Mushrooms could boost your phone's battery

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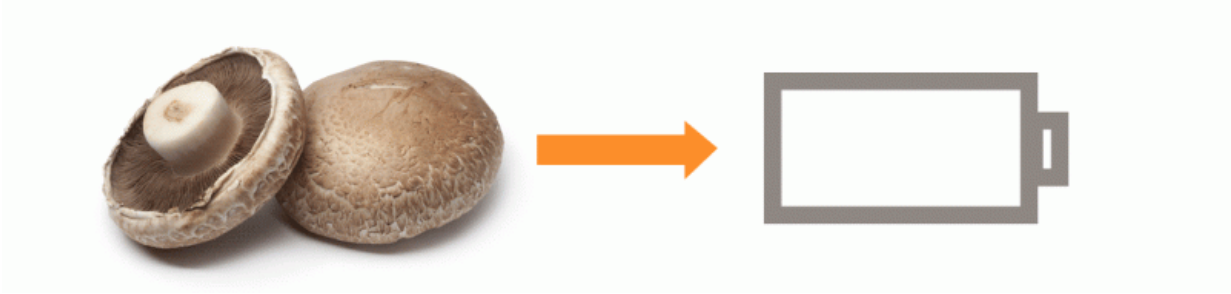


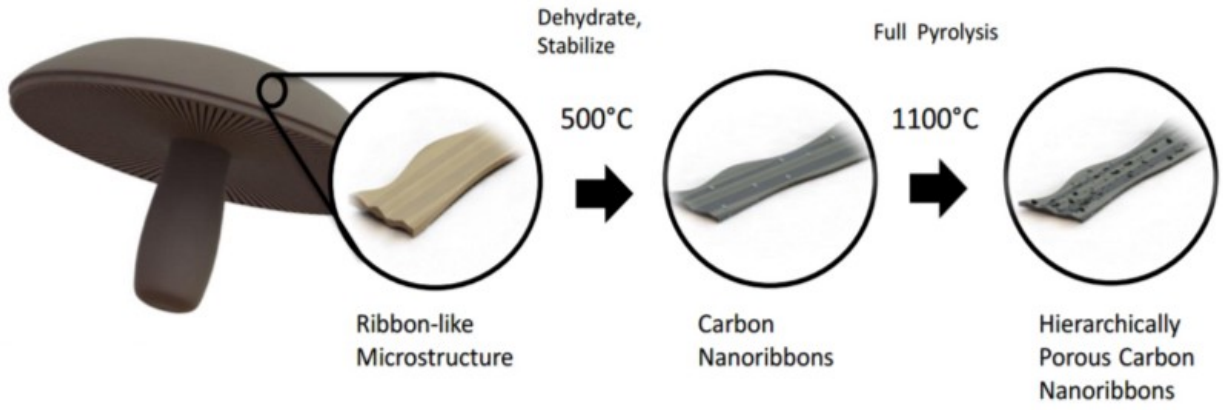
Anyone who uses their smartphone a lot notices that over time, the battery begins to lose steam and needs to be recharged more often. And the last thing you want is for your phone to run out of juice when you need it most.

It turns out that a humble fungus could be the solution.

UC Riverside researchers have created a new type of battery anode (the negative side of a battery) using inexpensive and eco-friendly portobella mushrooms.

"With battery materials like this, future cell phones may see an increase in run time after many uses, rather than a decrease," said Brennan Campbell, a graduate student in the Materials Science and Engineering program.

A mushroom's highly porous structure provides more space for energy storage and transfer in batteries. And mushrooms also have a high concentration of potassium salt that activates more of its pores over time — increasing the battery storage capacity.



Turning mushrooms into battery anodes. Credit: UC Riverside

Rechargeable lithium-ion battery anodes are currently made from synthetic graphite, which requires purification and preparation processes that are harmful to the environment. With more demand for better batteries, researchers have been looking at using biological materials as a cheaper and sustainable alternative.

For closer look at the research, check out this video by AJ+:

Provided by University of California - Riverside