

While silicon has been the go-to material for decades, researchers are now exploring new materials in solar panel manufacturing that promise higher efficiency, greater flexibility, and lower production costs.

Solar energy is no longer just panels bolted to a roof or field. In 2026, new solar panel technology is driving dramatic improvements in how we capture, store, and use sunlight. Ongoing ...

We explore the nine most exciting developments in the solar industry in 2025, from indoor solar panels to "two-for-one" fission.

Modern solar panels are getting better protection thanks to advanced encapsulation materials that act like a high-tech shield. These new materials go far beyond traditional EVA ...

Any new material must not only work well at converting sunlight to electrons, but be abundant in the earth's crust, available at low cost, and stable enough to ensure long lifetimes.

Using advanced materials like transparent luminescent solar concentrators (TLSCs) or semi-transparent perovskite cells, this new solar panel technology allows surfaces such as windows, ...

The team suggests that replacing the ITO--one of the most fragile and expensive materials in photovoltaics--with single-walled carbon nanotubes (SWCNTs) could take perovskite ...

Solar power is no longer inching forward, it is compounding. In laboratories and early commercial lines, scientists are stacking new materials, coatings, and designs that push panels far beyond ...

An international team of researchers led by King Abdullah University of Science and Technology (KAUST) in Saudi Arabia has developed a new acrylate-based composite material that ...

Discover the latest advancements in next-gen solar panels, including high-efficiency materials like perovskite, quantum dots, and tandem cells. Explore innovative designs such as bifacial, ...

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