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## Mobile phones powered by WIND TURBINES: 'Micro-windmills' could be fitted to our phones

[Daily Mail UK](#) ^ | 1-14-14 | Victoria Woollaston

Posted on 1/15/2014 12:48:13 PM by [smokingfrog](#)

Forget hand-cranked chargers and solar-powered cases, the latest way to solve the ever-present problem of a dying phone battery is by using thin air.

Researchers from Texas have developed a miniscule 'micro-windmill' that is just 1.8mm wide and can transform wind energy into electricity.

The team behind the design claim hundreds of the nickel devices could be fitted to a phone case, for example, and users could charge their phone simply by waving it in the air.

- - - -

The technology was built by micro-engineering experts at the University of Texas Arlington (UTA).

Each windmill is made of flexible nickel alloy components capable of taking strong winds without breaking.

They are so small that ten of them can fit onto a single grain of rice.

Professor J.C. Chiao from the university said: 'The micro-windmills work well because the metal alloy is flexible and the design follows minimalism for functionality.

'Imagine that they can be cheaply made on the surfaces of portable electronics, so you can place them on a sleeve for your smartphone.

(Excerpt) Read more at [dailymail.co.uk](#) ...

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**TOPICS:** [News/Current Events](#); [Technical](#); [US: Texas](#)

**KEYWORDS:** [energy](#); [recharging](#); [wind](#)

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1 posted on 1/15/2014 12:48:14 PM by [smokingfrog](#)

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To: [smokingfrog](#)

Power the micro-windmill from the speaker's voice!

2 posted on 1/15/2014 12:49:11 PM by Pearls Before Swine

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To: **smokingfrog**

*Researchers from Texas have developed a miniscule 'micro-windmill' that is just 1.8mm wide and can transform wind energy into electricity. The team behind the design claim hundreds of the nickel devices could be fitted to a phone case, for example, and users could charge their phone simply by waving it in the air.*



3 posted on 1/15/2014 12:50:14 PM by Alex Murphy ("the defacto Leader of the FR Calvinist Protestant Brigades")

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To: **Pearls Before Swine**

Yep. Finally a way to capture salesmen's hot air!

4 posted on 1/15/2014 12:50:47 PM by **SoothingDave**

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To: **Alex Murphy**

"Pardon me, young man, but can you blow my phone?"

5 posted on 1/15/2014 12:50:50 PM by **GeronL** (Extra Large Cheesy Over-Stuffed Hobbit)

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<http://www.uta.edu/news/releases/2014/01/microwindmill-rao-chiao.php>

6 posted on 1/15/2014 12:51:06 PM by **smokingfrog** ( sleep with one eye open (<o> ---)

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To: **Pearls Before Swine**

And my girl friend said I am full of bullshit.

7 posted on 1/15/2014 12:52:14 PM by **Safetgiver** ( Islam makes barbarism look genteel.)

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To: **smokingfrog**



"...a six pack and a dozen hard boiled eggs, you could mount a mini fan to my butt and I could power dragster"

8 posted on 1/15/2014 12:53:24 PM by **Doogle** (USAF.68-73..8th TFW Ubon Thailand..never store a threat you should have eliminated))

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To: **Pocket Lint:**

[http://www.youtube.com/watch?feature=player\\_embedded&v=jJI\\_dwzvztQ](http://www.youtube.com/watch?feature=player_embedded&v=jJI_dwzvztQ)

9 posted on 1/15/2014 12:54:16 PM by **smokingfrog** ( sleep with one eye open (<o> ---)

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To: **Safetgiver**



10 posted on 1/15/2014 12:55:29 PM by **NRA1995** (I'd rather be a living "gun culture" member than a dead anti-gun candy-ass.)

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To: **smokingfrog**

someone should develop a little windwill charger that fits on the outside of a vehicle and spins , delivering charge , whenever the vehicle is being driven , recharging whatever is connected to it , within the vehicle

11 posted on 1/15/2014 12:56:09 PM by **LeoWindhorse**

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To: **smokingfrog**

Maybe the beanie with propeller on top will come back into fashion?Would look real good on the pajama-boy types.

12 posted on 1/15/2014 1:00:47 PM by **Farmer Dean** (stop worrying about what they want to do to you,start thinking about what you want to do to them)

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To: **NRA1995**



I love that commercial !! It is SOOOO annoying! When I go to the Gun Club and hear Union guys talking about Unions saving the world I scream “WHEE, WHEE, WHEE.” I sometimes get beat up, but who cares?

**13** posted on **1/15/2014 1:02:58 PM** by **Safetgiver** ( Islam makes barbarism look genteel.)

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To: **LeoWindhorse**

As opposed to the cigarette lighter chargers that run off the vehicles' electrical system?.....

**14** posted on **1/15/2014 1:05:26 PM** by **Red Badger** (Proud member of the Zeta Omicron Tau Fraternity since 2004.....)

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To: **smokingfrog**

Hood ornament?

