

# THIS WEEK IN CHEMISTRY

28<sup>TH</sup> FEBRUARY 2016 – 5<sup>TH</sup> MARCH 2016

Links to articles & studies for the featured stories are provided at: <http://goo.gl/vuJ51j>



## AN OCTOPUS-INSPIRED, STRETCHY, COLOUR-CHANGING SKIN

Researchers have created a skin that can be stretched to six times its original length, and also light up in five different colours. It relies on an ionic hydrogel made from lithium chloride and a polyacrylamide. The skin could find uses in skins for robotics, and wearable displays.



## IMPROVING THE COLOUR OF RUBIES – USING A MICROWAVE

Scientists found a new way to improve the uniformity of colour, clarity, and lustre of rubies: microwaving them at high temperature. It altered their colour and increased their clarity. It's thought to be due to changes in the oxidation states of iron, chromium and titanium in the stones.



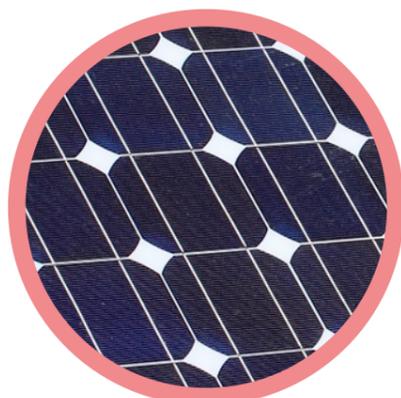
## LIQUID METAL 'BALLOONS' ALLOW ROOM TEMPERATURE SOLDERING

Soldering can damage components used in devices. A new technique avoids this by using a bismuth, indium and tin alloy. It melts above room temperature, but tiny drops of it can be formed into 'balloons' which stay liquid until burst, allowing them to be used to solder materials.



## ELECTROSTATIC FIELDS SPEED UP DIELS-ALDER REACTIONS

Using a scanning tunnelling microscope (STM), chemists have shown that applying an electric field to the carbon-carbon bond forming Diels-Alder reaction increases the rate of the reaction. It had previously been assumed that electric fields didn't play a major role in reaction speed.



## POLYMER HELPS CREATE THINNEST, LIGHTEST SOLAR CELLS EVER

Researchers created solar cells so thin and light, they can be held on a soap bubble's surface. 1.3 micrometres thick and weighing 3.2 grams per metre squared, they were made using vapour deposition, using poly(p-xylylene) as the supportive material and protective overcoat.

