

Solar photovoltaic panels under the onion



Overview

Every time you chop an onion, you probably toss the papery skins straight into the trash. But hidden inside those red layers are natural compounds with powerful UV-blocking properties. Scientists have figured out how to extract them and turn them into a protective biofilm for. In a lab in Turku, Finland, scientists have found a surprising ally in the fight for sustainable solar energy: the papery red skin of an onion. How does it work?

Sun-Ways' patented system mounts. Researchers have developed a sustainable UV protection film from red onion peels, extracting quercetin and infusing it into nanocellulose. This bio-based shield absorbs 99.9% of UV rays, outperforming traditional plastics in durability tests and extending solar panel lifespans.

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[Red Onion Peels Yield Sustainable UV Film for Longer-Lasting Solar Panels](#)

Researchers have developed a sustainable UV protection film from red onion peels, extracting quercetin and infusing it into nanocellulose. This bio-based shield absorbs 99.9% of UV rays, outperforming ...

[A New Solar Panel Shield Made From Onion Peels](#)

In a lab in Turku, Finland, scientists have found a surprising ally in the fight for sustainable solar energy: the papery red skin of an onion.



12.8V 100Ah



[New biodegradable film made from onion skins can boost solar panel](#)

A film dyed with red onion skin extract and dye-sensitized solar cells. The films were placed on top of the solar cells in the study.

[Scientists turned to a red onion to improve solar cells ...](#)

Red onion dye could be the missing ingredient required to bolster ultraviolet (UV) protection for solar cells, scientists say.



[RED ONION SKINS COULD MAKE SOLAR PANELS STRONGER THAN ...](#)

By extending the life of solar panels, this onion-based film could make renewable energy cheaper, more sustainable, and more accessible. It's a small change with potentially massive ripple effects.

[Onion-Skin Film Blocks 99.9% of UV--A Game Changer for Solar Panels](#)

One of the most crucial aspects of solar cell protection is maintaining transparency, as excessive filtering can reduce energy absorption. Fortunately, the onion-dyed nanocellulose film addresses ...



[New onion skin biodegradable film could extend the life of solar panels](#)

A protective film made from plant waste, such as onion peels, is not only durable but also sustainable. This research is part of a broader push by the Finnish forest and materials industry to develop ...



[Scientists Have a Weird Fix for Solar Panels' UV Sensitivity: Onions](#)

Although solar power is one of our greatest green energy tools, some of the components of the solar cell are not so sustainable. A new study, aiming to find a bio-based replacement for



[The Unexpected Future of Solar, From Onions to Algorithms](#)

Swiss startup Sun-Ways is turning train tracks into solar farms by installing removable solar panels in between the rails. No disruption to trains, no extra land required, no eyesores -- just clean energy flowing from ...

[Solar Panels From Red Onion Skins and Pomegranate Peels](#)

When infused with natural extracts from red onion skins and pomegranate peels, it becomes a powerful UV barrier. The team extracted pigments -- mainly flavonoids and tannins -- from the plant waste, ...



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