

# THIS WEEK IN CHEMISTRY

30<sup>TH</sup> APRIL 2017 – 6<sup>TH</sup> MAY 2017

Links to articles & studies for the featured stories are provided at: <https://goo.gl/TaS7HG>



## IBUPROFEN LASTS TWICE AS LONG IN METAL-ORGANIC FRAMEWORK

Encapsulating the pain-killing drug ibuprofen in a sugar-based metal-organic framework (MOF) allowed the ibuprofen to remain in the bloodstream of mice for twice the usual duration. The uptake of the encapsulated drug was comparable with normal ibuprofen.



## BURIAL SITES HAVE TELL-TALE GEOCHEMICAL SIGNS

The levels of different chemical elements in the soil reveal burial sites, even centuries after flesh and bones have decomposed. Using X-ray fluorescence spectroscopy scientists found that burial site soil had higher levels of phosphorus, zinc, sulfur, iron, and calcium.



## SENSOR USES ROSE SCENT TO WARN OF UNSAFE WATER

A new nanoparticle sensor emits a rose-scented compound upon detecting bacterial contamination in water. The sensor uses gold nanoparticles and a lipase enzyme to detect *E coli* bacteria, and produces rose-scented phenethyl alcohol to warn if water is unsafe.



## WORLD'S FIRST NANOCAR RACE SETS SPEED RECORD

Six teams took part in the world's first nanocar race last weekend. They raced single molecules around a purpose-built miniature gold track using a scanning tunnel microscope. The winning Austrian team set a record for the fastest manipulation of a single molecule.



## DOLPHIN BREATHALYSER REVEALS OIL SPILL HEALTH EFFECTS

Using a breathalyser-type device for dolphins researchers have assessed the health of dolphins exposed to the Deepwater Horizon oil spill. They found compounds in their breath which originate from the breakdown of lung cells, bacterial infection, and inflammation.

