**Power of sound**
**Jamie First**

Honking, yelling and cheering are more powerful than you may think.

Background noises such as traffic, music and even your own voice could soon change the way you charge your phone.

Scientists from Queen Mary University of London (QMUL) and researchers at Nokia have built a prototype mobile device that can be powered when ambient sounds are converted into electricity.

The invention uses zinc oxide, a material that when squashed or stretched creates a voltage by transforming energy from motion into electrical energy, in the form of nanorods.

The nanorods can be coated onto various surfaces in different locations and respond to vibration and movement.

RMIT University's electrical and computer engineering senior lecturer Dr Mark Gregory said the device shows a great deal of potential.

"It's always been a problem that the amount of motion required to get enough charge has been too much, so if they can get a better conversion rate, that's very positive," he said.

But, he still thinks more work needs to be done.

"People have been investing in that approach for a long time … with more research, sooner or later it will be viable.

"With that sort of result, you're looking at products coming on to the market in the next five years."

Dr Gregory said a breakthrough such as this could lead to charging other day-to-day electronics including sensors and GPS devices.

"These are big areas we are going to see movement in because they can be low powered."

Dr Joe Briscoe and Dr Steve Dunn from QMUL's school of engineering and materials science inspired the creation after they found that playing pop and rock music improved the performance of solar cells.

"Being able to keep mobile devices working for longer, or do away with batteries completely by tapping into the stray energy that is all around us is an exciting concept," Dr Briscoe said in a media release.

The final device is the same size as a Nokia Lumia 925 and generates five volts.