Silicon Energy Battery Patent

What is the silicon anode batteries patent landscape report?
To meet this need,the Publisher is releasing a new Silicon Anode Batteries Patent Landscape report,which aims to clarify the current positions of IP players,analyze their IP strategies,and reveal where industry leaders,newcomers,and start-ups are focusing their R&D efforts. Key Features of the Report:

Are silicon-based anodes the future of Li-ion batteries?
Today,the use of silicon-based anodes in Li-ion batteries is becoming a reality,with billions od dollars flowing into silicon anode start-ups (IDTechEx,2021) and a market for silicon anode material for Li-ion batteries projected to reach $24 billion by 2034 (IDTechEx,2024).

Which battery manufacturers offer silicon anode Li-ion cells?
Likewise, several battery manufacturers have announced the commercial availability of silicon anode Li-ion cells, including Amprius, Sionic Energy (formerly NOHMS), Farasis Energy, Enovix, StoreDot, Samsung, Panasonic, PPES (a joint venture between Toyota and Panasonic), Murata, and Enevate/EnerTech.

Who makes silicon active materials for Li-ion batteries?
Several material manufacturers,such as Advano,Sila Nanotechnology,Elkem,Group14,NanoGraf,OneD Materials,and Nexeon,have announced the commercial production of silicon active materials for Li-ion batteries.

How many patent families are there for Li-ion battery anodes?
Among battery materials manufacturers,Showa Denko holds the 2nd largest number of newly published patent families related to Li-ion battery anodes since 2018 (117) behind Shanshan. 8 of these patent families are also related to solid-state or semi-solid electrolytes.

How much does ONED battery science cost?
Highly attractive process costs of around USD 19.7/kg Si (USD 1.67/ kWh) have been claimed by OneD Battery Sciences to be feasible at large scale, which drive evaluation efforts in the context of EV applications (not only niche applications). use of a variety of solvents and polymer additives). Because the use of solvents and solvent

The 2024 edition of the "Li-ion Battery High-energy Silicon Anode Innovation & Patent Review" by b-science is now available. This review is designed for R& D, IP, product management, business development and VC decision makers involved with the prospective launch of novel Si-based negative electrode materials and corresponding Li-ion battery cells.

1. Pure silicon anode. 2. Electrolyte. 3. Cell design. Enevate uses an innovative, multi-layer design that allows us to safely pack more energy into a single cell, because our XFC-Energy ® ...

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Enevate has more patent families directed to silicon battery technologies than all of our competitors combined". Enevate"s 100 th issued patent, US Pat. No. 11,075,408, was granted on July 27, 2021, and is entitled ...

StoreDot"s patent portfolio reveals their key developments for each component to achieve a fast-charging battery with good energy and power performances, lifetime ...

Jiuhuan Energy Storage Technology is a battery manufacturer founded in 2003. Its ten patent families are related to solid-state battery cells with undefined solid electrolytes. Liwei Energy Technology is a battery ...

urrounding use of silicon nanowires in energy storage devices. They identify companies ...

Based on a unique AI-supported approach, this review highlights commercially relevant ...

High Energy Density and Specific Energy Silicon Anode-Based Batteries ... Sunnyvale, CA 95136 ionel@amprius / 1-510-512-5484 Abstract: Amprius" unique, patent-protected, silicon nanowire technology addresses swelling by enabling ... increase in cathode capacity will be enhanced in a silicon battery due to the higher percentage of cathode ...

NEO Battery Materials is a Canadian battery materials technology company focused on developing silicon anode materials for lithium-ion batteries in electric vehicles, electronics, and energy storage systems. With a patent-protected, low-cost manufacturing process, NEO Battery enables longer-running and ultra-fast charging batteries compared to ...

Samsung, LG Chem/LG Energy Solution, Panasonic/Sanyo, ATL, COSMX, Nexeon, Enevate, Ionobell, Enwires Focus on start-ups and pure players 58 oMapping of 290+ startups and pure players involved in the silicon anode battery patent landscape oChinese startups and pure players oSouth Korean startups and pure players

4 ???· Preview of the "Li-ion Battery High-energy Silicon Anode Innovation & Patent Review", including decision tree on nano-silicon synthetic processes, manufacturing process ...

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