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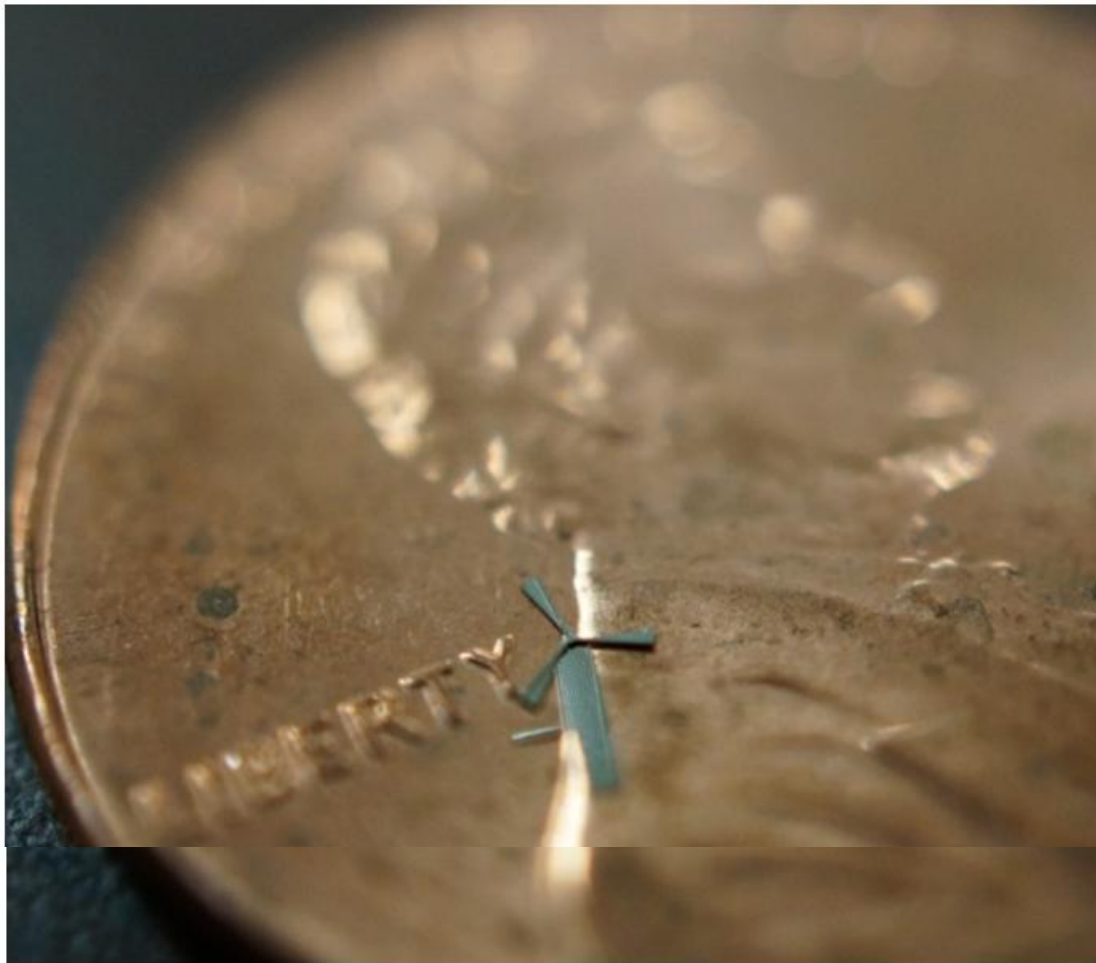
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## These Tiny Windmills Could Soon Power Your Portable Devices

By Daniel Zeevi | Jan 21, 2014 |

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Windmills are considered a clean and safe alternative energy source, but they're pretty big and could never fit onto something as small as your cellphone, right? Well, researchers from the [University of Texas at Arlington](#) (UTA) have created and tested a micro-windmill apparatus that can harness wind energy in places that aren't suitable for larger wind turbines. These miniature windmills are only about 1.8 mm wide, which means you could place dozens of them on a strain of hair or thousands on a [smartphone](#) for example to provide a quick clean energy boost.

The micro-energy technology was invented by scientists Smitha Rao and JC Chiao at UTA, who are hoping to gain a provisional patent soon. "The micro-windmills work well because the metal alloy is flexible and Smitha's design follows minimalism for functionality," Chiao said. The nickel alloy used is also very durable, sports a smart aerodynamic design and can be manufactured very cheaply on a large scale.

"Imagine that they can be cheaply made on the surfaces of portable electronics," Chiao said, "so you can place them on a sleeve for your smart phone. 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 also eluded to mounting these on the walls of houses to harvest energy for lighting, wireless communication and other purposes.

These machines could also be essential to building more advanced micro-robots that could be used for surgical tools, industrial applications and exploring disaster stricken areas.

***Are you ready to start harnessing the [power of the wind](#) on your mobile device?***

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