

# Here's a simple but groundbreaking way to make lithium batteries 'last 750% longer'

Researchers have just announced a breakthrough in lithium battery technology that extends battery life by up to 750%.

This breakthrough was achieved using only water, which promises to revolutionize the field of environmentally friendly energy storage.



Battery life gets a lot of attention for lithium batteries.

Lithium-ion batteries have been highly regarded for energy storage, with their use increasing dramatically in devices such as mobile phones, tablets, electric bicycles and solar energy storage systems. However, certain properties of lithium metal make the batteries flammable and explosive and have a limited lifespan.

To address this issue, Professor Il-Doo Kim from the Korea Advanced Institute of Science and Technology and Professor Jiyoung Lee from Ajou University collaborated on a research that led to a breakthrough in lithium batteries. They pointed out that the artificial protective layer needed for lithium metal is often made from toxic materials, which is environmentally harmful and expensive.

In a study published in the journal *Advanced Materials*, scientists developed a new protective layer made from hollow nanofibers, produced using an electrospinning process using plant-derived guar gum and water. This method not only increases battery life but is also environmentally friendly, as the protective layer is capable of

naturally decomposing in about a month.



The new breakthrough not only extends battery life but is also environmentally friendly.

The research results showed that the battery retained 93.3% of its capacity after 300 charge-discharge cycles, achieving 'world-class' performance. This is one of the latest innovations in lithium battery manufacturing, alongside other research such as the use of nickel-based oxides to improve battery performance.

This breakthrough not only benefits consumers with more efficient batteries for everyday products, but also reduces the negative environmental impact and waste from battery manufacturing.

You finished reading the article "**Here's a simple but groundbreaking way to make lithium batteries 'last 750% longer'**" edited by the [TipsMake](#) team. We hope this article has provided you with many useful tech tips and tricks. You can search for similar articles on tips and guides. Thank you for reading and for following us regularly.