

# About Solar Power Generation Patents

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 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.

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 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 most patent documents on photovoltaic cells?

The evolution of the total number of patent documents on photovoltaic cells per country in the period from 2004 to 2013 is shown in Fig. 7. It can be seen that the first two positions are occupied by the United States and China respectively, followed by Japan, Germany and South Korea. Fig. 7.

What is a solar thermoelectric generator (Steg)?

Abstract: A solar thermoelectric generator (STEG) is disclosed. A STEG includes a thermoelectric generator (TEG) configured to convert light energy from solar light into electrical energy, and a heat transfer structure coupled to the TEG where a portion of the heat transfer structure is configured to be embedded in the earth.

Solar power generation is a sustainable and clean source of energy that has gained significant attention in recent years due to its potential to reduce greenhouse gas emissions and mitigate ...

What is needed is a portable, modular solar power generator with energy storage capacity and an energy management system to process both direct current (DC) and ...

India is a fast-developing solar industry with a solar installed capacity of 66.97 GWAC as of the year 2022 and ranks fourth globally in 2021 in solar power generation. India has a solar potential of about 748 GW, assuming 3% of ...



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According to Nature Communications, solar power is currently on track to become the world's dominant source of power by 2050. If you're innovating in the solar industry, patents will be a primary tool for legally ...

Innovation in renewable energy and decarbonisation-related fields has exploded, with patenting activity at the European Patent Office in low-carbon energy (LCE) technologies overtaking that in fossil fuels around the year 2000. Renewable energy includes solar and wind energy, as well as marine, hydro and geothermal energy. Alternative fuels ...

What is needed is a portable, modular solar power generator with energy storage capacity and an energy management system to process both direct current (DC) and AC power and the capability to form a micro-grid power system.

The space-based solar power generating system is comprised of a flexible thin film photovoltaic sheet supported as a sail in the solar wind. The solar wind provides pointing support, deployment support, and structure stiffness without a heavy backup structure. A high Isp electric propulsion system is used to counteract the force exerted on the sail by the solar wind.

There are two main technologies for solar power generation: solar photovoltaics and solar chimney technologies. Solar photovoltaics convert sunlight directly into electricity via photovoltaic cells. They can be ground ...

This application claims the priority of Korean Patent Application No. 10-2021-0060637 filed on May 11, 2021 and Korean Patent Application No. 10-2021-0100325 filed on Jul. 30, 2021, in the Korean Intellectual Property Office, the disclosure of which is incorporated herein by reference. TECHNICAL FIELD. The present disclosure relates to an agrivoltaic forecasting ...

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Arc detection and prevention in a power generation system US10673229B2 (en) 2010-11-09: 2020-06-02: Solaredge Technologies Ltd. Arc detection and prevention in a power generation system USD895539S1 (en) \* 2018-06-12: 2020-09-08: Sirius Instrumentation And Controls Inc. Support structure

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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.

solar power generation is a photovoltaic effect (photovoltaic effect) in which an electromotive force by electrons/holes is generated by light energy when n-type doping on a...

Web: <https://nakhsolarandelectric.co.za>

