

Absorption of sodium ions from solar glass

In order to minimise the CIGS absorber formation time, elemental Se vapour is used to prepare the CIGS absorber. The grain sizes of the CIGS films are found to increase with increasing sodium...

In the present work, the diffusion mechanism of alkali ions (Li, K along with Na) from specially designed glass substrates, other than SLG, to the direct current magnetron sputtered (dc-MS) Molybdenum ...

In this work, we use complementary microscopy and spectroscopy techniques to show that Na diffusion occurs in the fabrication process of PSMs. Na diffuses vertically inside P1 lines and then laterally ...

The contamination on the glass cover can absorb and reflect a certain part of the sunlight irradiation, which can decrease the intensity of the light coming in through the glass cover.

A standardized model is presented for evaluating the efficiency of spectral converters integrated into PV glass, systematically assessing spectral absorption and emission properties, current drop and ...

In this work PV panel encapsulants will be investigated to understand how sodium moves through this polymeric layer. Glass/encapsulant coupons with an area of 35 cm², mimicking the structure of full ...

The influence of Na diffusion from various glass substrates during a high-temperature selenization process on the microstructure and morphology of two-step formed CIGS absorber layers is investigated. In order to minimise ...

In this paper we evaluate the ion migration kinetics in encapsulant material under operational conditions. Analysis of Na migration profiles reveal the diffusivity constant and activation energy of Na in EVA.

Different possibilities in sodium ion migration control are presented, considering the influence of glass composition on sodium diffusion & its chemical potential as well as passivation of sodium-containing glasses ...

Sodium ions are commonly found in the glass used in solar panels, typically as a result of the composition of the glass material or contamination during manufacturing. Under outdoor conditions, PV ...



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