

Fully transparent perovskite solar glass





Overview

Are transparent perovskite solar cells suitable for self-powered smart windows?

High optical transmittance, good color neutrality, and high power conversion efficiency (PCE) are required for the transparent solar cells to meet the optical and power requirements of self-powered smart windows. Herein, an efficient MAPbCl₃-based transparent perovskite solar cell (TPSC) using a solvent-assisted two-step approach is developed.

Is perovskite a promising semiconductor for optoelectronic applications?

Perovskite has recently garnered significant attention as a promising semiconductor for optoelectronic applications and particularly for solar cells. In various applications, solar cells must be semi-transparent or even nearly fully transparent.

Can perovskite solar cells be used for Windows?

One of the challenges in the commercialization of perovskite solar cells for windows but also for other applications is their scalability. Usually, the layers are deposited by spin-coating, which cannot fabricate uniform layers on large substrates, and therefore, other methods must be used for industrial applications.

What is semi-transparent perovskite used for?

Semi-transparent perovskite for non-solar cell applications The perovskite is very useful not only for solar cells but also for other type of devices, which will be discussed in this subsection. Among the different functions of perovskite, the photodetectors gained many attention during last few years.



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