

Are flexible organic photovoltaics and energy storage systems the future of wearable electronics?

Flexible organic photovoltaics and energy storage systems have profound implications for future wearable electronics. Here, the authors discuss the transformative potential and challenges associated with the integrative design of these systems for energy harvesting.

Why do we need eco-friendly solar cells?

The growing concern of finding green energy sources is creating a large demand for eco-friendly solar cell products. Natural selection is the main mechanism of evolution, selecting optimal characteristics for an organisms' survival.

Can viola-inspired solar cells improve PCE compared to untextured solar cells?

The viola-inspired surface has a hierarchy of micro-cones and nano-wrinkles. The cones increase in-coupling of broadband light and retro-reflection, while the wrinkles decrease reflection losses. Results showed improvement in PCE by 6% compared to an untextured solar cell.

Can cone shapes be used as solar absorbers?

The cone shapes covering the moth-eye follow this law and create a gradual change in refractive index to effectively reduce reflection. The authors suggested the use of cone shapes as solar absorbers since the reflectance is <5% and absorbance is 96% in the visible wavelength region at angles of incidence under 55 deg.

In this prospective article, we provide a description of the most significant and ...

The numerous applications of TES to solar energy technologies are unique among energy systems and represent a powerful frontier in sustainable engineering to minimize unintended consequences on ...

The strategic engineering of solar energy technologies--from individual rooftop ...

This article illustrates the growth of solar energy based entrepreneurship along with subsequent formation of different types of renewable energy based micro enterprises in rural India; it also ...

Solar Panel Car Accessories. Solar panel Car Accessories are becoming increasingly popular as more drivers look to reduce their environmental impact and lower their ...

4 ???&#0183; Nature Energy - Academic and industrial researchers have gathered in Nanjing to ...

The National Renewable Energy Laboratory reports that the conversion efficiency of both organic and

