

THIS WEEK IN CHEMISTRY

30TH NOVEMBER - 6TH DECEMBER 2014

REWITABLE PAPER DEVELOPED USING UV SENSITIVE DYES

Rewritable 'paper' that uses dyes sensitive to UV light has been developed by US researchers, who covered a plastic film with methylene blue and a titanium dioxide catalyst, then shone UV light through masks. The image was then erased by heating to 115°C.



SIX NEW ALLOTROPES OF CARBON PREDICTED

Computational techniques have been used to predict the existence of six new carbon allotropes. The new allotropes are very hard and stable, and are structurally similar to some existing forms of carbon, which could make their fabrication easier.



MECHANISM OF HUMAN INFRARED VISION UNCOVERED

Though it's been known that humans can see near IR wavelengths of light, US researchers have now explained how. They showed that absorption of two photons of IR light causes isomerisation of a compound in the light-sensitive protein rhodopsin, enabling vision.



LEPTIN LINK TO HIGH BLOOD PRESSURE IN OBESITY

The hormone leptin, which regulates the amount of fat stored in the body, has been demonstrated to link high blood pressure and obesity. Researchers found that increasing leptin levels in obese rodents drove an increase in blood pressure.



NEW THREE MINUTE SYNTHESIS OF IBUPROFEN

A new method published this week details a method for synthesising ibuprofen in 3 minutes, with an average yield of over 90% for each step. The reagents used are also simple and inexpensive, meaning the synthesis could be a more practical way of producing the drug.



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