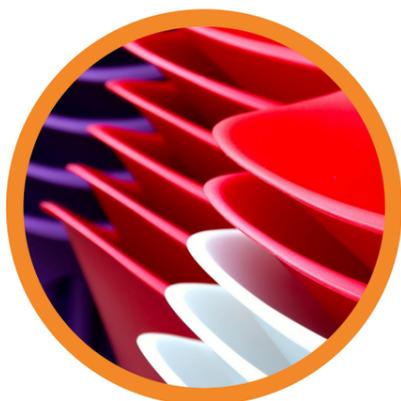


THIS WEEK IN CHEMISTRY

20TH MARCH 2016 – 26TH MARCH 2016

Links to articles & studies for the featured stories are provided at: <http://goo.gl/1pN5Y4>



A THERMOSETTING PLASTIC THAT'S EASIER TO REPAIR & RECYCLE

Thermosetting plastics, used in car bodies, are formed and made stronger by heating, but can't be remoulded or repaired after. A new material uses reversible disulfide crosslinks between polymer chains; it's stronger, easier to make, and can be reshaped and repaired.



PREDICTING WHETHER DRUG CANDIDATES CAUSE LIVER DAMAGE

Animal studies are often used to identify potential liver damage from drug candidates, but this can still be unreliable. A new computational model compares candidates to 3712 compounds known to cause liver toxicity, and could predict whether it will do likewise with 72% accuracy.



ISOTOPE RATIOS CAN HELP DETECT ILLICIT NUCLEAR TESTS

A new model which predicts the ratio of isotopes of noble gas elements released by nuclear explosions will help in the detection of illicit nuclear tests. The isotopes ^{133}Xe and ^{37}Ar are characteristic of nuclear explosions, and can be detected from hundreds of kilometres away.



METALLIC INKS USED 400 YEARS EARLIER THAN THOUGHT

Metallic inks were detected in papyrus from a Roman coastal town. Dating from 79AD, they pre-date the previous assumed point at which metallic inks began to be used. Using a process called X-Ray Phase Contrast Tomography (XPCT) they could identify lead in the ink.



GRAPHENE PATCH HELPS MAINTAIN DIABETIC BLOOD SUGAR LEVELS

A wearable graphene patch is able to detect glucose in sweat, and can also deliver diabetes drugs to control blood glucose levels. The patch has undergone successful tests in mice. It's thought the sensor portion of the device is closer to real-world use than the delivery system.

