SOLAR PAINT - AN INNOVATIVE SOURCE OF CHEAP ENERGY

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The greenest of modern homes already have solar panels on their roofs, but there may soon be a simpler way to harvest solar energy. Imagine if the next coat of paint you put on the outside of your home generates electricity from light—electricity that can be used to power the appliances and equipment on the inside. Researchers at the University of Notre Dame have invented solar paint, a compound that can absorb the sun's energy and transfer it to your home.

The solar paint's secret is the use of quantum dots, which are power-producing nano-particles. In this case, that was titanium dioxide coated with either cadmium sulfide or cadmium selenide. The quandum dots are suspended in a water-alcohol mixture and made into a spreadable compound. It can then be spread — in one coat — onto any conductive surface, collecting energy without any special equipment.

Unfortunately, the solar paint isn't quite ready for prime time. The typical light-to-energy conversion efficiency in commercial solar cells is 10 to 15 percent. Solar paint is, at present moment, only yielding a 1 percent conversion. The researchers, however, believe that if they can get the efficiency cranked up just a little higher, it will be a viable solution. As it can be made cheaply and liberally, solar paint could get away with having lower than standard conversion efficiencies. While it still sounds like it's years away from commercial use, the solar paint has loads of potential. If a house has a roof and walls that are covered in solar paint, it could complement traditional power sources to help reduce costs and indirectly contribute to environmental conservation. Solar panels will probably always be more efficient, but the simplicity, low cost, and unobtrusiveness of solar paint could lead to more widespread adoption.

If the idea of solar colors run into mass production, this significantly reduce energy costs. Thus, we not only save money but also improve the ecological situation on the planet. Energy saving is now an integral part of our lives, because our resources are not unlimited, and who knows what legacy we will leave to future generations.

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