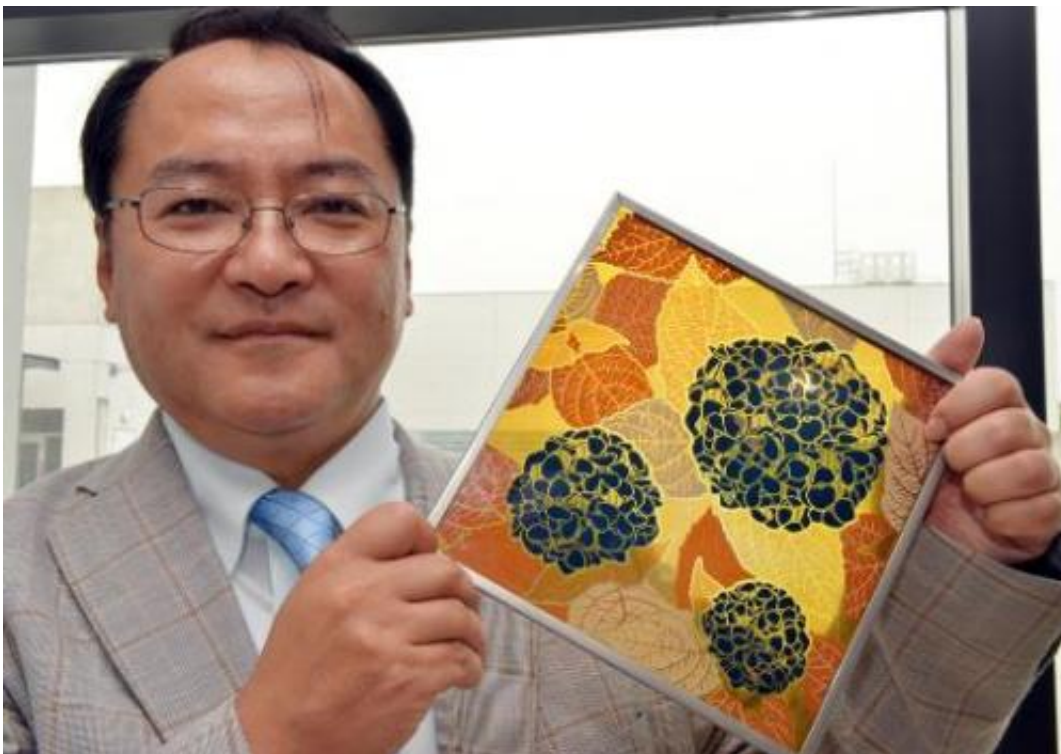


Green power blooms as Japan unveils 'hydrangea solar cell'

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Hiroshi Segawa, a professor at University of Tokyo's Research Centre for Advanced Science and Technology (RCAST), displays a prototype model of an organic solar power cell at his laboratory on July 24, 2014

A solar cell that resembles a flower is offering a new take on green energy in Japan, where one scientist is searching for renewables that look good.

In a country badly scarred by the tsunami-sparked nuclear disaster at Fukushima three years ago, the hydrangea-inspired solar offering is small beer alongside one of the world's biggest offshore wind power farms now floating off the country's east coast.

But Hiroshi Segawa, a professor at University of Tokyo's Research Centre for Advanced Science and Technology, is hoping his dye-sensitised solar cell, which meshes floral beauty with cutting-edge technology, will brighten the scene.

Segawa's Annabelle, named after a type of white hydrangea, is made up of flowery stained glass-like solar cells built into a latticed wood box modelled on traditional Japanese doors.

While the 20 centimetre (8 inch) wide box might make a pretty addition to a sunroom, it can also store enough energy to charge your smartphone twice.

The leaves generate electricity, which is stored in the flower. As the device charges up the petals turn increasingly blue. But as Annabelle discharges, those blue petals turn white, just like the real-life hydrangea.

'Enjoyable energy'

"People do not have a very good image about things related to energy, such as nuclear power," Segawa told AFP.

"Thermal [power generation](#) conjures up images of blistering hot dirty coal while solar panels take up a lot of space.



Hiroshi Segawa, a professor at University of Tokyo's Research Centre for Advanced Science and Technology (RCAST), displays prototype models of organic solar power cells at his laboratory in Tokyo on July 24, 2014

"Even wind power generation has problems with bird strikes and noise, but (Annabelle) doesn't harm the environment."

While Segawa is not expecting to topple the dominant silicon-based [solar panels](#), he is hoping the fast-growing sector has room for "enjoyable energy" that adds a splash of colour to an otherwise drab industry.

Since the Fukushima nuclear disaster in 2011, Japan has been pushing to boost the use of alternative energy.

The country's [solar power generation](#) is rapidly growing, but it still only represents a small share of the overall power mix.

In Japan, the share of power generated from renewable sources, excluding hydropower, lags other developed economies at 4.7 percent of the total, far less than 10.4 percent in Britain or 20.1 percent in Germany, according to data from the International Energy Agency.

All of Japan's nuclear plants were shuttered after the 2011 atomic accident—yanking away a [power](#) source that once supplied more than one quarter of the nation's energy.

Despite Tokyo's efforts to develop the solar sector, the weather — particularly a lack of reliable sunlight—is among the factors holding back wider use.

But Segawa says Annabelle works even in weak indoor light.

It also has a myriad of design possibilities. Segawa has already experimented with a cell that looks like French President Francois Hollande and one of the computer-generated Japanese pop star Hatsune Miku.

"You can make [solar cells](#) out of animated characters, portraits of real people and lots of other stuff," he said.

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