

Is it difficult to patent lithium battery technology

Should you consider battery technology before filing a patent?

Considering certain key technical elements of battery technologies before pursuing a claim -- or even before filing a patent -- can help prepare patent holders and their legal teams to assert ownership of an intellectual property asset efficiently and effectively when it matters most.

Are lithium-ion batteries patentable?

Frequently, patent filings for lithium-ion batteries cover a novel component material (e.g., an electrolyte formulation) or novel combination of component materials (e.g., solid-state battery architecture).

What is a battery patent?

The claims in these types of patents typically list specific formulation requirements, including details about the individual components in their initial form (raw materials) or upon assembly of the battery (e.g., concentration of electrolyte salt).

Are alternative battery chemistries getting more patents?

Between 2012-2021, the number of patent families filed in CPC class H01M10/054,13 which relates to alternative battery chemistries, has steadily increased. The trends follow those seen for redox flow and solid-state battery technology, with a steady growth in the number of patent families filed in this class.

Could AI replace lithium ion batteries?

That's the question that Focus, a predictive AI analysis platform, aims to answer in its latest report: an analysis of 12 different battery types in development that could potentially replace the current lithium ion batteries in use today.

Could graphene be the next big disruptor of lithium-ion batteries?

The analysis found that current lithium-ion batteries, NCM and LFP, are here to stay for the foreseeable future, as they are continuing to progress rapidly and are already cleared for use. But graphene, an unexpected contender, could be the next big disruptor. "If there is one battery technology to keep an eye on, it is graphene," Focus says.

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Battery technology developers are obtaining patents for innovations across all parts of the cell and battery to maximise their commercial positions. Continued growth in patenting activity is evident and proving very effective, particularly for start-ups and smaller businesses, where protection for very specific aspects of a battery or cell ...

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A new report analyzes patent data for 12 battery types and predicts which is most likely to disrupt the industry with ultra-fast-charging and next-level range. What kinds of batteries will...

The growth and spread of rechargeable batteries are reflected in an increase in patent applications in battery technologies, which have grown at a much faster rate than patent applications overall (Figure 1). Battery patent applications ...

Alternative Chemistries . Research and development focusing on alternatives to lithium-ion technology is also progressing. For example, sodium and aluminium chemistries provide two potential alternatives to traditional lithium-based battery chemistries. 10 One reason for the interest in alternative battery chemistries is based on supply chain issues relating to ...

What to Avoid When Disposing of Lithium-Ion Batteries. Remember that you should never throw lithium-ion batteries in the trash. If they end up in landfills, they can leak harmful chemicals like lithium salts and cobalt, or even start underground fires, which are difficult to control and dangerous for the environment.

It is the battery in your electric car that determines how far you can drive on one charge and how quickly you can re-charge. However, the lithium-ion battery, the most widely used electric car battery today, has its ...

"Lithium-Ion Battery Systems and Technology" published in "Encyclopedia of Sustainability Science and Technology" ... Goodenough was the first to patent LiCoO_2 as a lithium intercalation cathode material in 1980 and H. Ikeda of Sanyo was the first to patent an intercalation material in an organic solvent such as graphite in 1981 . S. Basu of Bell Laboratories filed an US patent in ...

Within the battery domain, lithium-sulfur technologies were identified as emerging on the academic side, whereas multi-power systems were emerging within industry research. Several papers use patent data for the study ...

Figure 5 presents critical timing metrics for the patent process in SSB technologies, ... Current solid-state batteries are costly, complex, and difficult to produce at scale. Existing production methods for critical materials such as lithium sulfide (Li_2S) and sodium sulfide (Na_2S) are inefficient, generating impurities and facing challenges with large-scale ...

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Methodologically, this article is based on the research of Fan et al. (), related to obtaining solar energy. As indicated in Fig. 1, about the methodological process, this study was carried out by consulting the database of

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the European Patent Office (EPO) (), called Global Patent Index (GPI), through a language of this platform. Specifically, the data collected pertained to lithium batteries ...

Unlike lithium solid-state batteries, solid-state batteries based on potassium and sodium silicates have a low TRL (Technology Readiness Level). This means there is still a long way to go from discovery in the lab to getting the technology out into society and making a difference. The earliest we can expect to see them in new electric cars on the market is 10 ...

The major patents governing LFP and its use as a cathode material in lithium-ion batteries expired at or before the end of 2022, making widescale global production ...

It's pretty commonly accepted that our current lithium ion battery technology is a huge limiting factor in a number of technological areas from... Skip to main content. Open menu Open navigation Go to Reddit Home. r/explainlikeimfive A chip A close button. Get app Get the Reddit app Log In Log in to Reddit. Expand user menu Open settings menu. Log In / Sign Up; ...

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