UTA Researchers Create Super Tiny Micro-Windmills

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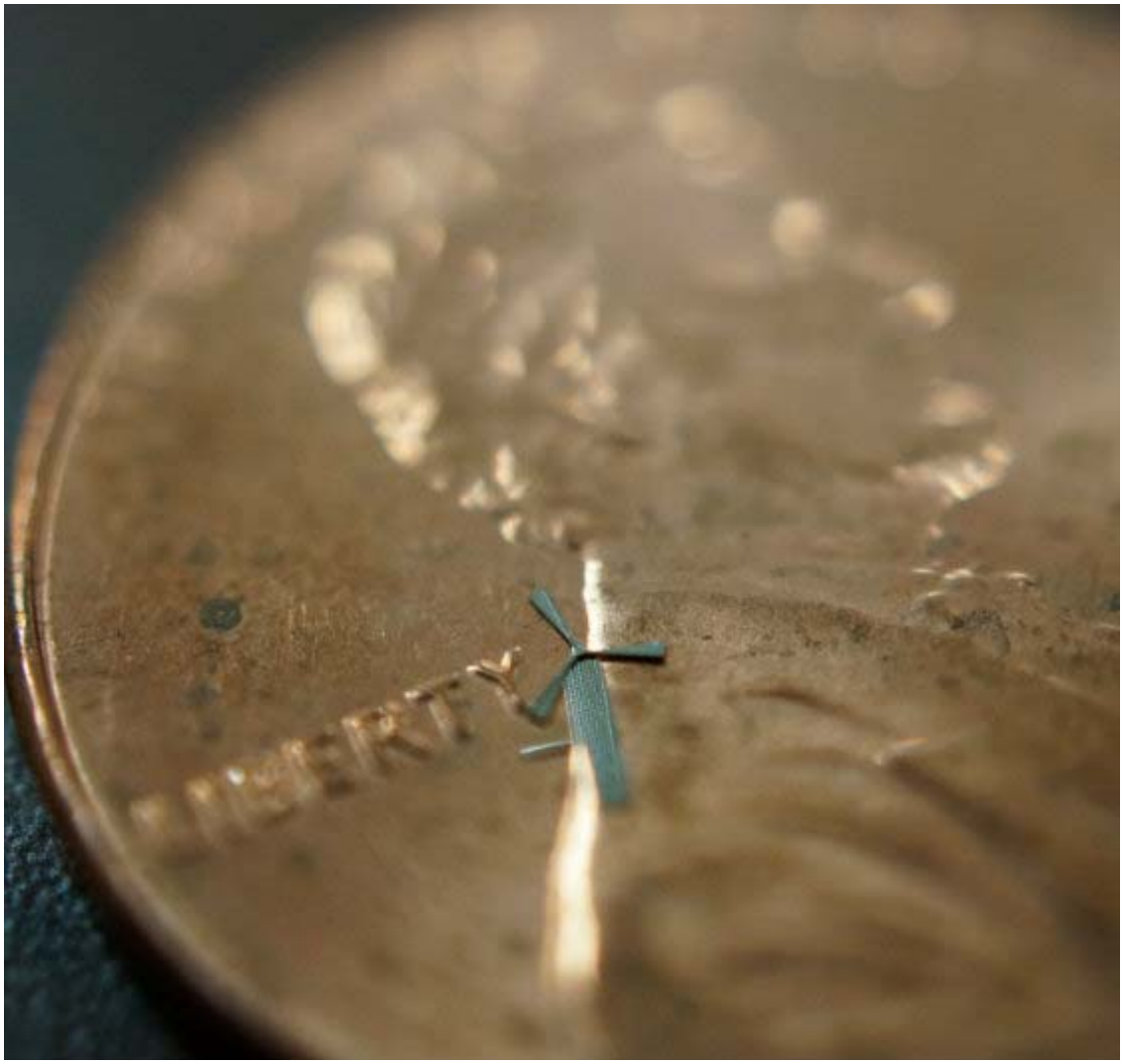

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Think of it as the intersection between origami and semiconductor manufacturing. Researchers at the University of Texas at Arlington have invented a nickel-alloy windmill so tiny that 10 of them could be comfortably anchored to a grain of rice.

Smitha Rao and J.-C Chiao successfully tested the device, composed entirely of aerodynamic, two-dimensional materials, using strong artificial winds. An immediate application could be to charge the battery of a smartphone. Embed hundreds, if not thousands, of the tiny turbines on the sleeve of a phone, then "when the phone is out of battery power, all you need to do is to put on the sleeve, wave the phone in the air for a few minutes and you can use the phone again," Chiao says.

The micro-technology is apparently so promising that an agreement has been reached with a Taiwanese company hoping to commercialize the windmills. Because they are relatively cheap to manufacture, the researchers believe the potential applications are limitless. Think panels containing thousands of the devices used to harvest the wind to power outdoor lights and wireless devices, for starters.

The video below shows one of the micro-windmills in action.