New energy batteries have patents

Why do we need a patent for new energy vehicle battery technology?
Given the core and innovation of new energy vehicle battery technology,patent application,and authorization have become an important driving force to promote technological progress and industrial development.

How many new energy vehicle power batteries are patented each year?
The number of collaborative patent applications for new energy vehicle power batteries increased from 4 in 2008 to 72in 2011,indicating a consistent trend of growth. During the initial phase of patent collaboration,the level of cooperation was minimal,with only 4 patents filed annually,reflecting an early stage of innovation.

What is new energy power battery technology?
New energy power battery technology is a highly patent-intensive field,and patent protection and cooperation are crucial to the development and application of the technology. Patents are the result of technological innovation and an important indicator of technological innovation behavior (Archibugi 1992).

Are battery patents growing?
Overall,a considerable increasein annual battery patenting activity is observed from 2000-2009 to 2010-2019. Second,we also found that four battery technologies - redox-flow,solid-state,sodium-ion,and lithium-sulfur batteries - have displayed vibrant growth in recent years.

How many battery patents are there in the world?
Over 90,000battery inventions from the period 2000-2019 analyzed. Patent data explored from technometric and textmetric perspectives. Global battery patenting activity growth mostly originating in Asia. Three country clusters emerge with different circularity potentials. Battery advances so far suggest incomplete circular transition.

Are new energy power battery patents cooperating in different provinces?
Subsequently,a thorough analysis is conducted to examine the spatial patterns of patent cooperation within each province specifically about new energy power batteries. Figure 4 shows that the total number of provinces involved in new energy power battery patent cooperation is increasingthroughout the three stages.

In 2022, more than 320 new patent applicants entered the solid-state Li-ion battery-related patent landscape, with three-quarters filing only one patent family (i.e., unique invention). Most of these IP newcomers are Chinese companies ...

Solid-state Li-ion batteries have garnered significant attention in recent decades due to their notable advantages of safety and potential for high energy density. Solid electrolytes (SE) with rapid ionic transport and excellent stability are essential for the commercialization of this promising next-generation of Lithium batteries.

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More than 300,000 patent families related to batteries have been published worldwide since the early 1990s. In 2017, more than 30,400 new patent families were published, 30,900+ patents ...

Additionally, the IP analysis allowed us to pinpoint over 60 IP newcomers who filed their first halide-related patents in 2022 or after: EVE Energy, Korea Electronics Technology Institute ...

CALB is seeking damages totaling RMB 1.007 billion (EUR130 million). The lawsuits target CATL, its subsidiary Sichuan Times New Energy Technology Co., as well as Tesla"s Wuhan sales service company, Zeekr"s ...

This study builds on battery patents that can roughly be characterized in the following way: (1) inventions related to the casing, wrapping, or covering, i.e., non-active parts ...

Specifically, we reveal that patent filings in batteries and electricity storage have soared over the past ten years, at an annual growth rate of 14% versus just 3.5% on average i - highlighting a ...

Knowmade just released a new Solid-State Li-ion Batteries Patent Landscape report to offer a complementary understanding of the battery competitive landscape, its ...

In 2017, several new entrants such as Ningbo Jidianxin New Material Technology, Suzhou Sichuangyuanbo Electronic Technology, Dongguan Jiaqian New Mat Technology and China Electronic New Energy Research Institute ...

Sunrise New Energy Announces Breakthrough Achievement in Sodium-ion Battery Hard Carbon Composite Material with Approval of Invention Patent by National Intellectual Property Office

Due to increasing concerns on climate change, air pollution, and associated public health, China"s new-energy-vehicle (NEV) industry has received great support and experienced rapid development. Many patents have been approved and applied in this field to support its rapid development. However, few studies investigated the evolution of these patents.

Amount of batteries and other energy storage needs to grow fiftyfold by 2040 to put world on track for climate and sustainable energy goals; Electric vehicles now main drivers of battery innovation ; Advances in ...

Batteries have the potential to contribute significantly to a greener and more sustainable future, and so are a critical sector in the drive to net zero. What do the latest patent statistics reveal about innovation in the ...

Moreover, redox flow batteries are emerging as the most exciting new battery technology for grid storage, with patent activity doubling since 2014, to 894 in 2019 (also above). Hence we include notes on ESS Inc. A description of each ...

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Proportion of R& D personnel for new energy vehicle patents 2.4. The Direction of Technology Research and Development Is Mainly Concentrated in the Field of Power Batteries In general, the power ...

Particularly, among the eight new energy fields analyzed, solar energy, energy storage and hydrogen have the largest research output in the period of 2015-2019, demonstrating the focus on these ...

Web: https://batteryhqcenturion.co.za