

Who has the patent for solar power generation

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.

When was solar energy invented?

Research continued, centered in France and spreading elsewhere, on thermal energy generation from solar radiation. In 1860, Augustin Mouchot, a French mathematics professor, began working on solar energy after becoming gravely concerned about France's dependence on coal.

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.

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.

Who invented the solar cell?

In 1941, Russell S Ohl at Bell Labs invented the first silicon solar cell, securing US patent no 2,402,662 on his invention. In the '662 patent, Ohl described a process of forming a silicon ingot using silicon of a high degree of purity, ideally around 99.85%.

How many patents does General Electric have?

General Electric (a US multinational service and technology company) with 171 patents is in eighth position. GE Renewable Energy works with power generation and storage in hydroelectric power plants, wind and land-based wind turbines, solar panels, and innovative technologies such as biomass and tidal power.

The development of renewal sources of energy (such as solar, wind and tidal) is essential to tackling the climate crisis. What can we learn about them from looking at patent data? The past decade has seen unprecedented investment in ...

So far in 2017, 334 patents have been approved, including Google's technology for an antenna with a solar panel, an LG Innotek solar cell apparatus, a General Electric system for reducing vibration in a wind turbine, a wind turbine blade ...

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The utility model discloses a vehicle-mounted solar-energy filtering power generation device, which can improve the photoelectric conversion efficiency effectively. The device comprises ...

Solar energy generation vs. capacity; Solar power generation; The cost of 66 different technologies over time; The long-term energy transition in Europe; Thermal efficiency factor applied to non-fossil energy sources to convert them ...

The invention relates to an electric pencil sharpener using solar power generation as a power supply, and belongs to the application technical field of new energy resources. The electric ...

Solar power systems and their related technologies have developed into a globally utilized green energy source. Given the relatively high installation costs, low conversion rates and battery capacity issues, solar ...

Solid particles are generally considered to be the most suitable heat transfer fluid (HTF) and thermal energy storage (TES) materials for the next-generation concentrated solar power ...

Oxford, 9 August 2024, Scientists at Oxford University Physics Department have developed a revolutionary approach which could generate increasing amounts of solar electricity without ...

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Based on a forward citation impact factor analysis, the paper has identified ten patent applications belonging to the various PV groups as the most influential innovations. The ...

The framework for tracing the biomass power generation technology development and trajectory is shown in Fig. 1, which shows the data collection, growth curve analysis, and path analysis research steps. The data ...

The present invention relates to a solar power generator provided in a vehicle. The solar power generator includes: a mounting frame fixed and combined with a roof frame, and including an ...



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