

## Paperthin Batteries Offer New Options, Applications

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**Scientists in the United States have developed a new kind of battery that looks and feels just like a piece of paper. VOA's Deepak Dobhal reports its inventors say the battery's power and flexibility make it ideal for numerous applications - from powering portable electronics to running medical devices. Jim Bertel narrates.**

A small thin strip of black paper could soon be powering anything from small devices to big planes. Researchers at the Rensselaer Polytechnic Institute in New York state have developed a new battery made of cellulose, the same plant cells used in most papers.

Pulickel Ajayan helped develop the battery and believes it has the potential to revolutionize the world we live in. "This is almost like a building block. What we have done is made this building block the basic Lego unit which can be stacked or stitched together to make many different devices," he said.

Ajayan and his team claim the paper thin battery will work just as well as ordinary ones, if not better. The battery's unique flexibility makes it an ideal candidate to be molded into any shape. Car manufacturers are among those anxious to test the new battery.

Ajayan explains the material. "It's a biodegradable material, and it is biocompatible so we can, you know, say that rather than using the very chemically toxic material that normally goes into batteries, we have something that is much more environmentally benign," he notes.

With no dangerous chemicals, Ajayan says the battery is ideal for medical devices like pacemakers. At present, the battery costs considerably more than conventional batteries to manufacture. But research is underway to develop a suitable way to mass-produce this revolutionary power source.



**Pulickel Ajayan holds the paper thin battery**



**Researcher is holding paper thin battery, which can be molded into any shape**