

What to do if we can't make a breakthrough in battery technology

Can batteries unlock other energy technologies?

Batteries can unlock other energy technologies, and they're starting to make their mark on the grid. This article is from The Spark, MIT Technology Review's weekly climate newsletter. To receive it in your inbox every Wednesday, sign up [here](#). Batteries are on my mind this week. (Aren't they always?)

How difficult is it to develop better batteries?

One difficult thing about developing better batteries is that the technology is still poorly understood. Changing one part of a battery--say, by introducing a new electrode--can produce unforeseen problems, some of which can't be detected without years of testing.

Are batteries getting better at recycling?

We have an in-depth explainer on current and future battery recycling technology [here](#) if you want the deep dive, but at a high level, there are a few ways that batteries are getting better at being recyclable. First again comes machine learning and artificial intelligence.

Can a broken battery make a better battery?

But if indeed a battery is broken down into little pieces like that, the resulting mess can actually give birth to better batteries. "The black mass, when it's refined, is better than using virgin material," Brian Skalovsky, director of battery recycling at Cox Automotive Mobility EV Battery Solutions, told us.

Why are commercial batteries so difficult to develop?

While countless breakthroughs have been announced over the last decade, time and again these advances failed to translate into commercial batteries. One difficult thing about developing better batteries is that the technology is still poorly understood.

Will batteries clean up the grid?

Batteries won't be the magic miracle technology that cleans up the entire grid. Other sources of low-carbon energy that are more consistently available, like geothermal, or able to ramp up and down to meet demand, like hydropower, will be crucial parts of the energy system.

A 3D electrode design has seemingly unlocked new potential for Battolyser researchers. Their invention is a battery-electrolyser combination spawned in labs at the ...

The technology around solid-state batteries is still improving to make them commercially viable, and some still do use lithium -- but Altech's Cerenergy ABS60 does not, Interesting ...

What new revolutionary phone technology do you think will become a standard in 5 years time?(2nd edition)

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... one thing that hasn't seen much improvement over the years is BATTERY. would be great if a new tech comes up to prolong ...

At the Battery Research and Innovation Hub at Deakin University's Institute for Frontier Materials, we are doing important research into alternative battery technologies, aiming to reduce waste and re-use battery ...

Stanford's breakthrough in lithium metal battery technology promises to extend EV ranges and battery life through a simple resting protocol, enhancing commercial viability. ...

If cheaper battery technology is possible, it will be much easier to scale up storage facilities and make renewable power an even more effective alternative than energy ...

The lab encourages scientists to do just that, in an effort to bring critical new technology into the marketplace. The lab and the U.S. government still hold the patents, ...

A pair of 500-foot smokestacks rise from a natural-gas power plant on the harbor of Moss Landing, California, casting an industrial pall over the pretty seaside town. If ...

While we can't look at every technology that's in development, we can look at a few to give you a sense of the problems people are trying to solve. ... and put it into the battery ...

We still need fundamental breakthroughs in battery technology before that becomes a reality. Battery-powered portable devices have transformed our lives. But there's a ...

Researchers make promising breakthrough using lasers to convert pollution into fuel: "We were very excited to see the boost in productivity" This is an advance that has the ...

And yet, according to scientists, engineers, startup founders and analysts, the use of the word "breakthrough" in the context of battery technology is misleading at best.

One of the considerations for many car shoppers interested in an electric vehicle is the driving range for a battery. A team of researchers in Russia recently had a ...

Researchers make breakthrough combining best battery technologies to create world-first battery: "Usually seen as a far-off-in-the-future technology" Rick Kazmer Tue, ...

Testing showed the new parts can prevent performance-limiting corrosion while also extending the pack's lifespan. Researchers make breakthrough in battery technology without key ...

The battery retained 80% of its capacity after 6,000 cycles, outperforming other pouch cell batteries on the

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market today. The technology has been licensed through Harvard ...

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