

THIS WEEK IN CHEMISTRY

21ST FEBRUARY 2016 – 27TH FEBRUARY 2016

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



COMMON DRUGS HELP TREAT DEADLY SCORPION VENOM

Researchers in Brazil found that mice given deadly doses of scorpion venom recovered if given doses of common anti-inflammatory drugs such as indomethacin and celecoxib. If the same effect is seen in humans, they could be a convenient alternative to anti-venoms.



MIMICKING THE ICE-RESISTANT DESIGN OF PENGUIN FEATHERS

By examining the feathers of Humboldt penguins under an electron microscope, researchers identified small ridges and hooks that make them so good at repelling water and ice. They then mimicked the design using polyimide fibres, to make an ice-resistant coating.



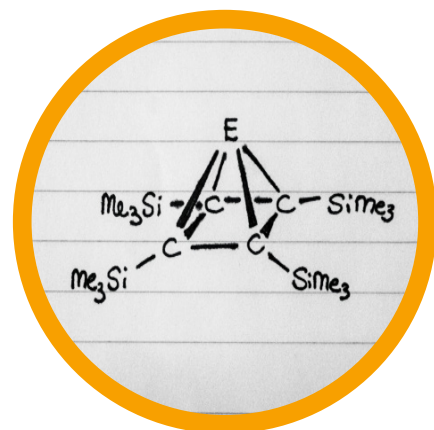
FURTHER EVIDENCE PROPOSED FOR VIBRATIONAL SMELL THEORY

The smells of molecules when some hydrogens are replaced with deuterium cause different responses in brains of bees to the original molecule. This bolsters the theory that molecular vibrations cause smells. The standard view is that a molecule's shape causes its smell.



HIGH PRESSURE GIVES WEIRD COMPOUNDS & OXIDATION STATES

The continuation of work looking at how table salt (sodium chloride) behaves at high pressures of up to 350 GPa has found odd compounds such as Na_4Cl_3 , and also observed chlorine in the -2 oxidation state. The findings defy classical chemistry principles, such as valency.



PYRAMID-SHAPED MOLECULES PREPARED FOR FIRST TIME

Pyramid-shaped molecules known as pyramidanes has been theorised since the 1970s, but only now has a team managed to produce them. They contain a square base of carbon atoms, bonded to a germanium, tin, or lead atom. The compounds may prove useful in synthesis.

