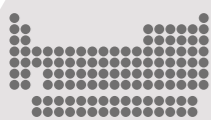


#CHEMMONTHLY MARCH 2019

NEW RECORD FOR WORLD'S SMALLEST PERIODIC TABLE



The University of Nottingham has one-upped itself by beating its own record for the world's smallest periodic table. Their latest effort, which measures 14 micrometres by 7 micrometres, was made on a silicon chip using a beam of high energy electrons.

STIR BAR CONTAMINATION CAN CATALYSE REACTIONS



The magnetic stir bars used in many chemical laboratories are coated in an inert polymer (PTFE) which should stop them affecting reactions. However, new research shows that scratches and cracks could track metal particles, which could then interfere with reactions.

NEW RESEARCH EXPLAINS WHY LEMONS ARE SOUR



Researchers have identified the genetic reasons why lemons are so sour. They discovered two proton pumps in which pack lemon cell vacuoles full of hydrogen ions and result in the fruit's low pH. Mutations lead to the loss of these proteins in sweeter fruits.

PARKINSON'S DISEASE 'MUSK' COMPOUNDS IDENTIFIED



Researchers have identified four compounds found on the skin of Parkinson's Disease sufferers that contribute to its characteristic 'musk' and act as biomarkers for the disease. They may help develop diagnostic tests before other disease effects appear.

ANALYSIS FINDS HAZARDOUS COMPOUNDS IN TATTOO INKS



Analysis of inks used in tattoos has revealed a number of compounds of concern. A new report identified azo pigments, metals, and organic byproducts. It recommends that limits should be introduced on these compounds in tattoo inks to control the risks.

HOW MOSQUITOES DETECT HUMAN SWEAT IDENTIFIED



Researchers discovered a protein in mosquito antennae which helps them detect humans by sensing the lactic acid in our sweat. It also helped them detect other acidic compounds in sweat, and in the development of products to repel mosquitoes.

SEA SPRAY SPREADS POLLUTANTS INTO ATMOSPHERE



Perfluoroalkyl acids are persistent pollutants that originate from firefighting foams and other products. Previously it was thought that ultimately they ended up in the oceans. New research shows sea spray can spread hundreds of metric tons of them to the atmosphere.

ANAESTHETIC DISRUPTS PEOPLE'S TRAUMATIC MEMORIES



An early trial successfully used the anaesthetic propofol to disrupt people's traumatic memories. After being shown a traumatic video, then sedated with propofol, those tested 24 hours after waking found it harder to remember the traumatic sections of the video.

For links to articles and studies, visit: bit.ly/chemmonthlymar19. Follow @Chemunicate or #ChemMonthly on Twitter to keep up with the latest chemistry news!



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