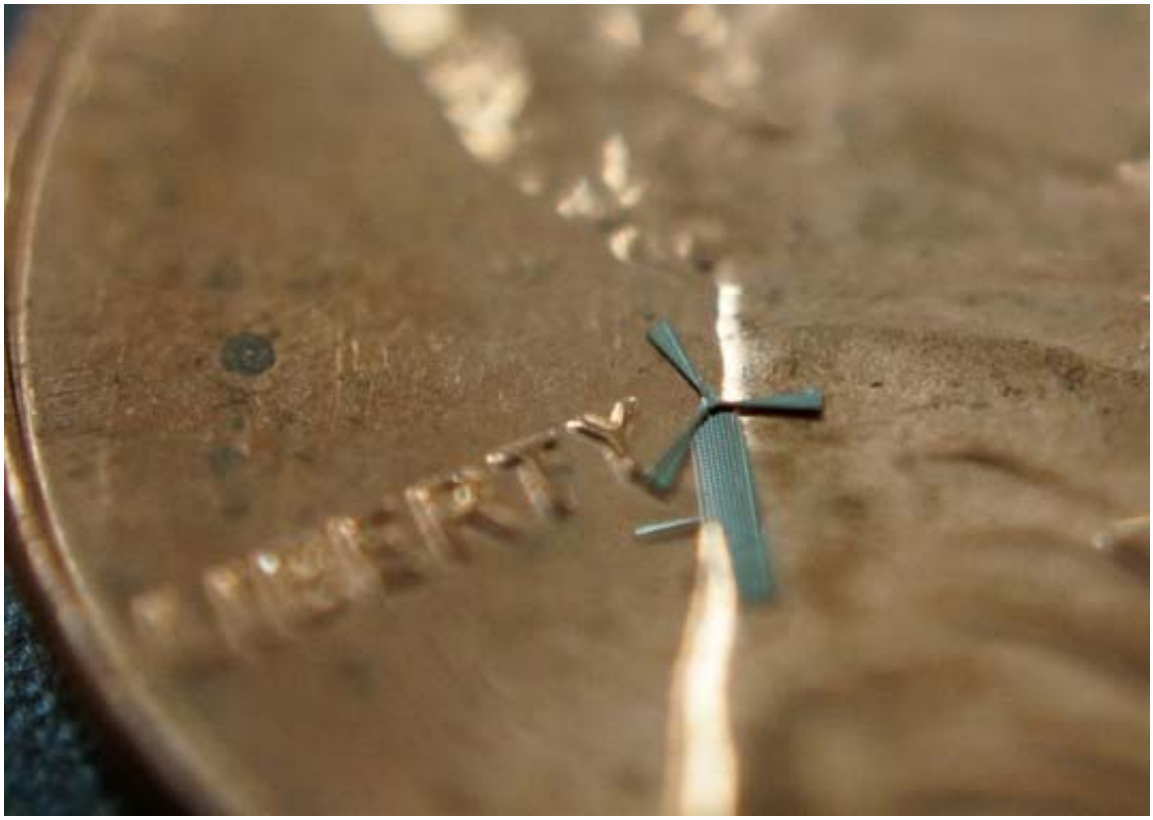
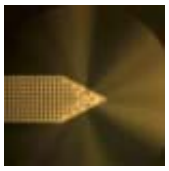
# Teeny Tiny Windmills Could Power Future Smartphones

