

# THIS WEEK IN CHEMISTRY

19<sup>TH</sup> APRIL - 26<sup>TH</sup> APRIL 2015



## NEW STRONTIUM CLOCK IS MOST ACCURATE EVER BUILT

A new atomic clock, which works by measuring the oscillations of strontium atoms between energy levels, is so accurate it won't lose or gain a second in 15 billion years. The clock's precision is such that it can also detect gravitational time dilation.

## 170-YEAR OLD CHAMPAGNE TASTES SWEET & CHEESY

A 170-year old batch of champagne found in a shipwreck off Finland has shed light on old winemaking methods. The levels of sugar (150 grams per litre) and salt were high compared to today. Conditions on the sea bed meant the champagne was remarkably well preserved.



## CREATING 3D HOLOGRAMS USING GRAPHENE OXIDE

Researchers have created 1cm tall 3D holograms, viewable in an angle of up to 52°, using graphene oxide. They reduced the graphene oxide with a rapidly pulsing laser to alter how light bends as it passes through. Its development could lead to floating 3D displays.

## BEEES DRAWN TO NEONICOTINOID-TAINTED NECTAR

A new study found that bees given a choice between nectars with or without neonicotinoid pesticide contaminants showed a preference for the tainted nectar. If also true in the field, it would mean that estimates of neonicotinoid exposure may be higher than thought.



## CHEMICAL BREATH TEST COULD AID MALARIA DIAGNOSIS

A new breath test for malaria detects sulfur-containing organic chemicals in the breath of volunteers with a small infection dose. These compounds, usually undetectable, were present in the early stages of infection. Further tests in sufferers are planned.



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