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Mini windmill could charge handset batteries and more

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A tiny windmill created by researchers at the University of Texas Arlington might be used to charge cell phone batteries and even provide home energy generation. The device, created by research associate Smitha Rao and electrical engineering professor J.-C. Chiao, measures 1.8 millimeters at its widest point. A single grain of rice could hold about 10 of the mini windmills, said the university. Hundreds of the windmills could be embedded in a cell phone sleeve that would be designed to enable wind to spin the windmills and generate electricity that could be collected by the cell phone's battery.

Rao's designs blend origami concepts into conventional wafer-scale semiconductor device layouts, enabling complex 3-D moveable mechanical structures to be self-assembled from two-dimensional metal pieces using planar multilayer electroplating techniques that were optimized by WinMEMS Technologies, a fabrication foundry interested in Rao's work. Taiwan-based WinMEMS is exploring commercialization opportunities for the devices, while UT Arlington, which has applied for a provisional patent, will retain the intellectual properties. For more, check out this UT Arlington release.