

THIS WEEK IN CHEMISTRY

1ST FEBRUARY - 7TH FEBRUARY 2015

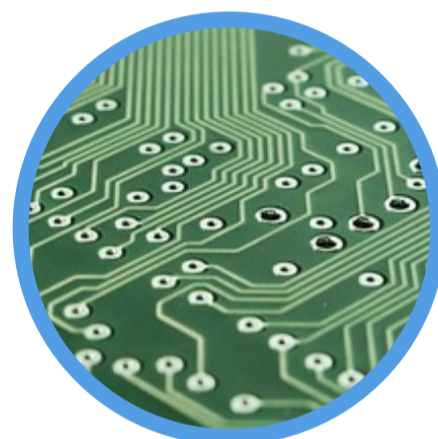
IMPROVED STEEL IS STRONGER THAN TITANIUM ALLOYS

South Korean researchers made a new steel by adding nickel to an alloy of iron, aluminium, manganese & carbon. The resultant alloy has a lower density than normal steel, making it more useful for lightweight applications. It also costs less than titanium alloys.



FIRST TRANSISTOR USING ATOM-THIN SILICON UNVEILED

Silicene is a graphene analogue, an atom-thick material composed of silicon. This week, the first transistor using silicene was unveiled, and though it only works for a few minutes before the silicene degrades, it is hoped further research could yield longer durations.



DNA SEGMENTS COULD STORE DIGITAL DATA FOR MILLENNIA

Digital data storage mediums have relatively short lifetimes. A study this week showed that digital information could be stored on DNA encapsulated in silica, and could be recovered, error-free, after millennia, based on a series of artificial ageing experiments.



NEW FLUOROCHEMICALS FOUND IN FIREFIGHTERS' BLOOD

Scientists compared blood of 20 firefighters with that of 20 students & office workers, and identified 4 unknown fluorinated surfactant compounds. The compounds originate from firefighting foams, and may be a cause for concern, as little is known of their risks.



DISSOLVING POLYMER WAFERS HELP DELIVER EYE DRUGS

Eye drops are quickly cleared through the tear ducts, so must contain high drug concentrations. Scientists have now developed dissolving polymer wafers that can be used to effectively deliver drugs to the eye. Clinical trials could begin by the end of the year.



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