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# The aesthetics of solar energy

The nanotechnology-based coloured foils developed by Solaxess make it possible to integrate solar energy into buildings without compromising their aesthetics. This unique solution should contribute to a much more widespread use of photovoltaics.

« Solaxess' challenge is not filling its order books but meeting higher and higher demand. »

— Sébastien Eberhard, CEO & Founder



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## CONTEXT

One billion square metres of photovoltaic panels are installed around the world every year. Unfortunately, however, these systems are often aesthetically jarring. To help them integrate better into their surroundings, Solaxess has developed a solution that allows solar panels to be treated like actual construction products. The aim is to encourage a substantial increase in active solar roofs and facades, while respecting buildings' aesthetic criteria.

## TECHNOLOGY

With help from CSEM, in Neuchâtel, Solaxess has developed a technology that allows any photovoltaic panel to be coloured uniformly. It consists of a polymer-based nanotechnology foil that can be integrated directly by manufacturers, whatever the solar cell technology used. The foil is sold in rolls, which are easier to transport and store, and less fragile than pallets of coloured glass. This unique solution – protected by seven international patents – makes it possible to install photovoltaic panels on roofs or facades wherever they are wanted or needed, without spoiling the landscape or ruining the appearance of beautiful buildings, whether they be notable, historic or protected. Beside their aesthetic appeal, coloured solar panels also help to avoid the heat islands generated by large numbers of dark panels in city centres. In 2023, in Lancy, in the canton of Geneva, the four sides of a 55-metre-high residential tower were fitted.

## MATURITY

This cutting-edge BIPV (building-integrated photovoltaics) solution has been in series production since 2022, with a current production capacity of about one million square metres of foil a year. Capacity is set to grow further to meet increasingly strong demand. The nanotechnology foils are being bought by photovoltaic panel manufacturers in Europe and, to a lesser extent, in China and Korea. In 2024, Solaxess has been looking into the possibility of transferring its German production back to Switzerland, either bringing it in house or using local subcontractors. The company has raised CHF 2.5 million in new capital to this end.