Solar: paper like cells

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1. Theme description

There is a significant interest for the production of renewable energy. The researchers try every day to find or improve methods to produce green energy. One of the best renewable energy is the solar energy: available every day (though discontinuously)[1].

A new system to capture and use the solar energy is 3PV (printed paper photovoltaics)[2]. This technology uses an ink with electrical properties to print on a lot of materials (paper too) an advanced system of solar cell[3].

The 3PV is developed and study for the first time by the MIT researchers in 2011[4].

This new technology could be incorporated into clothing, accessories and etc. opening the ways to new method to use the solar energy[5]. The printed cells are flexible so it could be use in documents, windows, wall coverings, etc. adapting its form. Furthermore, this cheap technology could lead to produce new solar system in rural areas, needing reliable source of electricity.

The efficiency of the 3PV started in 2011 with 1%, reaching now about the 20%[6].

Additionally, the power-to-weight ratio of this technology is among the highest ever achieved: it is more efficient than common photovoltaic cells on glass substrates.

In the following, an overview of 3PV and the major results obtained by this technology until now are reported.

[1]https://www.renewableenergyworld.com/index/tech.html

[2]http://blog.drupa.com/de/solar-cells-printed-paper/

[3]https://inhabitat.com/paper-thin-printed-solar-cells-could-provide-power-for-1-3-billion/

[4]http://energy.mit.edu/news/solar-cells-printed-on-paper/

[5]https://www.treehugger.com/clean-technology/solar-cells-can-now-be-printed-on-anything-even-paper-and-fabric.html

[6]http://blog.drupa.com/de/solar-cells-printed-paper/

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