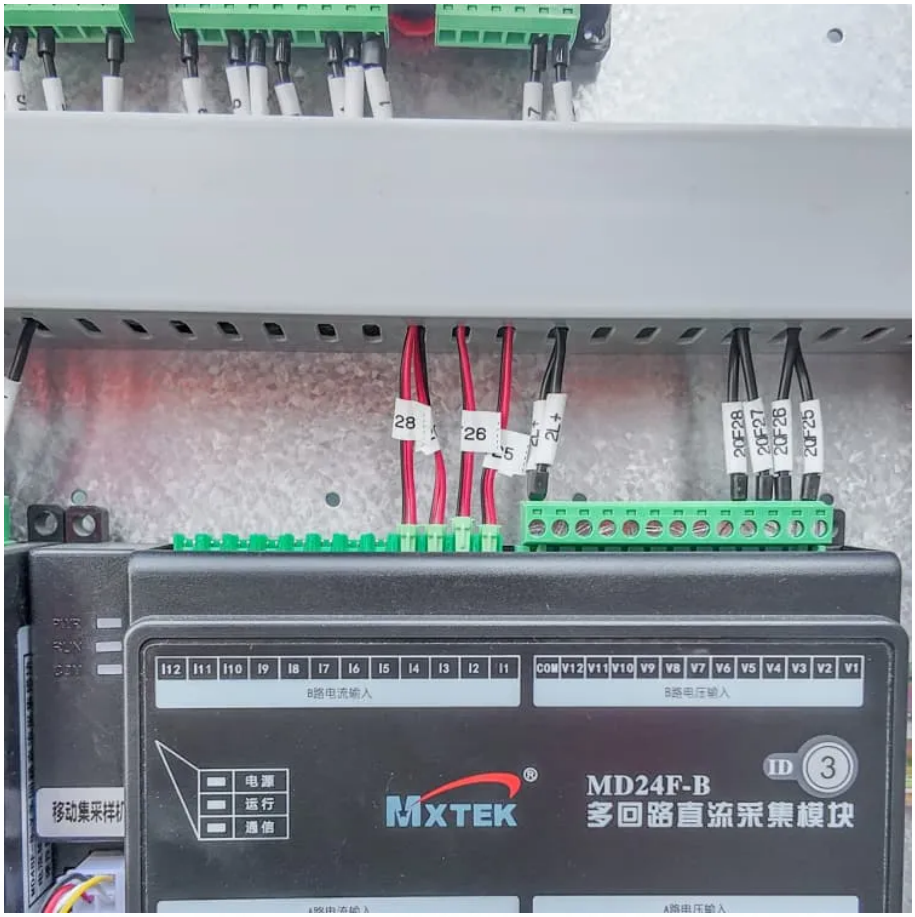
GETON CONTAINERS

Solar glass and solar pvdf



Overview

This study involved the creation of self-cleaning surfaces on glass substrates by applying a polyvinylidene fluoride (PVDF) solution through spray coating. The properties of the coated surfaces were evaluate.

What is PVDF based self-clean coating?

PVDF based self-clean coating was developed by spray coating method. SEM and AFM analyses validate the nano-flake structure promoting hydrophobicity. UV degradation test confirms the stability of PVDF coating. 1. Introduction Maintaining the cleanliness of solar panels poses a significant challenge.

How much light is transmitted through a PVDF coating?

It is worth mentioning that up to a PVDF concentration of 5 %, the transmission of light through the coating remains stable. However, when the PVDF concentration exceeds 5 %, the transmission of light through the coated substrates decreases, as evidenced in Fig. 1e.

Is PVDF a fluoropolymer?

PVDF is a fluoropolymer that is widely available in commercial markets and possesses favorable physical, chemical, and mechanical properties, as well as a low surface energy of 25 dynes/cm. Additionally, it exemplifies outstanding chemical stability and exhibits a high degree of resistance to aging and degradation .

Why does the CA increase in PVDF coatings?

Notably, beyond a concentration of 5 %, the CA continues to rise (not presented in Figure), albeit at the expense of light intensity. PVDF coatings with higher concentrations tend to have higher degrees of crystallinity (XRD analysis also confirms the increase in crystallinity, as described in the supporting information).

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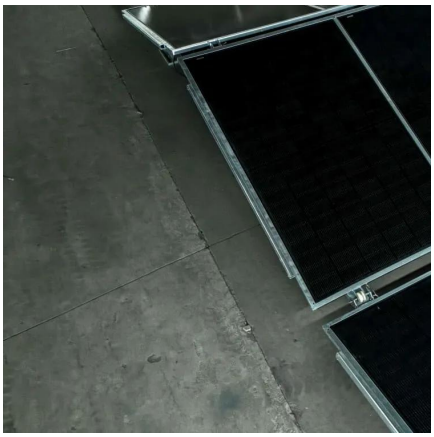

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