Researchers at the University of Texas at Arlington are working on the world’s tiniest windmill that could fit on a grain of rice and charge your smartphone! The tiny windmill is just 1.8mm 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 WinHMEMS Technologies Co. to realize the baby windmill project.

The superconducting tiny windmills are made from resistant nickel alloy placed for its rigidity and durability. Each of the tiny wheels is made using a technique similar to organs. The iron bar is self-assembled with wafer-scale semiconductor electroplating principles followed behind a bug’s eye view. The 1.8mm 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 WinHMEMS 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 rechargeable devices. Once produced, the windmills could be bundled together, on a sliver of a smart phone or attachable device. The user would then activate the windmills by waving the device about, blowing on them or even taking them near them. The vibrations created would be enough to kickstart the miniature windmills, and begin to charge the smartphone without the need to plug a charger into the grid.

+ University of Texas at Arlington
Via Gizmodo