

# Cheap, Biodegradable Sugar Batteries

Source: [myscienceacademy.org](http://myscienceacademy.org)

Published: January 30, 2014

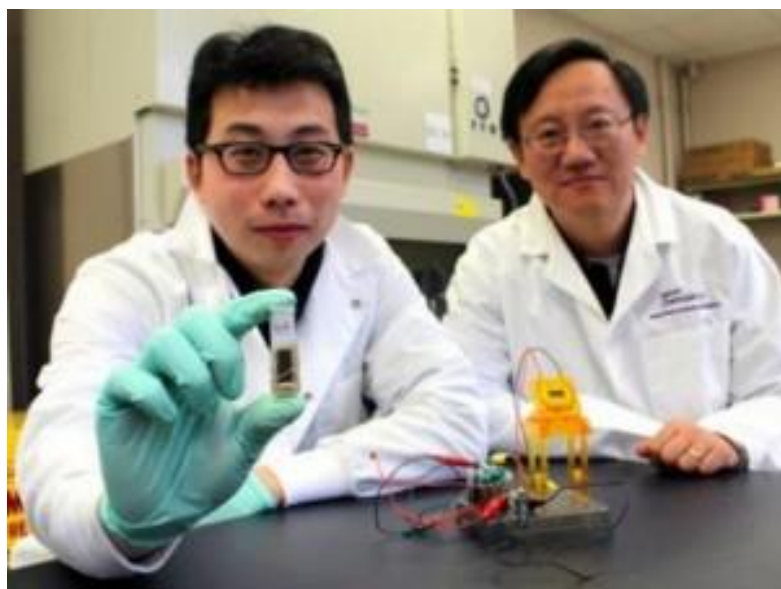


Image © Virginia Tech

Environmentally friendly, **energy-dense sugar [battery](#)** developed by a Virginia Tech research team, a development that could replace conventional batteries with ones that are cheaper.

The new battery that runs on sugar and has an unmatched energy density, as soon as three years, could be powering cell phones, tablets and other electronics.

The findings from [Y.H. Percival Zhang](#), an associate professor of biological systems engineering in the [College of Agriculture and Life Sciences](#) and the College of Engineering, were published yesterday in the journal Nature Communications.

Zhang, said:

“Sugar is a perfect energy storage compound in nature. So it’s only logical that we try to harness this natural power in an environmentally friendly way to produce a battery.

Like all fuel cells, the sugar battery combines fuel — in this case, maltodextrin, a polysaccharide made from partial hydrolysis of starch — with air to generate electricity and water as the main byproducts.

We are releasing all electron charges stored in the sugar solution slowly step-by-step by using an enzyme cascade.

This article no longer exists at the Source link above. It can be found in the [Matteroftrust.org](http://Matteroftrust.org) Resource Library.

---