Developing countries apply for solar charging patents

How many patents are there for solar modules?
The TR of Mechanisms for Assembling Solar Modules (Fig. 5) is made up of 35 patents,extracted from a cluster of 11,830 patents and 24,174 citations,all of them protected in the USA,and more recently protected in China,EPO,Japan,Canada and the United Kingdom (UK).

What are the patents for solar cells?
The patents that stand out in this TR are: US20040200520A1 (Metal contact structure for solar cell and method of manufacture), US20050016585A1 (Manufacturing a solar cell with backside contacts), US20060130891A1 (Back-contact photovoltaic cells) and US20070186970A1 (Solar cell and method of fabricating the same).

Which countries have the most PV patents?
Contributions include that the general statistics of PV patents confirmed China,Japan and the USAas the main application countries for this type of technology. It is worth mentioning that the representativeness of technological production in Asian countries reached 69% of the total PV patents.

Which countries have the most emerging technologies on PV energy?
It can be seen that the routes are predominantly American and Japaneseand that these countries currently provide the main technological bases for the most emerging technologies on PV energy,since they have invested in advance in the development of this type of technology over the last few years [67].

Which country has the most patent applications in 2022?
Click to enlarge Overall,Asia accounted for more than two thirds of all patent applications in the area in 2022,with more filings coming from applicants in South Koreathan from those in Japan,traditionally the leading country of origin.

Which countries are experimenting with organic PV cells?
Research limited to organic PV cells and patents applied only in South Korea,USA,Europe,China and Japan. Emerging PV technologies tested and developed on a smaller scale (Dye-sensitized TiO2,Thin-film Si and Organic PV). Points out how technologies are still being studied and developed (Perovskite,CZTS and Quantum dots).

Request PDF | Techno-economic assessment of photovoltaic-based charging stations for electric vehicles in developing countries | Many countries are planning their transition to renewable-energy ... Home electricity storage

This application also provides a solar charging station suitable for charging electric vehicles with the system

device for charging electric vehicles using solar energy, including: the...

With that in mind, it"s important to better understand the current global landscape for solar technology. Top solar patent filers by country. According to the WIPO, in the last decade (2010-2019), these five countries were the top filers of solar patent applications: Japan (5,360) United States (3,876) China (1,892) Republic of Korea (1,803)

Toyota Motor, Kia, Hyundai Motor, Panasonic, and Hitachi are among the key patent filers in electric vehicle charging systems. Hitachi announced a sustainable mobility partnership with Clever to ensure Denmark"s EV adoption is powered by 24/7 renewable electricity with advanced energy management and optimization solutions, underpinned with ...

BACKGROUND OF THE INVENTION 1. Field of the Invention. The present invention relates to a solar powered electric vehicle charging station, and more particularly, to a charging station which receives solar sourced electricity and grid sourced electricity for storage, having a microprocessor center for controlling a load center which prioritizes the aggregated ...

Overall, Asia accounted for more than two thirds of all patent applications in the area in 2022, with more filings coming from applicants in South Korea than from those in Japan, traditionally the leading country of origin. South Korea"s LG Group and SK Group more than doubled their filings compared to the previous year, as did Japan"s ...

Germany and other European countries as well as some developing countries have also developed a corresponding development plan. Since 1990s, the United Nations held a series of summit meetings attended by national leaders of various countries, discussing and formulating the world solar energy strategic planning as well as international solar energy convention, ...

Behind these transformative patents lies a vision to transform EV charging paradigms, especially in regions like India and other countries adopting the GB/T Bharat DC 001 standard and these patents absolutely act as act as major contributors in developing India"s EV charging infrastructure, fueling a future where accessibility and innovation converge seamlessly.

Economic growth, particularly in developing countries, is heavily driven by energy. The generation of clean and green energy for sustainable development and progress has become possible due to the depletion of fossil fuels, significant environmental concerns, and sudden changes in climate [1].When electric vehicle charging stations (EVCS), sufficient ...

Financing LED solar home systems in developing countries. About 1.4 billion people (or roughly 22% of the world""s population) around the world, most of whom lived in remote areas, still do not have access to the regular electricity [1], [2].The International Energy Agency (IEA) estimates that roughly 85% of the people

without electricity live in rural areas in developing countries, mostly ...

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"Geographic reach" refers to the number of countries each patent is registered in. It reflects the breadth of geographic application intended, ranging from "global" to "local". Toyota Motor, Kia, Hyundai Motor, Panasonic, and Hitachi are among the key patent filers in electric vehicle charging systems.

The present disclosure can be applied to a solar charging system, such as a vehicle which utilizes power generated by a solar panel.

the purpose of the present invention is to provide an electric vehicle charging system relying on solar energy to generate electricity, which aims to overcome the above shortcomings and solve...

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This framework aligned with global trends in climate change mitigation, providing developing countries like Pakistan with a practical solution. The results indicated a 10-kW, AC power output at 240 V coupled with an ideal 50 kWh EV battery rating, which was achieved for EV charging. The output parameters, including current voltage and power output of solar PV, ...

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