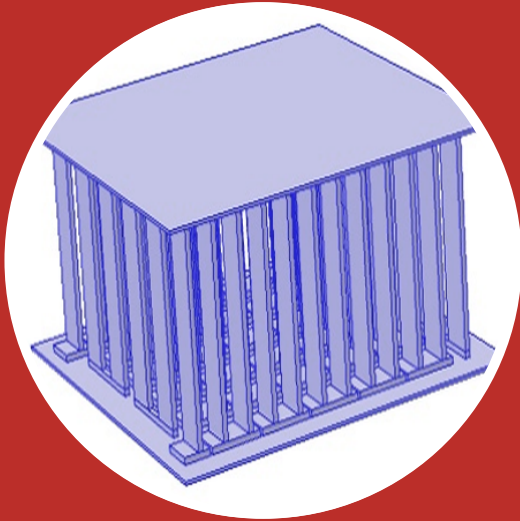


COOLING SYSTEM AND SUPPORT FOR A PHOTOVOLTAIC PANEL

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The invention refers to a drastic simplification of **cooling technology** of the solar cells and that of **thermoelectric conversion**. The integration of the heat exchanger so far separated in the conventional products from the thermoelectric converter, allows for cascading economic advantages in terms of overall costs of the system.

Protection: International

Inventors: Giampietro Fabbri, Matteo Greppi

INVENTION

Being continuously exposed to solar radiation, photovoltaic cells are usually affected by excessive overheating which results in their rapid degradation over time. For the same reason, the energy production efficiency decrease, too. To overcome these issues, the proposed **integrated cooling system** removes heat from the cells during harsh solar radiation times. In comparison with existing products exploiting the Seebeck-Peltier effect, within the patented system the given effect occurs instead internally, to the same heat exchanger acting as a support for the cells.

ADVANTAGES

- Dimension reduction resulting in greater compactness, sturdiness and ease of assembly;
- Greater efficiency of photoelectric conversion of the panels;
- Lower overall costs compared to similar systems.

APPLICATIONS

- In the construction, tertiary and residential sectors, for cooling conventional solar panels.

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