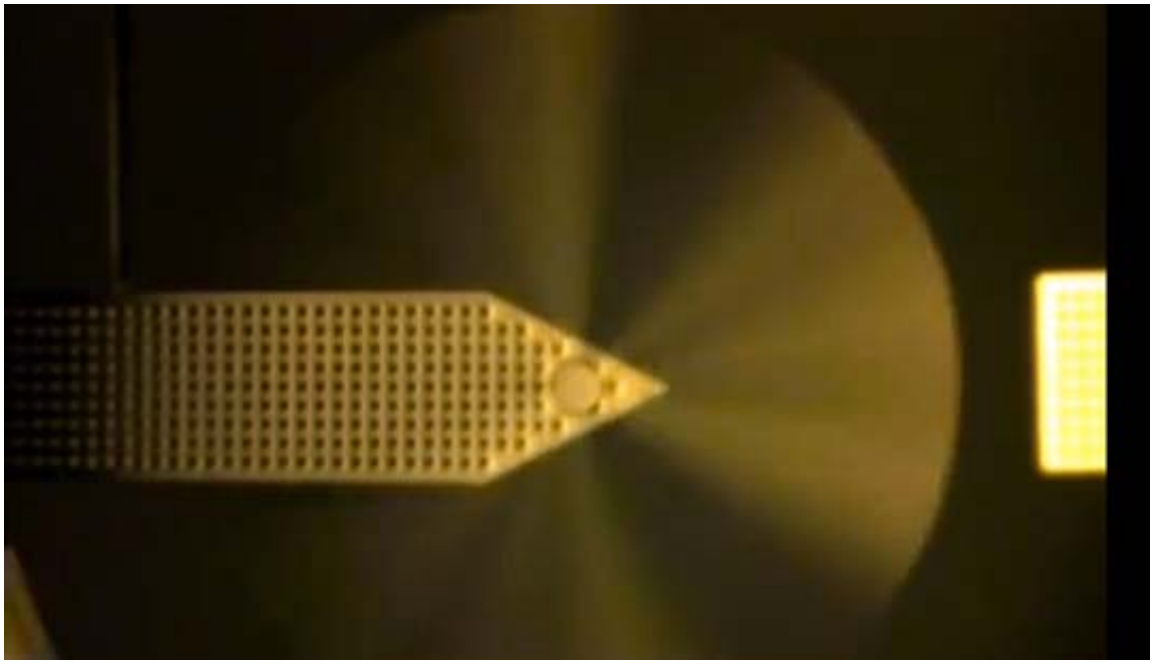
Posted By Lori Zimmer On January 14, 2014 @ 5:10 pm In green gadgets,News,Wind Power | No Comments



[1]

Researchers at the University of Texas at Arlington [2] are working on the world's tiniest wind farm [3] that could fit on a grain of rice and charge your smartphone [4]! The teeny tiny windmill is just 1.88mm wide, and uses a miniscule electroplating system to generate spinning power. Headed by Smitha Rao and J.C. Chiao, the research team has partnered with WinMEMS Technologies Co. [5] to realize the baby windmill project.



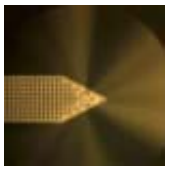

[6]

The super conducting tiny windmills [7] are made from resistant nickel alloy picked for its rigidity and durability. Each of the little mills is made using a technique similar to origami. The mini fan is self-assembled with wafer-scale semiconductor electroplating principles shrunk down to a bug's eye view. The 1.88mm fans are so small that ten of them could be placed on a grain of rice, working together as a miniature powerhouse.

With the concept in place, Rao and Chiao are looking to WinMEMS Technologies Co. to help bring the mini conducting fans into production and enter the marketplace. The windmill system could be made inexpensively, and serve as a renewable power source for chargeable devices. Once produced, the windmills could be grouped together, on a sleeve of a smart phone or attachable device. The user would then activate the windmills by waving the sleeve about, blowing on them or even talking near them. The vibrations created would be enough to kickstart the miniature wind farms, and begin to charge the smartphone [8] without the need to plug a charger into the grid.

+ University of Texas at Arlington [2]

Via Gizmodo [9]



[1] Image: **http://inhabitat.com/teeny-tiny-windmills-could-power-future-smartphones/miniature-windmill/**
[2] University of Texas at Arlington: **http://www.uta.edu/news/releases/2014/01/microwindmill-rao-chiao.php**
[3] wind farm: **http://inhabitat.com/uk-breaks-several-wind-power-generation-records-in-december-2013/**
[4] charge your smartphone: **http://inhabitat.com/duke-university-students-find-a-way-to-charge-cell-phones-with-wi-fi/**
[5] WinMEMS Technologies Co.: **http://www.winmemstech.com**
[6] Image: **http://inhabitat.com/teeny-tiny-windmills-could-power-future-smartphones/miniature-windmill2/**
[7] tiny windmills: **http://inhabitat.com/small-wind-turbine-wings-like-a-bee/**
[8] charge the smartphone: **http://inhabitat.com/pegas-windup-chair-charges-your-smartphone-as-you-sit/**
[9] Gizmodo: **http://gizmodo.com/this-super-tiny-windmill-could-someday-charge-your-phon-1499248318**