

Can a stretchable organic solar cell work?

The Korea Advanced Institute of Science and Technology (KAIST) Engineers have succeeded in implementing a stretchable organic solar cell by applying a newly developed polymer material that demonstrated the world's highest photovoltaic conversion efficiency (19%) while functioning even when stretched for more than 40% of its original state.

Can polymers make organic solar cells stretchable?

The new breakthrough from researchers at the Korea Advanced Institute of Science and Technology is reported in a paper, 'Rigid- and soft-block-copolymerized conjugated polymers enable high-performance intrinsically stretchable organic solar cells', published in the journal Joule.

Can solar cells be stretched?

It can be stretched by up to 40 per cent even as it is used, the creators claim. Solar cells have made their way to some consumer and wearable devices, such as Garmin's smartwatches. But they are much harder to make in forms that are able to flex, such as implanting them in clothing or other soft products.

Can stretchable solar cells be used as a power source?

The newly developed polymer is expected to play a role as a power source for next-generation wearable electronic devices. With the market for wearable electric devices growing rapidly, stretchable solar cells that can function under strain have received considerable attention as an energy source.

What is the world's highest-performing stretchable organic solar cell?

Researchers from the Korea Advanced Institute of Science and Technology (KAIST) declare it as the "world's highest-performing stretchable organic solar cell." The development is unique as it utilizes organic material to build the photoactive layer of the solar cell, which turns light into energy.

Can stretchable solar cells be used in electronic gadgets?

Add Interesting Engineering to your Google News feed. A team of researchers has achieved a milestone by developing lightweight and highly efficient stretchable solar cells for energy generation in electronic gadgets.

After the back of a commercially available rigid silicon panel was coated with a highly stretchable, biocompatible elastomer, the cell was divided into multiple silicon islands by means of a laser patterning-based corrugation technique. Each island was electrically linked through interdigitated back contacts traversing the solar cell.

A new breakthrough could help with the creation of stretchable solar cells, the researchers behind it say. The flexible solar panels could be used to power wearable technology and other...

An article in *Advanced Materials* presents polymer donors with hydrogen-bonding spacers that enable intrinsically stretchable organic solar cells with a high power conversion efficiency and good...

An article in *Advanced Materials* presents polymer donors with hydrogen ...

Workers install solar panels in the Kubuqi Desert in Ordos city, Inner Mongolia autonomous region, last year. DING GENHOU/FOR CHINA DAILY HOHHOT -- In Chaideng village in Ordos city, Inner Mongolia ...

The researchers said that stretchable solar cells that maintain strong electrical ability have been tough to produce until recently. But the new organic polymer they developed has been a game-changer in the research, in ...

A new stretchable solar cell developed by researchers at the Center for Emergent Matter Science at Riken University in Japan can stretch to nearly 1.5 times its original size with only a 20...

Solar panels are a valuable investment for homeowners and businesses. If you've installed a solar power setup, you'll know how important it is to ensure longevity. One of the best ways to protect your solar panels is by investing in solar panel covers. Solar panel covers provide an extra layer of protection against environmental hazards.

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