

# THIS WEEK IN CHEMISTRY

7<sup>TH</sup> DECEMBER - 13<sup>TH</sup> DECEMBER 2014

## NEW COMPOUND MAY HELP CONTROL WEIGHT GAIN

A proprionate chemical bound to the carbohydrate inulin could prevent weight gain in overweight adults. In a study, 10g of compound a day reduced weight gain over 6 months compared to a control group, though it must be eaten regularly to have an effect.



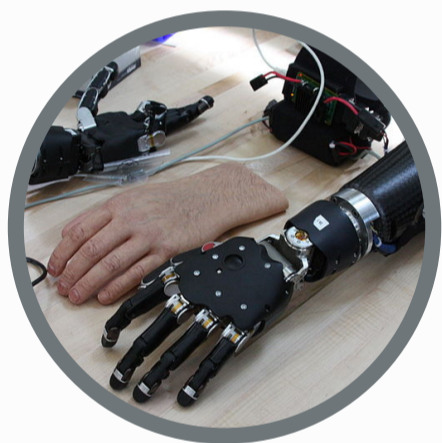
## USING A SMARTPHONE TO DETECT HAZARDOUS GASES

An inexpensive method to detect gases uses a combination of Near-Field Communication (NFC) tags and mobile phones. Carbon nanotubes in the tag respond electronically to different gases, such as ammonia, and the phone is used to detect this change.



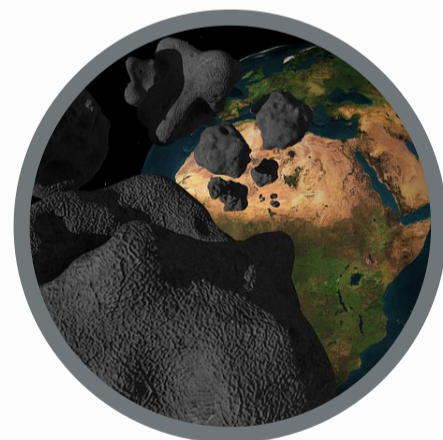
## NEW ARTIFICIAL SKIN CAN SENSE BOTH HEAT & TOUCH

A new stretchable prosthetic skin uses silicon nanoribbon sensors, which allow the sensing of strain, pressure, and temperature. The skin could eventually be used in prosthetic limbs to allow much greater perception of the surrounding environment.



## WATER ON EARTH UNLIKELY TO HAVE COME FROM COMETS

An analysis of the water found on comet 67/P, using data from the Rosetta spacecraft, has found its deuterium/hydrogen ratio is notably different from that on Earth, implying that comets are unlikely to have seeded a young Earth with water.



## NEW FORM OF ICE COULD STORE CARBON DIOXIDE

A new form of ice, Ice XVI, has been isolated for the first time. Its cage-like structure can trap gas molecules, and they are known to store large quantities of methane at the bottom of the ocean. They could also have a similar capacity to store carbon dioxide.



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