

Nokia developed audio charging technology

Scientists have tested audio charging technology on the Nokia Lumina 925, and it is reported to be capable of generating voltages up to 5V using everyday ambient noise such as traffic, music and voice. .

The 5V voltage level is enough to charge mobile phones, and is higher than 50 mV in previous research efforts.



Scientists have tested audio charging technology on the **Nokia Lumina 925** , and it is reported to be capable of generating voltages up to 5V using " *everyday ambient noise* " such as traffic, music and voice.

In 2011, Korean scientists proposed using sound to charge mobile phones. The charging mechanism is achieved through piezoelectric effects, in which zinc oxide nanoparticles convert sound vibrations into electricity. At that time, researchers could not generate enough electricity to charge the phone. But now, scientists from Nokia and *Queen Mary University London (QMUL)* have successfully researched this technology.

Similar to the team of Korean scientists, researchers at Nokia and QMUL use zinc oxide but in the form of small plates of nanorods. Nanorod bars will bend according to sound waves creating stresses in this process. Like other piezoelectric materials, zinc oxide produces electricity when subjected to mechanical pressure. This current can be used to power mobile devices.

Scientists begin by spraying a liquid zinc oxide coating on a plastic sheet. Then place it in a "*chemical mixture*" and heat it to 90°C, making the zinc oxide form a nanorod array.

To collect the generated voltage, the nanorod plates are sandwiched between two electrical contact plates. Often electrical contact plates are made of gold, but to cut costs, researchers have developed a technique that allows

normal aluminum foil to be used instead.

Dr. Joe Briscoe at *QMUL* University said it could keep mobile devices working for long periods of time, or remove batteries completely by harnessing the energy around us. Researchers hope this technology is highly feasible.

You finished reading the article "**Nokia developed audio charging technology**" edited by the [TipsMake](#) team. We hope this article has provided you with many useful tech tips and tricks. You can search for similar articles on tips and guides. Thank you for reading and for following us regularly.