

"Adolf Goetzberger Foundation": necessary profile for an award winner 2025/2026

In addition to his award-winning scientific work, Adolf Goetzberger was passionate about translating scientific findings into a usable product for society. Some outstanding examples are:

- The famous "**Fluko**" (**fluorescent collector**). Here, the incident sunlight - not only the direct radiation, but in particular the diffuse radiation that dominates in our latitudes - is directed onto the end faces. This results in a concentration of the irradiation from the ratio of the irradiation area to the four end faces. Solar modules attached to the end faces then produce electricity.
- As early as 1989, he was already thinking about how the area occupied by the PV modules could be put to additional use, particularly in future large-scale ground-mounted systems. The idea was **agri-PV**, where agriculture could also be practiced under the modules - the dual use. This idea was way ahead of its time, as nobody could imagine open spaces on a terawatt scale back then. Today, this market segment is becoming increasingly important.
- For the realization of PV modules that can be integrated into vertical noise barriers along freeways and train lines in a north-south direction, a project was set up with the previously scientific description of bifacial solar cells (e.g. by Prof. Luque) by Adolf Goetzberger together with TNC in Switzerland with **bifacial solar modules** from ASE (later RWE GmbH) and demonstrated how useful this application is. Interestingly, this type of **vertical north-south mounting** is now also being used in the agri-PV sector.
- The use of **solar energy to power buildings** was important to him - the "Rappenecker Hof" showpiece is a good example of this. He implemented systemic, holistic thinking and the concepts to be developed from it as early as 1990 with the then revolutionary **energy self-sufficient solar house**, in which many new technologies were tested for the first time and brought together in such a way that no grid connection or heat supply was necessary.
- He was also interested in developing technology to reduce energy consumption. The development of **transparent thermal insulation** - which was used as a demonstrator in his private home, is a good example for this.

The jury, which is responsible for the selection, is given the following criteria with the stated weighting:

- 40% Significant, personal contributions to innovations, new concepts/prototypes/processes with scientific and technological excellence to solve a technical and economic challenge in solar energy use with photovoltaics, thermal solar energy use, heat pumps, digitalization for the energy transition such as control/regulation, storage (incl. Power2X), energy efficiency or in a suitable combination. Innovations for optimal grid integration, self-consumption, grid serviceability with high proportions of PV and wind are also possible.
- 30% These are given special consideration in the evaluation:
Maturity, application potential and opportunities for implementation that have already taken place or are expected. The impact on the environment and energy supply in order to be able to change the energy system permanently and sustainably. This with a view to social welfare.
- 15% Quality of the description and comprehensibility of the topic from science to application in a product
- 15% Contribution and function of the person to be honored in the novelty, innovation, visionary concept