

Who applied for the patent for solar power generation

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%.

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. Their patent, US patent no 2,780,765, issued in 1957.

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.

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.

Where do PV patents come from?

Geographically, the analysis shows that 95% of PV patents were filed by inventors in seven countries: Japan, Korea, China, USA, Germany, Taiwan, and France. Despite the higher quantity of patent applications filed by East Asian countries, the international business potential of their patents is still far behind their Western counterparts.

Which countries have filed PV patent applications?

Finally, the geographical, organizational and technical trends over the past six decades are analysed along with a review of the most influential inventions. The analysis shows that 95% of the PV patent applications were filed by inventors from seven countries: Japan, Korea, China, USA, Germany, Taiwan, and France.

Over the next decades, solar energy power generation is anticipated to gain popularity because of the current energy and climate problems and ultimately become a crucial part of urban infrastructure.

The analysis shows that 95% of the PV patent applications were filed by inventors from seven countries: Japan, Korea, China, USA, Germany, Taiwan, and France. Most patents were filed by companies and related to thin-film and crystalline-silicon cells as well as panel encapsulation and supporting structures.

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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 Kinetics Associated Mass Mechanical Applications (KAMMA) -- heat, work and internal energy transfers from one object to another -- are applied to KAMMA gear flywheel power generation method ...

This article investigates different technological innovations on solar PV energy. For this, patents on PV technologies classified as green energies were selected in the IPC Green Inventory, which were treated using SNA techniques to obtain the results. Thus, it was possible to characterize the evolution of patents, the configuration of TR and ...

Between 2010 and 2019, Asia accounted for 50% of all renewable energy PCT patent applications, 61% of which were for solar energy, whilst the US accounted for 20%, of which 61% were for solar, and Europe accounted for 28%, of which 37% were for solar. However, it is the increase in photovoltaic patent applications from China that is most stark ...

In 1860, Augustin Mouchot, a French mathematics professor, began working on solar energy after becoming gravely concerned about France's dependence on coal. In 1861, he filed for a French patent on the use of concentrated solar radiation to heat water, and continued registering patents through the 1870's.

In the late 1970s, he provided visionary research into fluorescent planar collector-concentrators for solar energy conversion, which could revolutionise efficiency levels of solar power generation. In 1981, he founded the Freiburg-based ...

According to the ranking list, LG Group, Jinko Solar and AIKO Technology rank the first, second and third place respectively, with 1,360 patents, 1,101 patents, and 931 patents accordingly,...

A solar power generation system is provided for more efficiently and cost-effectively generating and delivering power. The solar power generation system includes a plurality of distributed ...

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 protect them as trade ...

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Recent analysis in the Huainan City of China noticed that there was an increase in land surface temperature by 1.24 °C for a radius of 200 m of the floating solar park [].After the review on the thermal aspects of FSPV, Michile [] revealed that though if the temperature of water is higher than the ambient temperature, cooling occurs due to the high U ...

A solar power generation system is provided for more efficiently and cost-effectively generating and delivering power. The solar power generation system includes a plurality of distributed power converter nodes each configured to convert DC power received from a solar module into a deadband DC waveform. The deadband DC power generated by each ...

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