

Patented technology for solar power generation

What are the patents for solar cells?

The patents that stand out in this TR are: US20040200520A1 (Metal contact structure for solar cell and method of manufacture), US20050016585A1 (Manufacturing a solar cell with backside contacts), US20060130891A1 (Back-contact photovoltaic cells) and US20070186970A1 (Solar cell and method of fabricating the same).

What are the patents on photovoltaic cells?

The patents on photovoltaic cells are concentrated in the area of semiconductors for the conversion of solar radiation into electric energy, in the area of generators for the direct conversion of light energy into electric energy and in the area of solar panels adapted for roof structures.

How many patents are there for solar modules?

The TR of Mechanisms for Assembling Solar Modules (Fig. 5) is made up of 35 patents, extracted from a cluster of 11,830 patents and 24,174 citations, all of them protected in the USA, and more recently protected in China, EPO, Japan, Canada and the United Kingdom (UK).

How many patents does first solar have?

In the ninth position, with 151 patents, is First Solar, a US company one of the largest manufacturers of photovoltaic solar modules with production units in the United States, Malaysia, Germany and Pakistan.

How has photovoltaic technology developed over the last 30 years?

Photovoltaic technology has developed rapidly over the last thirty years. The main activities of photovoltaic patents began in the late 1950s and the main photovoltaic patent assignees at that time were involved in the space business. Patent data has been widely used in technology assessment and forecasting ...

Which country has the highest number of patent registrations for photovoltaic cells?

Is to identified the technological development of photovoltaic cells by the analysis of patents. The main depositor countries are the USA, China, Japan, Germany and South Korea. American and Japanese organizations stand out with the highest number of patent registrations.

There is a prominence of deposited patents for polymer-based photovoltaic cell technologies, carbon nanostructures, III-V compounds, CdTe and amorphous silicon cells. The objective of this article is to identify the technological development of photovoltaic cells by the analysis of patents.

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The analysis shows that 95% of the PV patent applications were filed by inventors from seven countries: Japan, Korea, China, USA, Germany, Taiwan, and France. ...

Solar thermoelectric generators (STEGs) are solid state heat engines that generate electricity from concentrated sunlight. A novel detailed balance model for STEGs is provided and applied to...

MIAMI BEACH, Fla., Nov. 19, 2020 -- A& I Power, a company dedicated to developing sustainable innovations to help combat today's climate issues in power generation, today announced the launch of ...

The modules use the company's latest TOPCon cell for which it recently claimed 26.50% average mass production efficiency. DAH uses high-blocking encapsulant for its latest offering along with the latest laser-enhanced contact optimization (LECO) metallization technology. "Full-Screen Double-Glass PV Modules have a remarkably high bifaciality rate of ...

Historically, silicon-based solar cells have required high amounts of energy input to manufacture, both through mining and high-temperature industrial processing. Organic ...

The promise held by solar energy as a renewable resource has fueled investigations of all the aspects that may improve the performance of photovoltaic cells. A variety of approaches have been...

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