevention and control strategies, the efficiency of solar ...

Water droplets can refract, reflect or diffract sunlight away from solar cells and reduces the number of direct components of solar radiation hitting them to produce electricity. ...

Spray coating, benefiting from the advantages of high-throughput, good scalability and excellent compatibility with diverse substrates, has attracted significant ...

A novel inverted perovskite/silicon V-shaped tandem solar cell is proposed based on an elaborate design of photon matching and management, in which the underutilized ...

We investigated how ambient humidity affects MAPbBr₃ solar cell efficiency ...

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