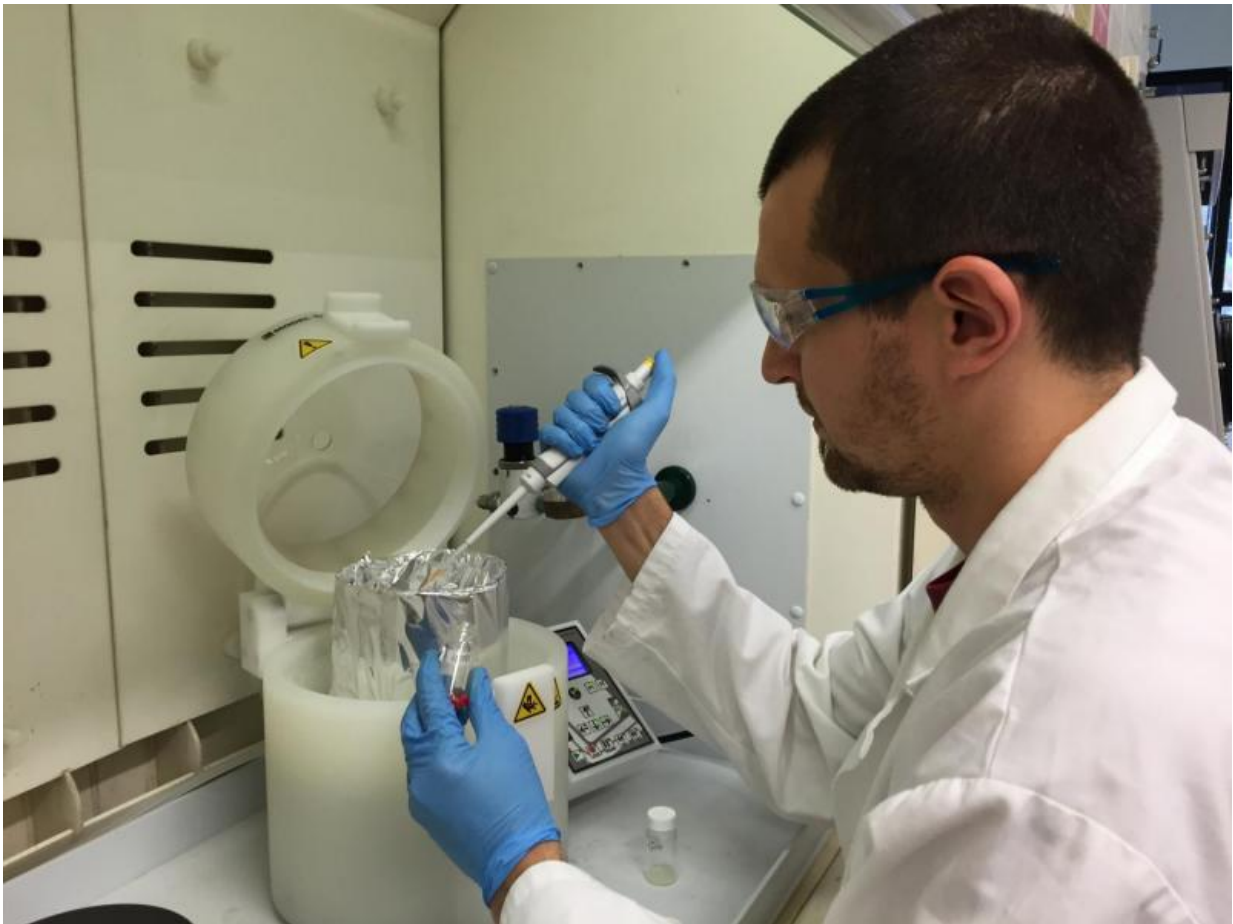


Making cheaper electronics with a flash of light

August 4 2016



Enrico depositing thin coatings. Credit: Fresh Science

Researchers at RMIT and CSIRO plan to revolutionise the manufacture

of smartphones, tablets, solar cells, and LED lights.

They've developed a way of printing [electronic components](#) using cheap and widely available materials, and a flash of light.

Current techniques used to fabricate circuitry and electronic components for many [electronic devices](#) are expensive, mainly because they require exotic materials, sophisticated fabrication equipment and high processing temperatures.