**15** posted on **1/15/2014 1:05:37 PM** by **G Larry**

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To: **Red Badger**

LOL you can't call it that now.

It's a “power port”

**16** posted on **1/15/2014 1:06:02 PM** by **nascarnation** (I'm hiring Jack Palladino to investigate Baraq's golf scores.)

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To: **LeoWindhorse**

The wheels of a car are a generator (the static electricity can blow up a gas station.) Why hasn't any geek harnessed that energy?

**17** posted on **1/15/2014 1:06:52 PM** by **Safetgiver** ( Islam makes barbarism look genteel.)

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To: **smokingfrog**

Why not two tin cans and some string?

**18** posted on **1/15/2014 1:09:03 PM** by **Hoodat** (Democrats - Opposing Equal Protection since 1828)  
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To: **smokingfrog**

So now one can turn on one's phone by blowing it?

**19** posted on **1/15/2014 1:13:17 PM** by **Paladin2**  
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To: **LeoWindhorse**

[http://www.youtube.com/watch?v=bkc8ZkvKKc&feature=player\\_detailpage](http://www.youtube.com/watch?v=bkc8ZkvKKc&feature=player_detailpage)

**20** posted on **1/15/2014 1:16:46 PM** by **smokingfrog** ( sleep with one eye open (<o> ---)  
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To: **Safetgiver**

Please, document any incident in which static electricity from a car's wheels has blown up a gas station.

**21** posted on **1/15/2014 1:18:38 PM** by **STYRO** (War sucks. Living in slavery sucks even worse.)  
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To: **Paladin2**

Doesn't that conveniently fit the homosexual agenda?

**22** posted on **1/15/2014 1:18:57 PM** by **ogen hal** (First amendment or reeducation camp)  
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To: **smokingfrog**

The Yellow Jacket, a cell phone case that doubles as a stun gun, is much cooler.

**23** posted on **1/15/2014 1:20:18 PM** by **tbw2**  
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To: **smokingfrog**

I was actually thinking of getting a decent hand crank charger for those times when trekking and hunting in back country for a few days at a time. Anyone have any good recommendations on one?

**24** posted on **1/15/2014 1:24:35 PM** by **hecticskeptic**

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To: **Safetgiver**

*The wheels of a car are a generator (the static electricity can blow up a gas station.) Why hasn't any geek harnessed that energy?*

First, because it's very difficult to design an inverter that takes 20 kV DC in and produces 5V out. There are no semiconductors that can take that voltage. This is one of the reasons why DC is not as easy to work with as the AC. For the latter you only need a transformer.

Second, there isn't that much of energy to bother with. Say, the car to ground capacitance is 1000 pF, and the voltage is 20 kV (any more and it will leak out, through tires or through ions in the air.) Then:

$$u = 0.5 * 1nF * (20kV)^2 = 0.2J$$

0.2 joules is, by definition, 200 mA through 1 Ohm for 1 second. In other words, it generates 0.2 watts for one second. This is just enough to power a keyfob LED (20 mW) for ten seconds - something that a cheap coin battery does 100x more reliably and more efficiently.

**25** posted on **1/15/2014 1:35:09 PM** by **Greysard**

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To: **STYRO**

Merely read the warnings at the gas pumps, read the warnings at the gas cans that say "Fill outside of the vehicle." Call any gas station and ask them why these are there. Static electricity is a hazard to anyone filling a gas can in the car. Read and study a little bit. Hundreds of youtubes, I'd bet, on this.

**26** posted on **1/15/2014 1:38:33 PM** by **Safetgiver** ( Islam makes barbarism look genteel.)

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To: **hecticskeptic**

cheap

[http://www.amazon.com/American-Cross-CLIPRAY-Charger-Flashlight/dp/B003BYROUQ/ref=cm\\_cr\\_pr\\_product\\_top](http://www.amazon.com/American-Cross-CLIPRAY-Charger-Flashlight/dp/B003BYROUQ/ref=cm_cr_pr_product_top)

**27** posted on **1/15/2014 1:41:43 PM** by **smokingfrog** ( sleep with one eye open (<o> ---)

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To: **Greysard**

First, because it's very difficult to design an inverter that takes 20 kV DC in and produces 5V out. There are no semiconductors that can take that voltage..... You seem knowladgible. Get to work. Ask for a grant.

**28** posted on **1/15/2014 1:42:45 PM** by **Safetgiver** ( Islam makes barbarism look genteel.)  
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To: **smokingfrog**; **Revolting cat!**; **GeronL**

*The team behind the design claim hundreds of the nickel devices could be fitted to a phone case, for example, and users could charge their phone simply by waving it in the air*

This isn't going to turn out well.



#ANNOYINGELECTRONICPACIFIER

**29** posted on **1/15/2014 1:44:39 PM** by **a fool in paradise** ("Health care is too important to be left to the government.")  
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To: **smokingfrog**

No tech info so it is non meaningful...Best question is HOW UCH taxpayer went into this boondoggle??

