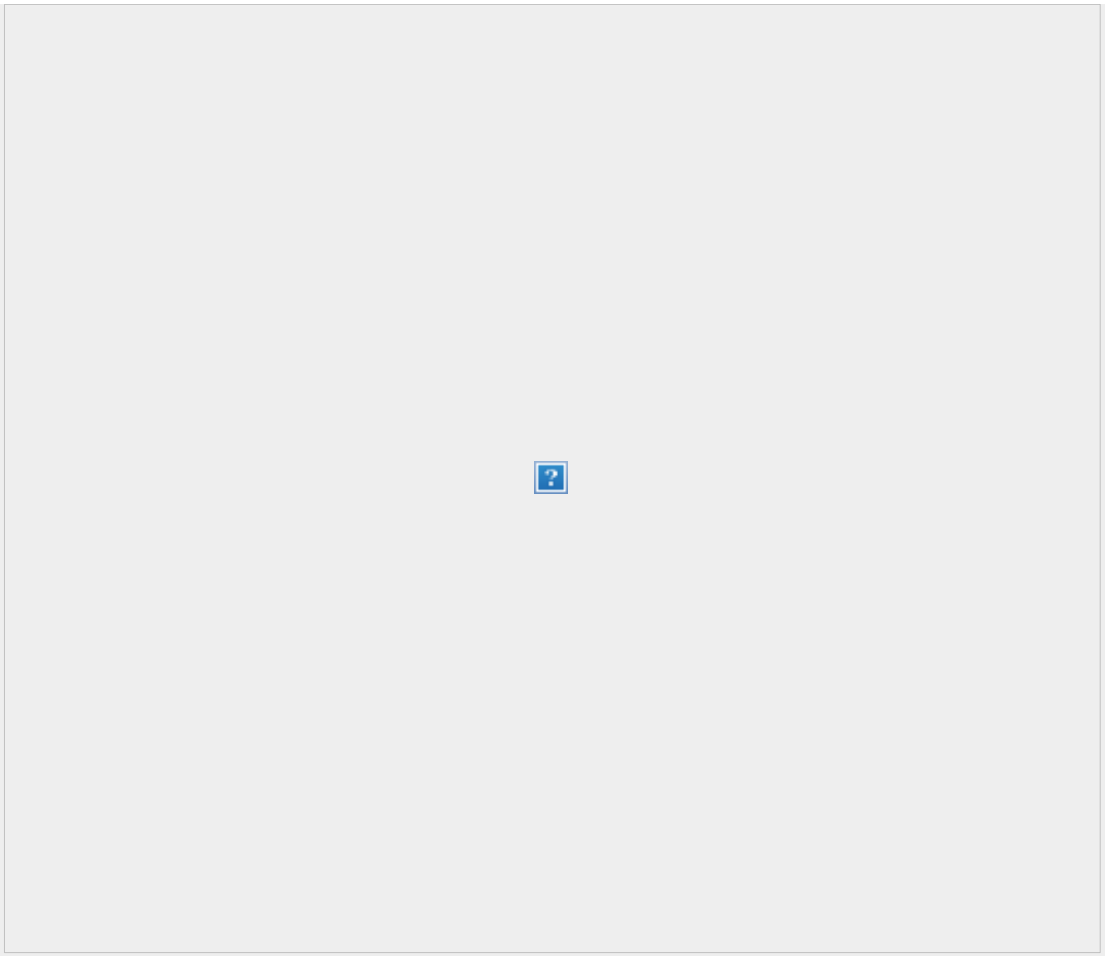
The Blog

Two Amazing, Tiny New Solar Technologies on the Horizon

Posted on 07. May, 2012 by Maryruth Belsey Priebe in Articles

OUR MOST POPULAR ARTICLES

No related posts.



Dr. Mark Bissett - Carbon Nanotube Solar BIPV Technology

Working from some of the most creative angles imaginable, scientists are testing new technologies all of the time to find more effective solutions for creating renewable energy through solar. And the name fo the game these days is that smaller is better. Here are two amazing solar technologies that could transform the way our society generates and uses energy.

