

Swiss firm says it can make near invisible solar modules

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A Swiss research and development company said Tuesday it had discovered a way to make white solar modules, which can blend with a building's "skin" to become virtually invisible.

The Swiss Center for Electronics and Microtechnology (SCEM), a non-profit company for applied research, said it had developed a new

technology paving the way to making the world's first white [solar modules](#) with no visible cells and connections.

"For decades architects have been asking for a way to customise the colour of solar elements to make them blend into a building's skin," it said in a statement.

The problem with the common blue-black solar modules, built to maximise sunlight absorption, is their "visually unaesthetic" appearance, which tends to hamper their acceptance, SCEM said.

"Currently, the market lacks photovoltaic products specifically designed to be integrated into buildings," it said.

White, the most sought-after colour for its elegance and versatility, is especially tricky because it generally reflects light rather than absorbing it.

To solve the problem, SCEM said it had taken [solar cell technology](#) for converting infrared solar light into electricity and combined it with a special filter that "scatters the whole visible spectrum while transmitting infrared light".

This method, it said, made it possible for crystalline silicon-based solar technologies to be molded into modules that blend seamlessly with building surfaces in any colour, including pure white.

"The technology can be applied on top of an existing module or integrated into a new module during assembly, on flat or curved surfaces," SCEM said.

In addition to use for buildings, it said it expected to see "significant interest" in the technology from the [consumer electronics industry](#), for

use in things like laptops, and from the car industry.

In addition to the aesthetic appeal, white [solar cells](#) have other advantages, SCEM said.

Since the visible, reflected light will not contribute to heat, the solar cells are expected to work at temperatures 20 to 30 degrees Celsius below standard models, it said.

"White PV modules can also contribute to increase energy savings in buildings by keeping inner spaces cooler and reducing air conditioning costs," it said, noting that several US cities had begun painting roofs white for the same reason.

More information: [www.csem.ch/site/card.asp?bBut ...
d=28474#.VE_jFx3F_SY](http://www.csem.ch/site/card.asp?bBut...d=28474#.VE_jFx3F_SY)

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