Liquid crystal glass and solar glass

How do liquid crystals work?
At the flick of a switch, prompted by a low voltage, the liquid crystals change their orientation instantly to regulate the amount of light and heat passing through the glass. The glass always remains transparent, so even in a darkened state, natural light is preserved, and the outside view is retained.

What is solar shading glass?
Our solar shading glass contains a transparent liquid crystal mixture with specific dye molecules. This mixture is placed between two glass sheets coated with a transparent conductive film.

How does liquid crystal technology improve the operating temperature range of smart windows?
This system significantly improves the operating temperature range of sunlight-driven smart windows based on liquid crystals: the transparent-scattering transitionis observed at 4-42 °C. The present mechanism allows development of autonomous and wireless smart windows adaptable to various environments.

What are photoresponsive liquid crystals?
Cite this: ACS Appl. Mater. Interfaces 2024,16,22,28638-28644 Photoresponsive liquid crystals are promising materials for sunlight-driven smart windows,which can automatically change their optical states in response to sunlight and control energy flow between the inside and outside of a building.

Liquid crystal-based smart windows can dynamically modulate light transmission over a broad bandwidth by low-power electrical signals, environment (such as temperature, light condition, ...

Smart windows based on liquid crystal (LC) have made significant advancements over the past decade. As critical mediators of outdoor light entering indoor spaces, these ...

Nanjing University scientists have developed an innovative light-redirecting coating -- Colorless and Unidirectional Solar Concentrator (CUSC) -- which turns glass ...

Photoresponsive liquid crystals are promising materials for sunlight-driven smart windows, which can automatically change their ...

China's transparent coating to turn ordinary windows into solar power generators The transparent solar concentrator uses liquid crystal films to harvest energy.

Photoresponsive liquid crystals are promising materials for sunlight-driven smart windows, which can automatically change their optical states in response to sunlight and ...

This research introduces a novel approach to smart window technology by incorporating a luminescent solar concentrator (LSC) that incorporates thin photovoltaic cells ...

Our solar shading glass contains a transparent liquid crystal mixture with specific dye molecules. This mixture is placed between two glass sheets coated with a transparent ...

Benefits of licrivision® for switchable windows Solar control Buildings with generous amounts of glass have issues of energy loss, heat gain and cooling cost. licrivision® ...

Our solar shading glass contains a transparent liquid crystal mixture with specific dye molecules. This mixture is placed between two ...

Web: https://hakonatuurfotografie.nl