

# **Amount of alkali used in solar glass**





## Overview

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Na-diffusion from soda lime glass (SLG) substrate to overlayers is found to enhance the performance of CuInGaS<sub>2</sub>/CuZnSnS<sub>4</sub> based thin film solar cells. In the present work, the diffusion mechanism of alk.

What is alkali glass?

Also known as Alkali glass or soda-lime glass. It is the most widely used type of fiberglass. Alkali glass accounts for approximately 90% of all manufactured glass. It is the most common type used to make glass containers such as jars and bottles for food and beverages, as well as window panes.

What is the difference between acidic etching and alkaline etched AIT glass?

The morphology of alkaline and acidic-etched AIT glass is considerably different, resulting in alkaline-etched AIT glass having a slightly lesser haze than those with acidic etching. We have also studied the effect of an additional nanotexture on alkaline-etched AIT glass by a short dip in dilute 2% HF.

Can textured AIT glass be used for thin-film solar cells?

After optimizing a non-hazardous, feasible acidic and alkaline-etched AIT glass, we further showed the proof of concept that the textured AIT glass can be used as an active component of thin-film solar cells.

Does alkaline etch reduce haze value?

The rms roughness from the large area (20 $\mu$ m x 20 $\mu$ m) AFM surface plot shows that for only alkaline etch,  $\sigma = 193$  nm which decreases to 132 nm with an additional short HF dip. Therefore this decrease in rms roughness translates to a lesser haze value as shown in Fig. 3 b.



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### Evaluating the role of composition and local structure on alkali ...

Oct 1, 2020 · The glass transition temperature lies between 535 and 580°C and the coefficient of thermal expansion 8.5-10 ppm/K, which is highly suitable for use as substrates in thin-film ...

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Glass cullet (GC) generated from the disposal of photovoltaic (PV) panels are typically landfilled, and effective GC utilization methods must be established for PV generation. In this study, ...



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## Diffusional investigation of alkali ions from composition tuned glass

Jun 1, 2021 · Abstract Na-diffusion from soda lime glass (SLG) substrate to overlayers is found to enhance the performance of  $\text{CuInGaS}_2$  / $\text{CuZnSnS}_4$  based thin film solar cells. In the present ...



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