Crystals that generate more electricity than solar panels

The technology combines silicon, the material currently used in solar photovoltaics (PV) in panels across the world, with perovskite materials to massively increase the efficiency of solar...

German researchers developed a lattice arrangement of three different layers of ferroelectric crystals that created a powerful photovoltaic effect.

German researchers from the Martin Luther University of Halle-Wittenberg presented a new type of solar cells based on layers of nanocrystals.

Perovskites--a family of materials nicknamed for their crystalline structure--have shown extraordinary promise in recent years as a far less expensive, equally efficient replacement for silicon ...

Researchers are breaking new ground with halide perovskites, promising a revolution in energy-efficient technologies. By exploring these materials at the nanoscale, they are developing ...

Perovskites are promising materials for solar cells. A layer of dipolar molecules at the perovskite surface improves the efficiency of these devices.

Studies suggest a perovskite solar panel could achieve efficiencies as high as 35%, while also reducing costs through cutting out some steps in the manufacturing process.

The betaray crystal sphere is a weatherproof glass ball which concentrates sunlight and moonlight into an intense beam that can generate electricity up to 70% more energy than solar panels.

Their approach involves stacking ultra-thin layers of different crystals in a precise sequence, resulting in a solar absorber that far outperforms traditional materials.

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Scientists are unlocking the secrets of halide perovskites -- a material that"s poised to reshape our future by bringing us closer to a new age of energy-efficient optoelectronics.

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