

The Papercraft-Inspired Stretchable Battery

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Researchers at Arizona State University get inspiration from a centuries-old Japanese art of folding paper to create a battery able to stretch to more than 150% of its size without losing any functionality.



The paper-folding art in question is kirigami-- a variant of the more famous origami adding cuts to the traditional folds. Previously the researchers tried creating origami-inspired batteries, but the results could flex, but not stretch.

Such flexible and stretchy batteries can find applications in a variety of wearable devices. In fact, the researchers managed to power a smartwatch using a kirigami-based lithium-ion battery inside an elastic band. The batteries can even be woven into fabrics used for clothing manufacture.

“This type of battery could potentially be used to replace the bulky and rigid batteries that are limiting the development of compact wearable electronic devices,” the research team concludes.

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