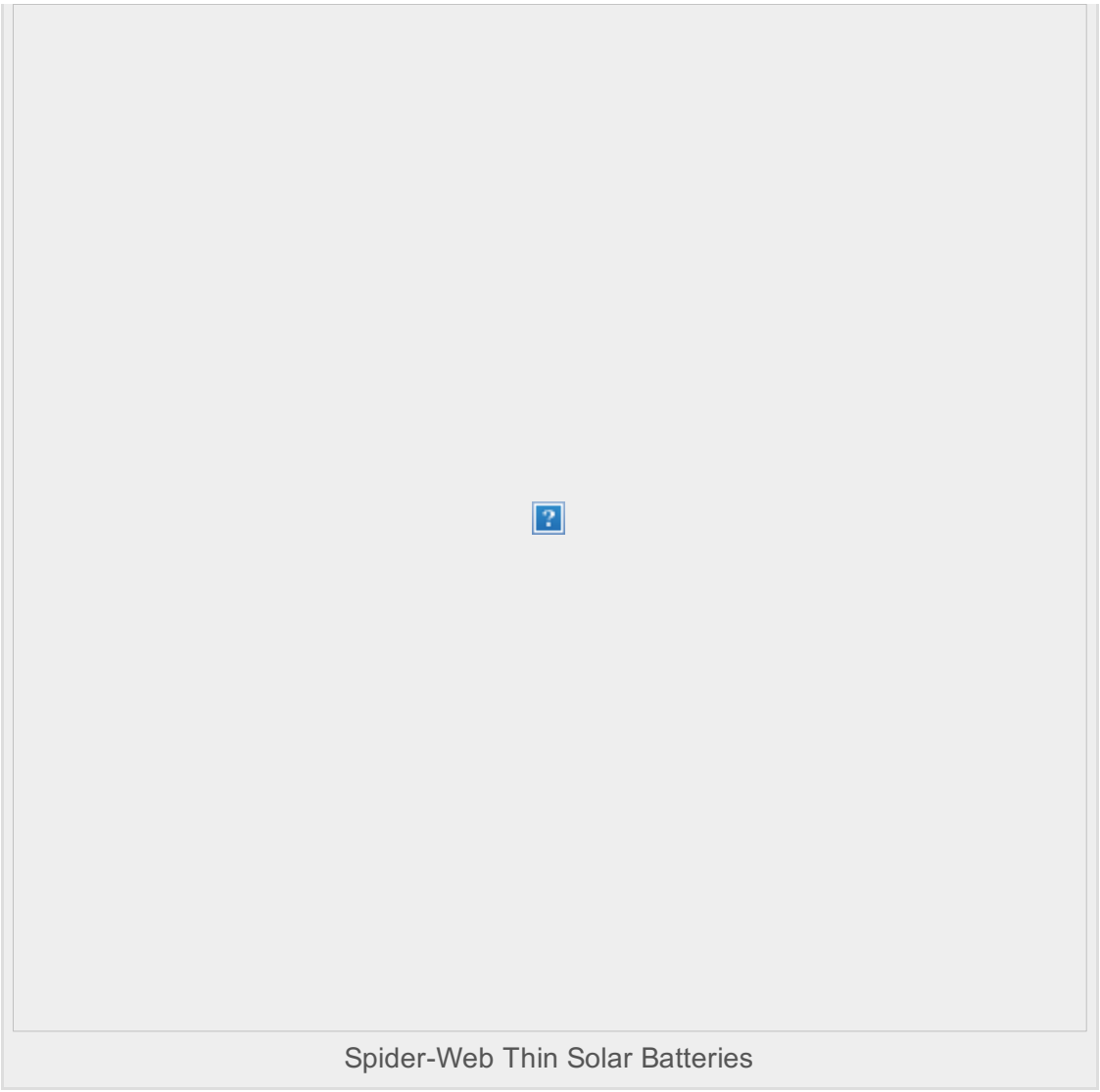
Nanotubes Make Spray-On Solar for Windows and Fabrics Possible

Scientist and investor, Dr. Mark Bissett of Flinders University School of Chemical and Physical Sciences in Adelaide, South Australia, has developed a transparent, spray-on, flexible solar energy generation system based on nanotechnology that could have us generating energy through windows and drapes if it can be developed cost-

effectively enough. Given that modern buildings are often composed of 75% glass, this technology has tremendous potential to convert ordinary surfaces into energy-generating ones.

Building Integrated Photovoltaics (BIPV) have been around for years, but some of the biggest drawbacks have been the cost of conventional crystalline silicon technology and the challenges of applying it to surfaces such as windows without impacting the view. This technology could completely overcome those challenges. Not only are carbon nanotubes – the delivery system for this technology – inexpensive, their conductivity-to-weight ratio is much greater than conventional materials.

It's another take on the smart-façade solar window idea we've already talked about. Their goal: putting it on the market in 10 years.



Spider-Web Thin Solar Batteries

Spider-Thin Batteries for Better Solar Energy Conversion

Measuring at only 1.8 micrometers thick, thinner than a strand of silk and one-tenth the thickness of any other solar cells currently available, a new battery technology applied like ink is being combined with solar cells to power small devices or larger electronics and appliances at a fraction of the weight and cost. Based on an organic semiconductor formulation, one gram of this solar battery can produce 10 watts of energy.

And unlike conventional solar conversion which operates at 4.2% efficiency, these do not experience the same conversion rate drops, even when folded or bent, making them much more durable, versatile, and efficient. And they can be produced cheaply. The researchers working on the project hope to improve efficiencies to the point where it would be ready for commercialization in about five years.

No related posts.

Tags: BIPV, renewable energy, smart facade, solar batteries, solar photovoltaics

We were unable to load Disqus. If you are a m

About YellowBlue Designs

We blog about green building practices to help you create energy efficient homes.