

# THIS WEEK IN CHEMISTRY

18<sup>TH</sup> SEPTEMBER 2016 – 24<sup>TH</sup> SEPTEMBER 2016

Links to articles & studies for the featured stories are provided at: <https://goo.gl/p11v91>



## COFFEE GROUNDS REMOVE LEAD AND MERCURY FROM WATER

A sponge made from 60% waste coffee grounds and 40% silicone can be used to remove lead and mercury from water. In tests, each gram of the foam removed up to 13 milligrams of lead and 17 milligrams of mercury over a time period of 30 hours.



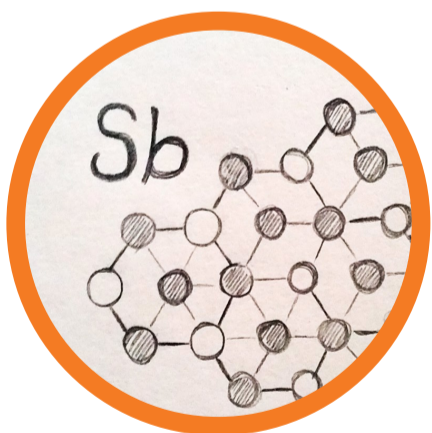
## EMBEDDED MICROCAPSULES MAKE PLASTIC CRACKS GLOW

A new technique embed microcapsules in plastics to enable them to glow when cracks appear. The molecules in the microcapsules glow under a UV light when they are released by damage to the plastic, allowing damage to be identified before the plastic breaks.



## IDENTIFYING THE EXPLOSIVES USED IN THE NEW YORK BOMBING

Initial reports speculating on the explosives used in last Saturday's bombing in New York said Tannerite, used in explosive targets for firearms practice, may have been used. Further reports say the explosive hexamethylene triperoxide diamine (HMTD) was also found.



## ANTIMONENE IS THE NEWEST ADDITION TO 2D MATERIALS FAMILY

Antimonene, an atom-thick layer of antimony, has become the latest member of the family of 2D materials that includes graphene. It has a hexagonal structure, is highly stable, can be immersed in water, and is predicted to have favourable electronic properties.



## ONE PENNY COINS CAN HELP CATALYSE POLYMERISATIONS

Polymerisations need a catalyst to get them started, and now scientists have discovered that one penny coins can be used. In reactions to make acrylics, the reaction started faster with coins than with the usual catalyst, copper wire, and made 50 grams of polymer in one batch.

