

Solar-collecting windows could make office buildings and skyscrapers more energy efficient, but harnessing solar power while retaining transparency is a tricky engineering problem.

To address this need, this paper comprehensively reviews research articles published in high-quality journals from 2019 to 2025.

Researchers engineered semitransparent organic solar cells into smart windows that simultaneously generate electricity and provide superior thermal insulation.

We enable industry, government, research, and nonprofit partners to conceive innovative ideas and develop concepts into prototypes. NREL can help you bring your idea to market.

Scientists in China have developed a new way of harvesting solar power by applying a translucent coating over a window to direct energy from ambient light to the edge of the glass -- ...

A research team led by Professor Jun Yong-seok from the Department of Integrative Energy Engineering and the Graduate School of Energy and Environment (Green School) at KU ...

Scientists have created a transparent solar coating that turns ordinary windows into clean energy generators without affecting clarity. Using cholesteric liquid crystal layers, the coating...

Scientists have developed a brand new, clear coating that can be applied to any standard window to turn it into an effective solar panel - while still keeping the window largely ...

Traditional silicon-based solar cells dominate the market, but their production requires significant resources. Researchers are now turning their attention to thin, semi-transparent solar cells ...

Recent innovations in photovoltaic materials and manufacturing processes are enhancing the efficiency and aesthetics of solar power windows. These advancements may lead to more effective energy ...

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