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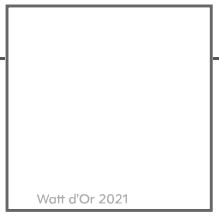
WATT D'OR: SOLAR FAÇADE WITH WHITE MODULES WINS AWARD



Watt d'Or 2021

Two new apartment buildings in a small village on Lake Zurich have convinced the Watt d'Or jury. With this award, the Swiss Federal Office of Energy honours outstanding projects that represent the architecture of the future.

The new apartment buildings in Männedorf, Switzerland, impress the observer with their spectacular architecture. Because they stand out from the architecture of the neighbourhood. But the real innovation is in the detail, well hidden from view. The buildings are completely clad in solar modules. Most of the opaque façade areas are covered with modules, which in turn are covered with reddish-brown solar glass.

WHITE MODULES PROVIDE RELIEF

To lighten the visual weight of the façade, architect René Schmidt, who has also designed a self-sufficient, solar-powered apartment building in Brütten, used white solar modules. This lightening is only possible because of a special technology designed by engineers at the CSEM in Neuchâtel and further developed to market maturity by Solaxess. The company, based in Marin-Epagnier, produces the nanotechnological film from various components. A polymer resin ensures the stability of the film.

COSTS REDUCED

The film is placed between the solar cells and the front glass and thus laminated into the module. The foil ensures that only that part of the visible light is reflected by the surface of the module which is decisive for the colouring. The rest of the incident light spectrum can be used by the solar cells underneath to produce electricity. On the one hand, this makes white modules possible that generate electricity and, on the other hand, reduces losses due to the colouring. In the meantime, Solaxess also has other colours in its portfolio. This allows Solaxess to scale the production of the foils, which, together with the further development in the past year, has ensured that the prices of the foil have dropped by two thirds.

SOLAR TECHNOLOGY DISAPPEARS FROM AWARENESS

The film can be combined with all solar technologies. René Schmid has opted for monocrystalline solar cells. However, these remain completely invisible to the observer because of the foil. The colouring of the remaining reddish-brown modules also makes the solar cells disappear under the front glass.

INNOVATIVE BUILDING CONCEPT WITH ENERGY FLAT RATE

But not only the solar building envelope is an innovation. The energy concept is also worth a close look. It is designed in such a way that the tenants even get an annual energy budget free of charge. You can read what this looks like in a detailed project description, which you can find in the **Solar Age** project database both in German and in English. A dossier on René Schmid's project in Brütten is also posted there. You can use the dossiers after registering free of charge as a Club Member of **Solar Age**. (su)