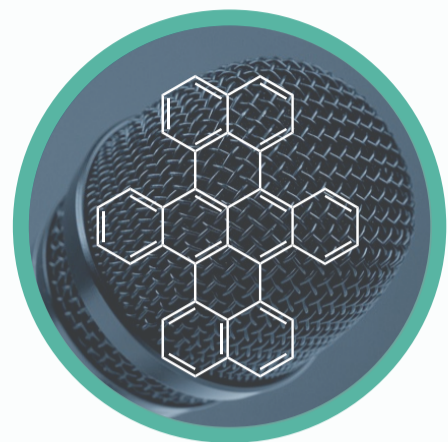


THIS WEEK IN CHEMISTRY

29TH SEPTEMBER - 5TH OCTOBER 2014

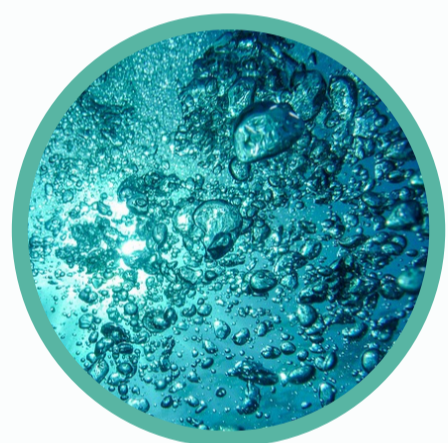
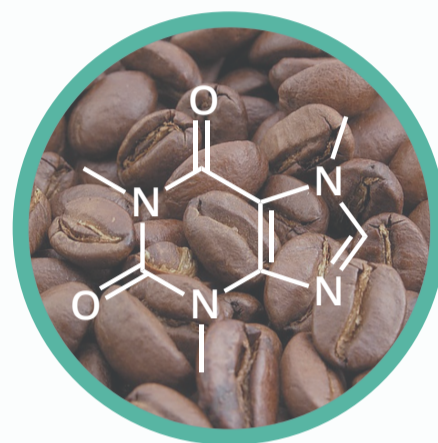


WORLD'S SMALLEST MICROPHONE IS A SINGLE MOLECULE

Scientists in Sweden have successfully created a microphone by embedding a single molecule of dibenzoterrylene in a crystal. Whilst it only works at very low temperature, it could be used to detect the small vibrations in chemical and biological systems.

MECHANISM FOR CAFFEINE'S EFFECTS ON PARKINSON'S

Researchers have observed that the potential antiparkinsonian effects of caffeine can be explained by it acting on adenosine receptors in a particular manner, which suppresses spontaneous activity. This understanding could help Parkinson's drug design.

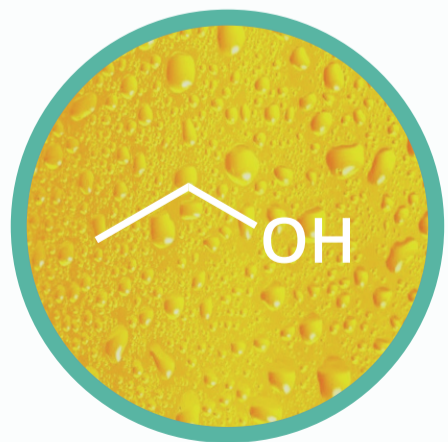
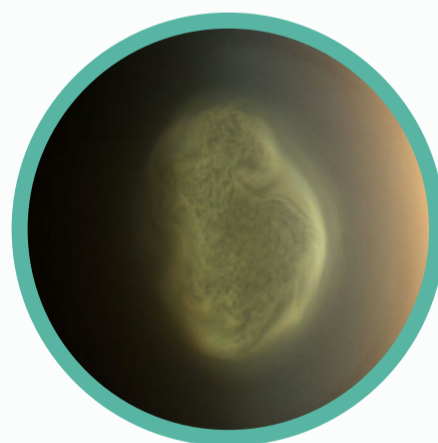


MOLECULAR OXYGEN PRODUCTION FROM CARBON DIOXIDE

Researchers have provided experimental evidence for the splitting of carbon dioxide into carbon and oxygen when exposed to certain wavelengths of light. It could be a factor in how oxygen originally formed in Earth's outer atmosphere.

HUGE CLOUD ON TITAN IS MADE OF HYDROGEN CYANIDE

A cloud at Titan's south pole the size of Egypt has been confirmed to be composed primarily of toxic hydrogen cyanide ice. This means the atmosphere at the poles must be 100°C colder than originally expected. The Cassini probe will examine the pole further in 2015.



ENHANCING THE ALCOHOL TOLERANCE OF YEAST

Researchers have found adding potassium compounds to yeast-growing mediums improves alcohol tolerance and increases the amount of time individual cells produce alcohol. It could eventually translate to big savings for commercial ethanol production.

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References & links to papers: <http://goo.gl/OQx0va> (Titan image courtesy of NASA)