But Enrico Della Gaspera from RMIT has developed a new method that is cheap, non-toxic, scalable, and can all be done at room temperature.

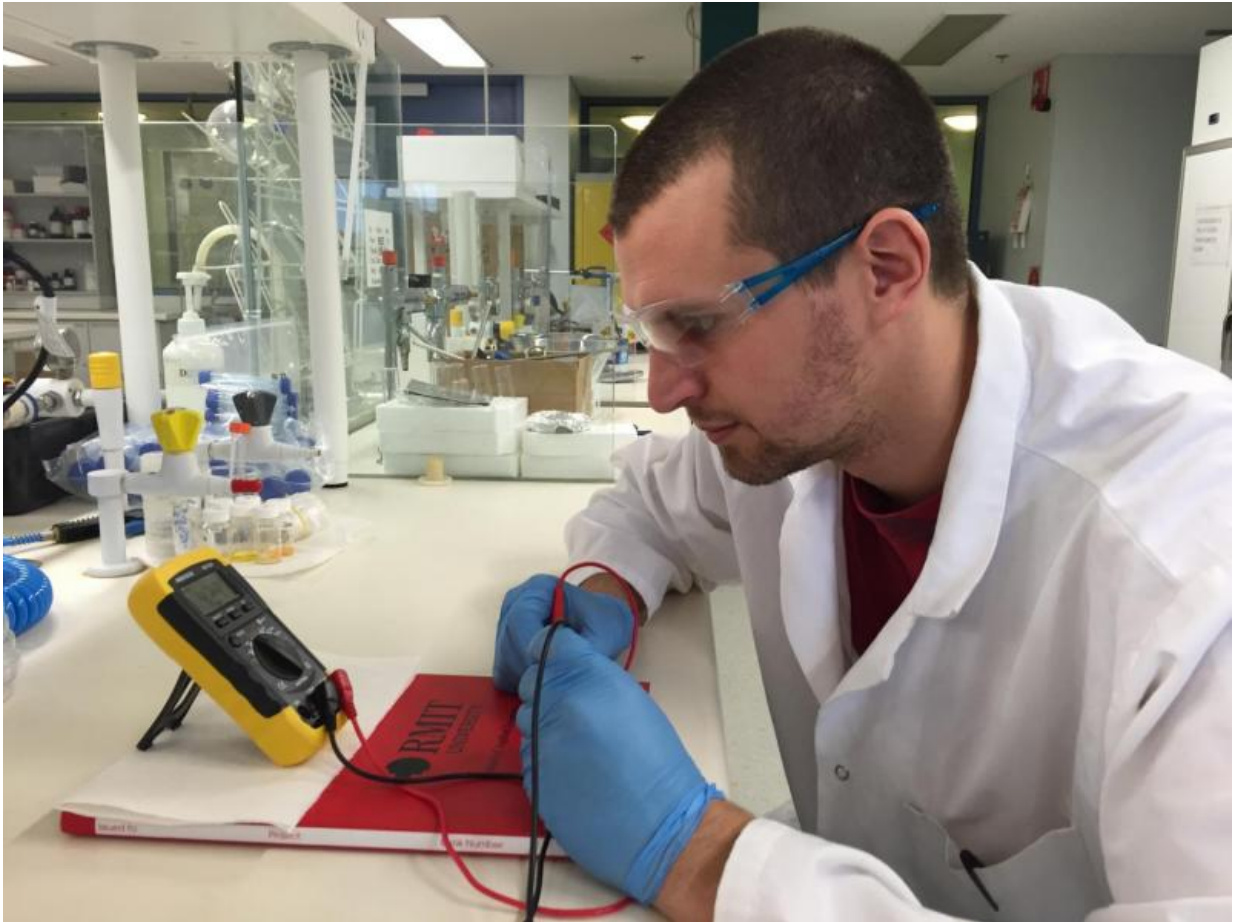
It first involves 'drawing' the desired [electrical circuit](#) using a simple ink-jet or 3D printer and a properly formulated 'ink'. Using a short but intense flash of light, like a very powerful camera flash, Enrico can then change the chemical and physical properties of the material that has been printed. For example, turning it from electrically insulating to electrically conductive.

The technology will dramatically advance the current manufacturing of electronic devices by reducing both fabrication times and costs.

