Rubyene Solar Cells

Nearly all types of solar photovoltaic cells and technologies have developed dramatically, especially in the past 5 years. Here, we critically compare the different types of photovoltaic ...

The past decade has witnessed the rapid development of perovskite solar cells, with their power conversion efficiency increasing from an initial 3.8% to over 26%, approaching the Shockley-Queisser (S-Q) limit for single-junction solar cells. Multijunction solar cells have garnered significant attention due to their tremendous potential to surpass the S-Q limit by ...

These solar cells have accomplished a record efficiency of 23.4 % on their own, making them a promising option for use in tandem solar cells with perovskite layers [107]. CIGS-based solar cells feature a bandgap that can be modulated to as low as 1 eV [108] and a high absorption coefficient, indicating that they are effective at absorbing sunlight.

Therefore, in this work, rubrene single crystals with a thickness of 250 nm to 1000 nm were used to produce an inverted bilayer organic solar cell. Subsequently, polycrystalline rubrene...

Solar cell modules consist of optically relevant geometric structures on very different length scales. While the whole module and the solar cells are on a scale of meters and centimeters, the ...

Following, polycrystalline rubrene (orthorhombic, triclinic) and amorphous bilayer solar cells of ...

The organic solar cells (OSCs) with the structure of ...

Small molecule dye of rubrene was doped into P3HT:PCBM heterojunction ...

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