



## Tiny windmills could power future smartphones (maybe)

01/11/2014 at 10:55 AM by [Brad Linder](#) — 15 Comments

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Mobile device makers have a few options for improving battery life. They can cram huge batteries into phones and tablets. They can improve the efficiency of chips, wireless modules, and screens. Or they can wait for battery technology to get better... which could take a while (although there are some [advances in battery tech on the horizon](#)).

Another approach is to let you recharge your battery on the go without stopping to plug in your device. Some companies already offer solar-powered smartphone cases, but fully recharging your phone with solar power can take days.

University of Texas Arlington researchers have a different idea: windmills. [Tiny, tiny windmills](#).



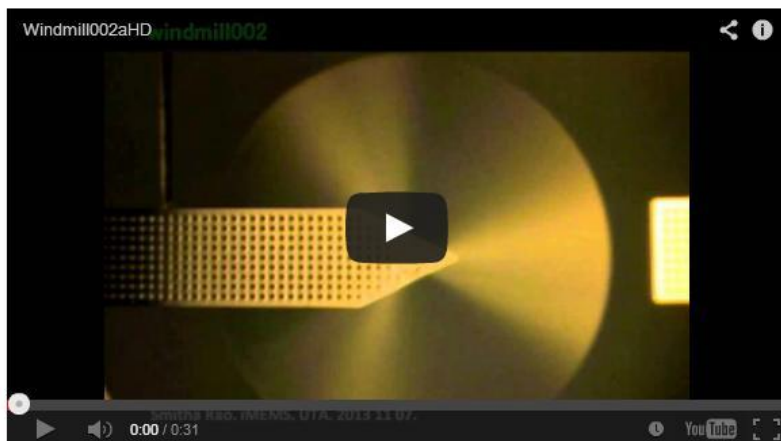
Smitha Rao and J C Chiao designed a tiny windmill that's just 1.8mm thick at its widest point. You can fit 10 windmills on a grain of rice, or hundreds on a typical smartphone case.

Need a bit of extra juice for your phone? Just hook up a case with all of those windmills and wave it around in the air for a few minutes, or stick your phone out the window of your moving car to pick up some wind.

Odds are your arm would get tired or your car ride would finish before your phone was fully charged. But it might not take as long if you just need to generate enough juice to make a quick phone call in an emergency.

The little windmills are made from a durable nickel alloy and have been shown not to break under strong winds.

UT Arlington is working with [WinMEMS Technologies](#) to find commercial applications for the technology. At this point I haven't seen details about just how much energy one of these little windmills generates or how many you'd need to actually keep a phone charged for a reasonable amount of time. But if the technology advances it could pose an alternative to solar power or hand cranks in some situations.

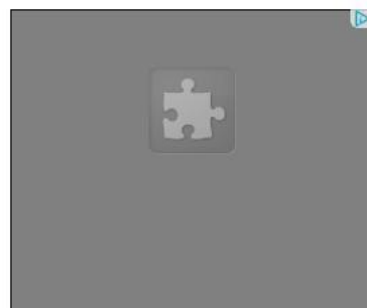


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