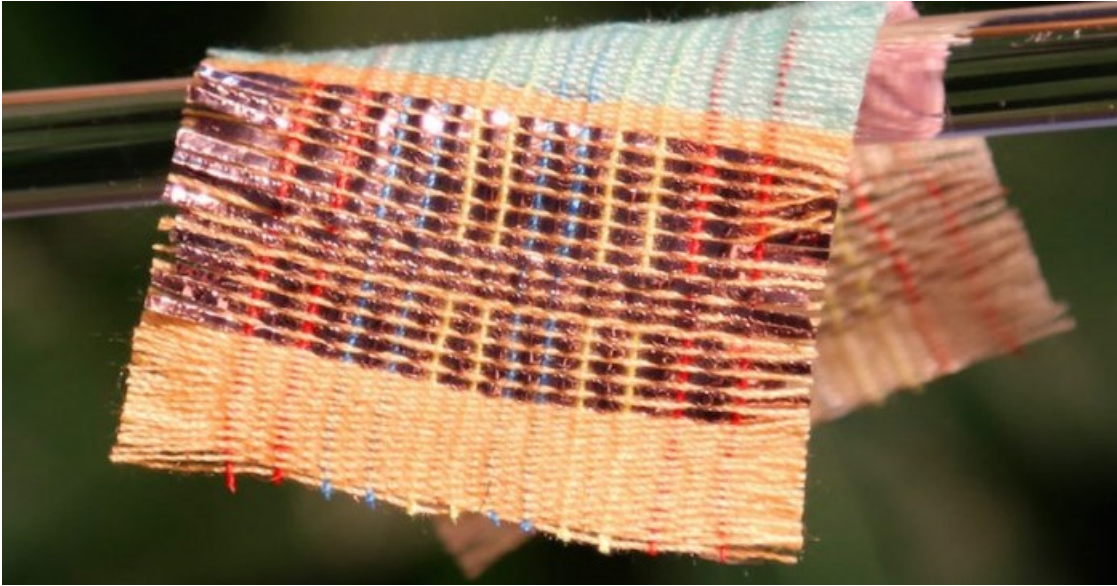


New energy material harnesses both sunlight and wind

By [Mbali Kgame](#)

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Eight Georgia Institute of Technology engineers pioneered a new type of hybrid textile that can harvest energy from two sources: the sun and wind...



Researchers at the Georgia Institute of Technology, US have developed a hybrid, energy-generating fabric powered by sunlight and the movement of the wind. The team hope to apply their design to clothing, curtains or tents, all of which will then be able to provide a source of energy with which to power devices such as smartphones.

[According to Professor Zhong Lin Wang](#), the team used a commercial textile machine to weave together solar cells taken from lightweight, polymer fibres with triboelectric nanogenerators (a type of technology that converts mechanical/ thermal energy as produced by small-scale physical change into electricity). The new fabric is 320 micrometres thick and woven together with strands of wool.

To test the fabric, engineers created a flag. By letting the fabric blow in the wind, the fabric generated enough energy to charge a 2mf commercial capacitor to two volts in a minute.

Early tests show that the fabric can be repeatedly used, however, researchers aim to test it further to see if it could be used over a long period of time.

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