**30** posted on **1/15/2014 1:46:10 PM** by **Nifster**  
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To: **Safetgiver**

Most of the static electricity is generated by the person sliding across the seat fabric. That's why you should stay outside the car while filling-up. When you're filling a gas can, place it on the ground so it will be grounded (esp. if it is a metal can). Plus, if you overfill the gas can, you don't want it to be inside the vehicle.

**31** posted on **1/15/2014 1:51:26 PM** by **smokingfrog** ( sleep with one eye open (<o> ---)  
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To: **a fool in paradise**

Just wait until people start waving around their phones in movie theaters to charge them up.

**32** posted on **1/15/2014 1:52:45 PM** by **smokingfrog** ( sleep with one eye open (<o> ---)

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To: **smokingfrog**

LOL!! Now that is funny.

**33** posted on **1/15/2014 1:54:40 PM** by **mc5cents** (Pray for America)

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To: **Farmer Dean**



**34** posted on **1/15/2014 1:59:11 PM** by **kanawa**

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To: **smokingfrog**

I can picture drivers doing this in the fast lane. Slowing down 5 miles per hour (as they typically do) to be “safe”.

**35** posted on **1/15/2014 1:59:52 PM** by **a fool in paradise** ("Health care is too important to be left to the government.")

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To: **smokingfrog**

Not arguing. I just don't see grabbing the door handle, opening the trunk(or whatever) grabbing the gas can and and grabbing the pump nozzle as not discharging the static electricity from getting out of my seat (which I don't have to slide across). Nor does anyone else have to slide across.

**36** posted on **1/15/2014 2:00:03 PM** by **Safetgiver** ( Islam makes barbarism look genteel.)

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To: **kanawa**

HA! You beat me. +1

**37** posted on **1/15/2014 2:01:05 PM** by **KGeorge** (Till we're together again, Gypsy girl. May 28, 1998- June 3, 2013)

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To: **Safetgiver**

I guess it's just me.

I haven't learned how to levitate myself yet.

**38** posted on **1/15/2014 2:04:20 PM** by **smokingfrog** ( sleep with one eye open (<o> ---)

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To: **smokingfrog**

We should make slightly larger versions of these, and mount them to the heads of every Democrat politician in office. All the hot air they emanate would keep them spinning all day long! Energy crisis solved.

**39** posted on **1/15/2014 2:45:52 PM** by **Disambiguator**

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To: **smokingfrog**

How about using those beanie hats with the windmill?

**40** posted on **1/15/2014 2:58:26 PM** by **GingisK**

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To: **smokingfrog**

Holding it out of the window driving down the road?

**41** posted on **1/15/2014 3:01:49 PM** by **bmwcyle** (People who do not study history are destined to believe really ignorant statements.)

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To: **smokingfrog**

Sounds interesting, like the piezo-electric (?) chargers on flashlights - no need for batteries.

**42** posted on **1/15/2014 3:12:59 PM** by **OldNewYork**

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To: **smokingfrog**

How many lawsuits will follow from people hearing a “buzzing noise” by being within a mile of the little wind turbine?

**43** posted on **1/15/2014 4:18:43 PM** by **esoxmagnum** (Turtles don't win fights. Victory belongs to the aggressor, not the guy hiding in a bunker.)

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To: **smokingfrog**

*Imagine that they can be cheaply made*

Paging Sir Paul McCartney; Sir Paul, please pick up the white phone!

**44** posted on **1/15/2014 4:48:11 PM** by **ApplegateRanch** (Love me, love my guns!Â©)

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To: **ApplegateRanch**



wrong Beatle

**45** posted on **1/15/2014 4:56:12 PM** by **smokingfrog** ( sleep with one eye open (<o> ---)

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To: **smokingfrog**

All Beatles are the wrong Beatle.

**46** posted on **1/15/2014 4:59:51 PM** by **Chickensoup** (we didn't love freedom enough... Solzhenitsyn.)  
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To: **smokingfrog**

When are they going to have a surgically implanted model like in Total Recall 2?

**47** posted on **1/15/2014 5:01:13 PM** by **Spartan302** (Spartans never quit, they come back later with more warriors. Asymmetrical Warfare.)  
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To: **smokingfrog**

Right; not that I cared for any of them...and I guess it shows.

**48** posted on **1/15/2014 5:06:44 PM** by **ApplegateRanch** (Love me, love my guns!Â©)  
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To: **Spartan302**

I don't remember that one (or didn't see it).

**49** posted on **1/15/2014 5:15:46 PM** by **smokingfrog** ( sleep with one eye open (<o> ---)  
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To: **Safetgiver**

Hogwash. Come on, just ONE example. Perhaps you are the one who should read and study before making bold claims about static electricity?

**50** posted on **1/15/2014 5:21:30 PM** by **STYRO** (War sucks. Living in slavery sucks even worse.)  
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2/1/2014

Mobile phones powered by WIND TURBINES: 'Micro-windmills' could be fitted to our phones

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