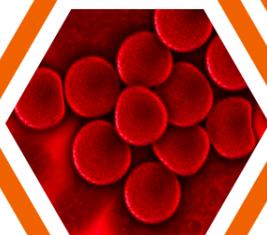


#CHEMMONTHLY JUNE 2019



ENZYME CONVERTS TYPE A BLOOD TO TYPE O BLOOD

A pair of enzymes from bacteria in the human digestive system are able to convert type A red blood cells to type O red blood cells. They do so by chemically transforming the carbohydrates that determine blood type, and more efficiently than previous enzymes.



ALLERGY DRUG MAKES RESISTANT BACTERIA VULNERABLE

The anti-allergy drug loratadine, commonly taken by hay fever sufferers, can make some antibiotic-resistant bacteria vulnerable to antibiotics, lab-based experiments have shown. The drug also breaks up and blocks bacterial biofilms. Clinical trials are planned.



CHEMISTS FIND COMPOUNDS BEHIND THE SMELL OF PRETZELS

Chemists have identified 22 odour compounds that contribute to the smell of soft pretzels. Two molecules were essential: one which has a roasted smell and another with a caramel smell. Both are also found in other baked goods, with the proportions in pretzels being key.



MAGNETS UP EFFICIENCY OF MAKING HYDROGEN FROM WATER

By bringing an ordinary magnet close to a reactor that splits water to make hydrogen, researchers have doubled the efficiency of the process. It works thanks to a phenomenon known as spin polarisation. Scaled up, the process could help boost hydrogen production.



SNAIL MUCUS INSPIRES REVERSIBLE HYDROGEL SUPERGLUE

A new hydrogel material acts as a strong but reversible glue. Inspired by snail mucus, like their slime it dries and locks objects to both regular and irregular surfaces, but releases objects when rehydrated. Its strength is as much as 892 newtons per square centimetre.



CALCULATIONS SHOW STRANGE BONDS COULD FORM IN URANUS

High pressure reactions between ammonia and hydrogen could create unusual bonds, including bridging hydrogens between two nitrogens, according to new calculations. The unusual compounds, including NH_7 , may form at the high pressures in Neptune and Uranus.



CLAY SHEET ALTERNATIVE TO METAL COATING IN FOOD PACKETS

Plastic films coated with sheets of synthetic clays could be used to replace the metal-coated films inside food packaging such as crisp packets. The clay-coated plastic film is more recyclable and its oxygen permeability is also 50 times lower than the metallised films.



HUMANS CONSUME THOUSANDS OF MICROPLASTIC PARTICLES

New research has shown that the average American could be consuming up to 50,000 microplastic particles per year in their food. The figure is based on known microplastic content of certain foods. It's unclear what, if any, effect this has on our health.

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