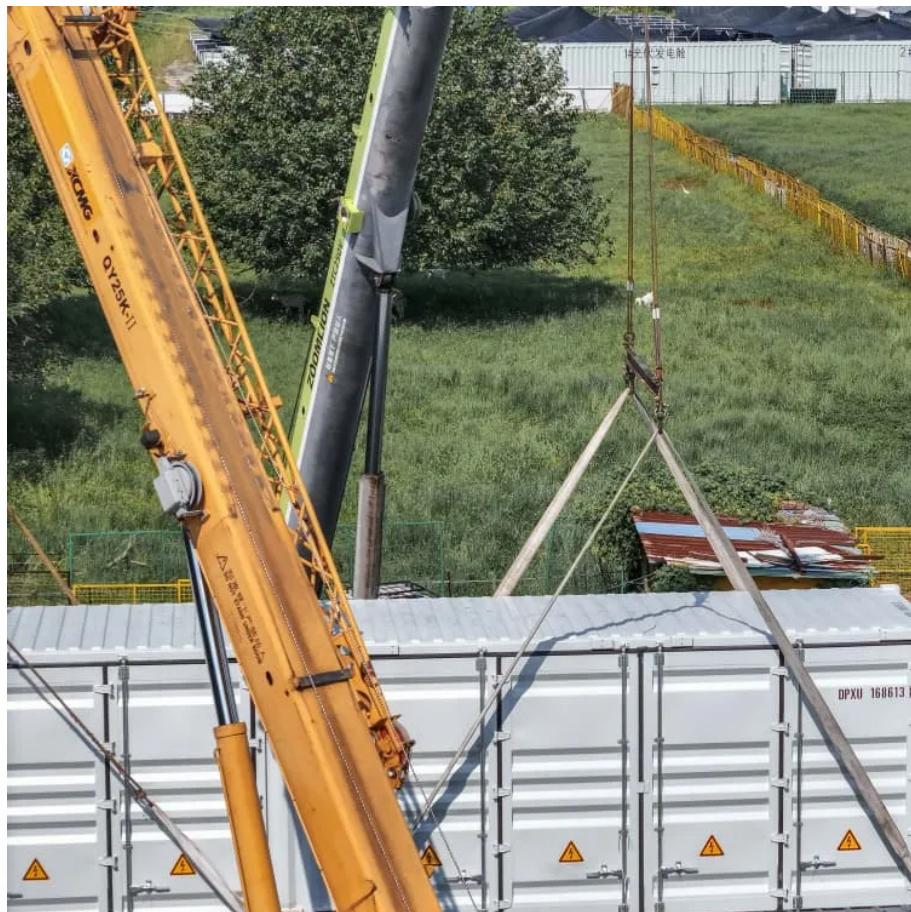




**BUHLE POWER**

# **Solar glass alkali content**





## Overview

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Does sodium-potassium silicate glass have a mixed alkali effect?

A novel topological analysis using persistent homology found that sodium-potassium silicate glass shows a significant reduction in large cavities as a result of the mixed alkali effect. Furthermore, a highly correlated pair arrangement between sodium and potassium ions around non-bridging oxygen atoms was identified.

How are alkali silicate glasses prepared?

Alkali silicate glasses were prepared from mixtures of reagent grade SiO<sub>2</sub>, Na<sub>2</sub>CO<sub>3</sub>, and K<sub>2</sub>CO<sub>3</sub> powders. The mixtures were melted at 1923 K in air. Each melt was quenched and annealed at the glass transition temperature and then cooled slowly by 1 K/min. The nominal and analyzed compositions of the glasses are listed in Table S1.

Does display cover glass have a robust alkali-resistance of UV-shielding and strengthening sol-gel coating?

In this report, robust alkali-resistance of display cover glass's UV-shielding and strengthening sol-gel coatings have been successfully prepared, using 2,2',4,4'-tetrahydroxybenzophenone (BP-2),  $\gamma$ - (2,3-epoxypropoxy) propyltrimethoxysilane (KH560) and tetraethyl orthosilicate (TEOS) as raw materials.

How to make a cover glass a strong alkali-resistant coating?

Robust alkali-resistant is obtained by tailoring an organic UV absorbent bonded to SiO<sub>2</sub> sol-gel. The new and facile preparation of the coating presents its application possibility on cover glass. Cover glass with UV-shielding function is important to mobile displays such as mobile phones and tablet PCs, as well as flexible photovoltaic cells.



## Solar glass alkali content



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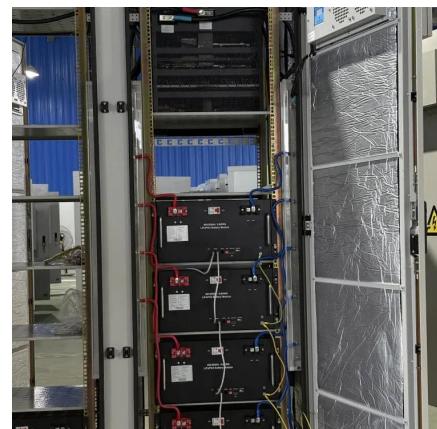
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...



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