

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.

What are the patents for solar panels?

It is noted that the patents US20040163338A1 (Low profile mounting system), US20060086382A1 (Mechanism for mounting solar modules) and US20110209745A1 (Photovoltaic framed module array mount using asymmetric rail) have great influence on this route due to their BC and were developed respectively by Unirac Inc, PVT Solar Inc and GE. Fig. 5.

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 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).

What role do patents play in renewables?

As with other sectors, patents play a central role in protecting rights in technology. Within renewables, most investment continues to be in solar and wind power.

Does PV technology have a role in patenting?

The technical review of these patents has shown the global continuous efforts for improving PV technologies and addressing their technical challenges. Taken together, the results show that the PV technological system has been deeply connected with patenting activities since its emergence in the past century.

Solar Energy Patents Case Study: First Solar. First Solar, a leading solar technology company, has developed numerous patents related to thin-film photovoltaic cells. ...

George Cove had a patent for his solar energy device and a registered company called "Sun Electric Generator Corporation". Cove's invention could produce electricity by ... using solar ...

Energy Independence: Utilizing solar energy reduces dependence on non-renewable energy sources, promoting energy independence for individuals, communities, and nations. Check Detailed Info on ...

The purpose is to guide Europe's clean energy transition to success, in part through setting out the current performance of PV technology and explaining why and how to go further. In our latest article on PV innovation, we discuss some ...

An object of the invention is to harness solar energy for creating electrical energy in an economical and efficient manner. By utilizing solar energy when available to charge a storage ...

solar panels cost about the same price if you were to use non solar energy also solar panels need all sorts of hard to find things and bad materials. Further more, it is ...

Figure 1 shows a 10-year overview of PV patenting activity, specifically the number of patent families (independent of jurisdiction) published per year from 2012 to 2022. ... A recent paper ...

With 366 citations and a PIF of 24.4, the patent entitled "Solar module mounting method and clip" is the most influential patent within the solar panels group [89]. It ...

Patent systems exist to encourage innovation by providing a government-granted monopoly in return for public disclosure of new inventions. Thus, analysis of published ...

The majority of the patent applications are in solar power since 2009. There were 2691 PCT patent applications in solar power technology in 2012. Patent applications involving solar ...

oSolar, Wind and Bioenergy accounts for 90% of the patents in renewable Energy in 2016 oSolar is the leading technology with 55% of patents in 2016 oAll the renewable energy technologies ...

Aimed at decision-makers in both the private and public sectors, this report is a unique source of intelligence on the innovation trends across the energy system, in particular ...

Back in 2021, the rise of patent disputes relating to solar technology was already an emerging trend, with a further uptick in related litigation widely predicted. The surge in ...

As with other sectors, patents play a central role in protecting rights in technology. Within renewables, most investment continues to be in solar and wind power. For instance, a ...

A green patent is granted for green technology or environmentally friendly technology, like waste, wind power, geothermal energy, solar energy, tidal power, and ...

Any U.S. patent or patent application that was directed to green energy technologies was eligible for this award, including in the areas of wind, solar, green hydrogen, ...

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