

Does influit have a higher energy density than Li-ion batteries?

Influit also claims that its Gen1 system has a volumetric energy density 23% higher than Li-ion batteries, falling between 350~550 Wh/l, and promises that the Gen2 under development has 4-5 times higher energy density than Li-ion batteries at a cost of only one third of that.

What makes influit energy a good battery?

Influit Energy's nanoelectrofuel, an aqueous suspension, eliminates the risk of fires or explosions, ensuring safety and reliability. The battery's wide operational range and ability to be recharged with various energy sources make it a promising contender in the sustainable energy landscape.

What is influit energy doing with DARPA?

Influit Energy has two separate projects underway with DARPA. One is focused on demonstrating the effectiveness of the batteries in a utility electric vehicle, and the other is a study looking at how to optimize and scale up the manufacturing of the NEF batteries. The goal is to reduce the mass and volume of the batteries.

Are liquid flow batteries better than Li-ion batteries?

Liquid flow batteries, such as those with a 23% higher energy density than the best Li-Ion batteries, are more efficient in generating electricity. They rely on fluids, called nanoelectrofuels (NEF), instead of the solid electrodes used in Li-Ion batteries. Liquid flow batteries have been researched for many years.

What are the advantages of a liquid flow battery?

A liquid flow battery offers several advantages besides the higher energy density. Its fuels are non-flammable and non-explosive. If they accidentally mix, nothing happens except a slight temperature rise by a few degrees. The liquid battery is also much cheaper because it does not use rare materials.

How does a flow battery generate current?

In the flow battery design, anolyte and catholyte liquids are passed past each other on either side of an ion exchange membrane to generate current. The electrofuels in this system flow like motor oil due to the nanoparticles being surface-modified to prevent agglomeration and reduce viscosity.

Flow batteries are a cutting-edge technology that has the potential to revolutionize energy storage. These batteries, also known as redox flow batteries, offer high energy density and are becoming increasingly popular in the renewable energy sector.

The Influit liquid flow battery has an impressive performance, with 23% higher energy density by volume than lithium-ion batteries - that's somewhere between 350-550 Wh/l at the system level...

The Illinois Institute of Technology Chicago (IIT) startup Influit Energy has developed five separate projects as components of an innovative closed-loop energy ecosystem. "We have created a new flow battery based on our invented composite electrolytic fluid, which includes nanoparticles as active elements of the device, in a single system, which we called ...

These innovative batteries have the potential to revolutionize the way we store and utilize energy. With their sleek and bold design, Influit Energy is leading the charge towards a more efficient and sustainable future. What sets Influit Energy apart is their cutting-edge flow battery technology.

"We have created a new type of flow battery that is predicated upon a composite material that we invented, which is a nanofluid where the nanoparticles are battery-active materials, which we called nanoelectrofuel, or NEF," says John ...

"This SBIR project is an important milestone for us. The nanoelectrofuel battery is very R&D intensive, and validation in the full flow cell enabled by this SBIR award will significantly reduce risk in further investments and commercialization," said Katsoudas, Influit CEO. "Within the first year, we have to validate a lab-scale battery.

In a major breakthrough, DARPA is making strides with its nanoelectrofuel flow battery, designed to address the challenges posed by lithium-based batteries. The new flow battery, developed by Influit Energy, aims to revolutionize the electrification of transportation by offering a safer and more efficient alternative.

In 2021 we noted that Influit is "targeting the electric vehicle market for its variation on the flow battery theme, which it has dubbed the "Nanoelectrofuel Flow Battery."" In the summer of 2022 Influit was reportedly considering the idea of picking up its nanoelectrofuel flow battery and moving to Texas, but cooler heads prevailed.

With energy density 23% higher and half the cost of lithium-ion batteries with no need to worry about fire and can be quickly replenish, Influit Energy, a spin-off company of the Illinois Institute of Technology in the United ...

CMBlu began pilot projects of its Organic SolidFlow brand battery systems last year, launching into the US at the start of 2023. Image: CMBlu via Twitter. CMBlu Energy, the designer and maker of a proprietary organic flow battery, has won its first deal in the US since the company's expansion into the market.

The United States government has also played a critical role in Influit Energy's growth, awarding the company more than \$10 million in contracts to fund the design and fabrication of NEF flow battery prototypes that will allow several agencies to utilize Influit Energy's batteries in electric vehicles and aircraft.

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This battery uses a completely new kind of fluid, called a nanoelectrofuel. Compared to a traditional flow battery of comparable size, it can store 15 to 25 times as much energy, allowing for a battery system small enough for use in an electric vehicle and energy - dense enough to provide the range and the speedy refill of a gasoline-powered vehicle.

With energy density 23% higher and half the cost of lithium-ion batteries with no need to worry about fire and can be quickly replenish, Influit Energy, a spin-off company of the Illinois Institute of Technology in the United States, said its proprietary flow battery is about to be commercialized.

Here, visitors can find the latest press releases, articles, and updates about Influit Energy and the flow battery industry as a whole. This section not only keeps visitors informed but also positions Influit Energy as a thought leader in the field. The team and job postings section showcases the talented individuals behind Influit Energy's ...

Illinois Tech "spinout" startup Influit Energy has created the world's first rechargeable, safe, electric fuel Energy eureka! alert Open. Share Add a Comment. Sort by: ... "We have created a new type of flow battery that is predicated upon a composite material that we invented, which is a nanofluid where the nanoparticles are battery ...

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