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Solar glass carrier movement

Overview

What is charge carrier trapping in perovskite solar cell absorbers?

Charge carrier trapping at surface defects of perovskite solar cell absorbers: a first-principles study. Charge transfer from methylammonium lead iodide perovskite to organic transport materials: efficiencies, transfer rates, and interfacial recombination.

Do photovoltaic molecular structures influence the performance of organic solar cells?

Mobility is a critical parameter influencing the overall performance of organic solar cells (OSCs). Herein, we innovatively elucidated the intricate interrelation between the photovoltaic molecular structures and the methodologies employed for the extraction of charge carrier mobility in OSCs.

Who is responsible for the design and visualization of charge carrier transport?

H.Y. acknowledges the Shandong Provincial Natural Science Foundation (No. ZR2021QF016/ZR2022YQ04) and the Qilu Young Scholar Program of Shandong University. H.Y. conceived the ideas and visualization. D.J. performed the charge carrier transport properties, device measurements and data collection, wrote the original draft and visualization.

How does mobility affect photovoltaic conversion?

In OSCs, mobility is highly correlated with the photovoltaic parameters involving the short-circuit current density (Jsc), open-circuit voltage (Voc), and fill factor (FF). Various phenomenological models have been proposed to investigate the transport-related photovoltaic conversion processes , .

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However, photophysical mechanism of non-fullerene organic small molecule acceptors and photoelectric conversion mechanism are unclear, seriously hampering efficient development of ...

Dive into the research topics of 'Carrier transport composites with suppressed glass-

transition for stable planar perovskite solar cells'. Together they form a unique fingerprint.

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