

THIS WEEK IN CHEMISTRY

1ST MARCH - 7TH MARCH 2015

MOTION-POWERED FABRIC CHARGES ELECTRONIC DEVICES

Scientists have developed a new fabric that can generate enough energy from the movement of a person's arm to charge small electronic devices. The fabric could be incorporated into clothing to allow charging of phones whilst on the go.



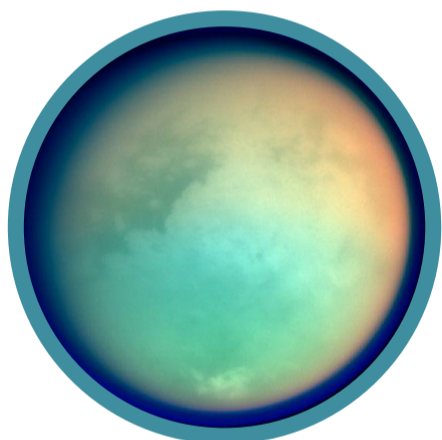
NEW SUPERHYDROPHOBIC COATING RESISTS DAMAGE

An ethanol-based suspension of nanoparticles of TiO_2 , coated with perfluorooctyltriethoxysilane, can be used as a paint which makes surfaces water-repellent and self-cleaning, even after sandpaper testing. It could lead to stain-resistant clothing.



BASIS FOR METHANE-BASED LIFE ON TITAN SUGGESTED

Scientists have theorised possible cell structures for methane-based life on Saturn's moon, Titan. They suggest the cells could have cell membranes consisting of compounds such as acrylonitrile, which would be capable of functioning in the cold methane seas of Titan.



HANDSHAKES AS A FORM OF CHEMICAL COMMUNICATION

A 271 volunteer study found smelling of their own hands increased markedly after handshakes, suggesting a chemical signalling role. Researchers determined chemicals transferred included squalene and hexadecanoic acid, which have signalling roles in other animals.



EARLY EARTH COULD HAVE EXPERIENCED IRON RAIN

US researchers found the pressure required to vaporise iron is 40% less than thought. Meteors would vaporise on impact with early Earth; this vaporised mixture would later fall as an 'iron rain'. This would explain levels of precious metals in Earth's mantle & crust.



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