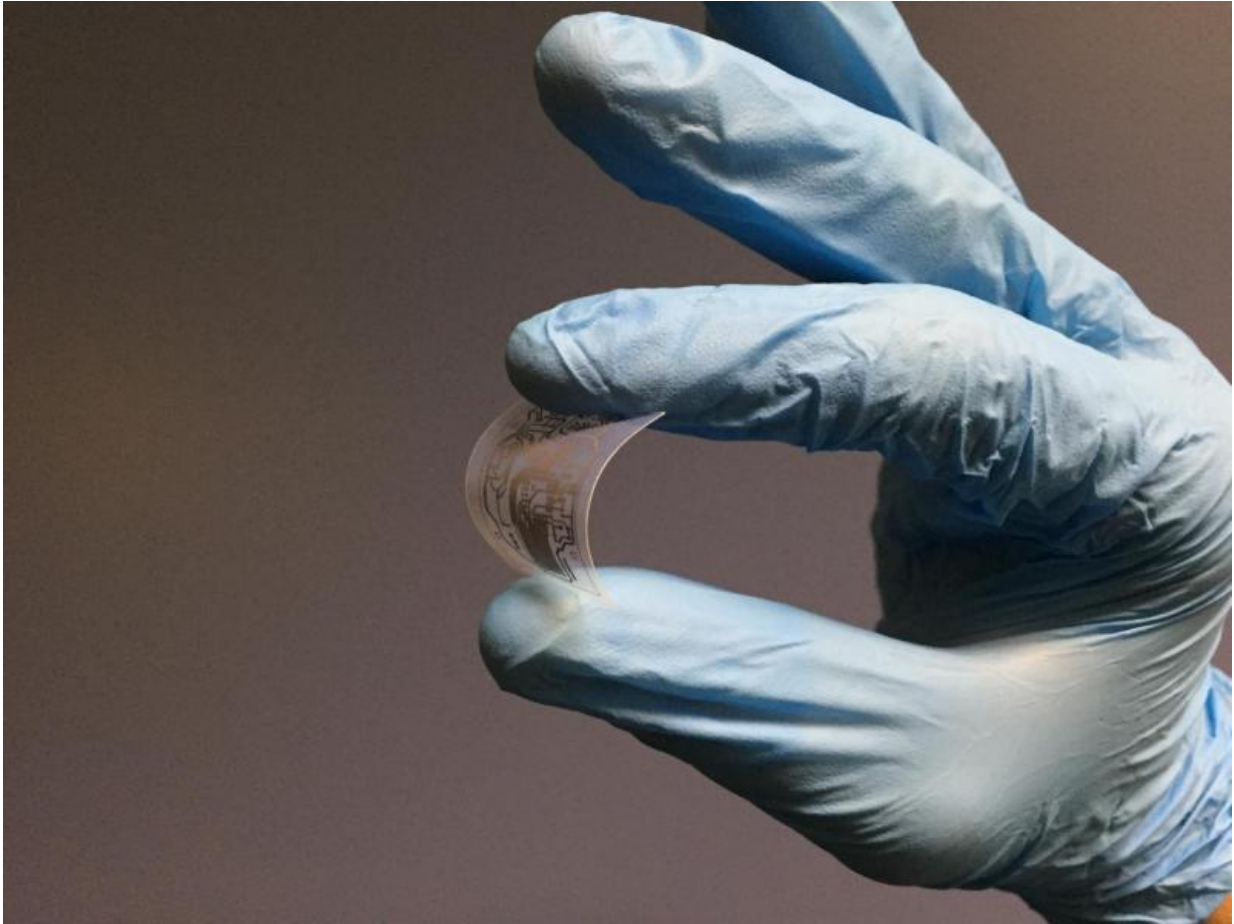
Because the process does not require the high temperatures of conventional electronics manufacture, it can be used to build electronics onto plastic supports. This allows manufacture of flexible, lightweight electronic devices.

Enrico hopes to see this technology used to produce printable, flexible, foldable electronics. As an example, solar cells that can be used in your camping van, or on your backpack to charge your laptop while you're walking around.

The cheap, even disposable electronics made possible by this low-cost method could be used as part of [solar cells](#) in remote or underdeveloped areas as a source of energy.



Enrico measuring resistance. Credit: Fresh Science



Enrico with a flexible circuit printed using this method. Credit: Fresh Science



Sunglasses required. Credit: Fresh Science

Provided by Fresh Science

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