

Solar Energy South Africa

Photovoltaic panel planting patent



Overview

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.

Who invented a photovoltaic cell?

In 1954, Bell Labs' Daryl Chapin, Calvin Fuller, and Gerald Pearson created a silicon single-crystal photovoltaic (PV) cell capable of about 6% conversion efficiency with direct sunlight, enough to power an electric device for several hours of a day. 15 Their patent, US patent no 2,780,765, issued in 1957.

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 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.

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 , , , .

Are photovoltaic cells a technological development?

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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Solar Power: An Overview of the Patent Landscape

If you're innovating in the solar industry, patents will be a primary tool for legally protecting your IP. This is because solar power systems can typically be reverse engineered by competitors, which means you can't ...

Patenting trends in renewable energy

The granting of patents, however, remains under the control of national or regional patent Offices. Increasing the use of renewable energy is key to limiting global warming to 1.5°C. Under the PCT system, a patent applicant can file an ...



A study of solar photovoltaic systems and its applications in ...

Finally, a stable PV power generation technique for PV generation systems is proposed which is a novel MPPC technique applied to the PV generation system integrated with a supercapacitor ...

???????????????????? ?EN?Method for planting ...

?EN?The invention discloses a method for planting polygonatum cyrtoneura under a

photovoltaic power station, which comprises the following steps: selecting a photovoltaic ...



Technological Advancement in Solar Photovoltaic ...

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 patents published per ...

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