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Stretchable Battery That is Powered by Sweat

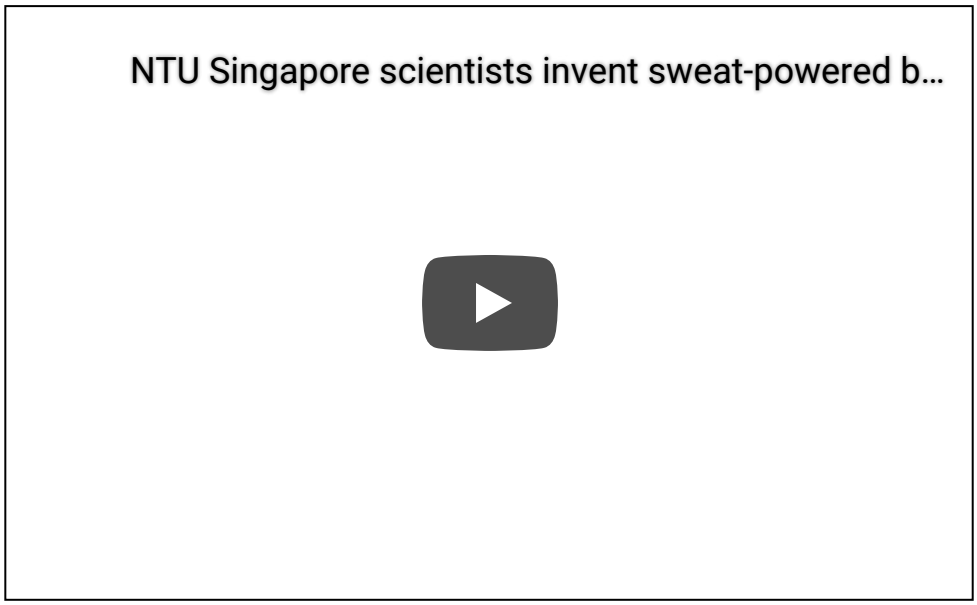
Scientists from Nanyang Technological University, Singapore (NTU Singapore) have developed a soft and stretchable battery that is powered by human perspiration.

The prototype battery consists of printed silver flake electrodes that generate electricity in the presence of sweat. Measuring 2 cm by 2 cm and as flat as a small paper bandage, the battery is affixed to a flexible and sweat absorbent textile that is stretchable and attachable to wearable devices, like watches, wrist bands or arm straps. For further information see the IDTechEx report on Energy Harvesting for Electronic Devices 2020-2040.

To demonstrate its potential use when it becomes incorporated in wearable biosensors and other electronic devices, the team of scientists tested their device with artificial

In a separate trial, the team reported that an individual wearing the battery around their wrist and cycling on a stationary bicycle for 30 minutes was able to generate a voltage of 4.2 V and output power of 3.9 mW that was sufficient to power a commercial temperature sensor device and send the data continuously to a smartphone via Bluetooth.

The battery could help reduce harmful electronic waste, as it does not contain heavy metals or toxic chemicals and the scientists behind it believe it could lead to innovation within the wearable tech industry.



Source: Nanyang Technological University
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