

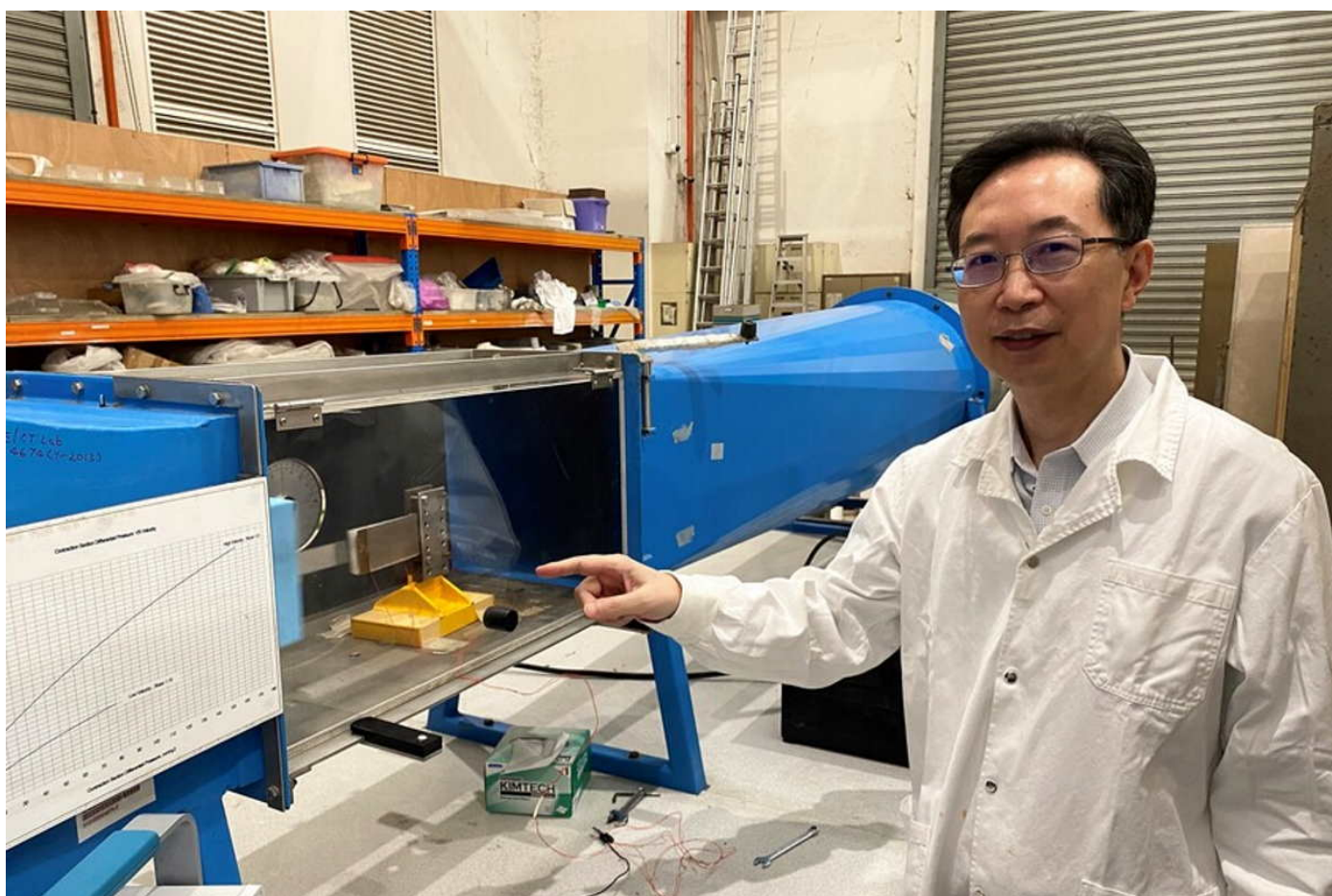
# Portable mini-wind that converts light breeze into electricity

A small, low-cost device developed by a team of scientists in Singapore can turn light breezes into energy

BY MICHELE SCIAMANNA

6 HOURS AGO

HOME ENGINEERING PORTABLE MINI-WIND THAT CONVERTS LIGHT BREEZE INTO ELECTRICITY




Producing **wind power** does not necessarily require strong gusts of wind. A **mini wind power plant** capable of producing energy even from light **breezes** comes from **Asia** . The device was developed by researchers led by Professor **Yang Yaowen** of **Nanyang Technological University** in Singapore.

The luminaire was made using **epoxy fiber** , a highly resistant polymeric material, in combination with other inexpensive materials such as copper, Teflon foil and aluminum. The device exploits the **triboelectric** effect , a phenomenon that is electrified by **rubbing** . When exposed to winds with a speed of 2 meters per second it can produce 3 volts and generate an electrical power of **290 microwatts** .

The experiment conducted by the scientists showed that the device powered **40 LEDs** **continuously** when exposed to a wind with a speed of 4 meters per second. In addition





ve, the mini wind turbine can be **easily transported**, as it measures 15 by 20 centimeters. 

As a renewable and clean energy source, wind power generation has attracted widespread research attention. Our research aims to address the lack of a small-scale energy harvester for more targeted functions, such as powering sensors and smaller electronic devices.

The device we have developed also acts as a potential alternative to smaller lithium-ion batteries, as our wind collector is self-sufficient and would only require occasional maintenance, and does not use heavy metals, which if not disposed of properly, can cause damage. environmental.

Yang Yaowen, expert in civil and environmental engineering

[This portable mini wind turbine converts the light breeze into electricity in a very simple and economical way \(greenme.it\)](#)

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