

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.

What is the technological system of solar photovoltaics?

2. The technological system of solar photovoltaics The PV technological system is a power system comprising a sequence of interconnected components that work together to convert sunlight energy into electricity, utilize the generated energy, store it, or invert it ( Fig. 1 ).

What is the technological knowledge basis of photovoltaic-thermal system?

The technological knowledge basis of this route is constituted by patents on solar cells with an integrated diode and bypass method, passing through photovoltaic panels with individually articulated concentrating elements and patents on receivers for concentration of photovoltaic-thermal systems. 5.2.4.

Why are photovoltaic cell patent registrations important?

Photovoltaic cell patent registrations are a valuable data set in the analysis and diffusion of PV technology and R&D activities. The dynamics of PV R&D activity is considered high, documented in a large increase in PV patent documents .

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.

Renewable energy, particularly solar photovoltaics, is getting cheaper." The most notable trend since 2002 is the growth of solar technology. In 2002, solar accounted for just over a quarter of published PCT applications for ...

Photovoltaic panel (or solar panel) comprising at least one luminescent solar concentrator (LSC) having an upper surface, a lower surface and one or more outer sides; at least one ...

2016-07-01 Priority to US15/738,156 priority patent/US20180315884A1/en ... The reactor allows the

treatment of piece of PV panel with one solar cell height and three solar cells length to be ...

This review examines the technological surveillance of photovoltaic panel recycling through a bibliometric study of articles and patents. The analysis considered the number of articles and ...

Patent(s) (pop-up blockers must be disabled) 9,117,948 9,418,844. Papers ... Various solar panel designs can be constructed that include active, cooling, and solar absorbance layers with tailored characteristics. ... Such multifunctional ...

What if you could purchase one of your favorite PERC solar panels, but with an added 2 or 3 Watts per panel and a 0.1 percent efficiency gain? ... We're writing about it again ...

The development of solar panels and solar technology has continued to progress over the years to modern times. Many thousands of subsequent patents have been filed that incorporate photovoltaic systems, ...

Patent(s) (pop-up blockers must be disabled) 10,930,812. ... Flexible and Printed Electronics 8 (2023): Tags: Photovoltaic panels solar cells additive manufacturing 3D printing robotic flexible ...

A solar cell manufactured from this new optical fiber has photovoltaic (PV) material integrated into the fiber to enable electricity generation from unused light, including non-visible portions of the spectrum and visible light not transmitted ...

The U.S. solar panel manufacturer has sent letters to Longi, Trina Solar, Jinko Solar, JA Solar and Canadian Solar saying it believes the companies are infringing on its patents.

Photovoltaic (PV) power generation has become a key area for investment worldwide. Solar PV panels are the core components of PV power generation systems, and the accumulation of soiling on their ...

U.S. solar panel manufacturer First Solar on its Q3 earnings call told analysts it has issued letters through its attorneys to major solar manufacturers, warning that it believes ...

