

THIS WEEK IN CHEMISTRY

15TH JANUARY 2017 – 21ST JANUARY 2017

Links to articles & studies for the featured stories are provided at: <https://goo.gl/XTMel6>



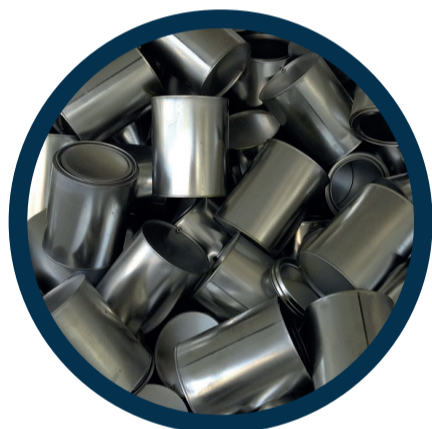
A LITHIUM BATTERY THAT RELEASES FLAME RETARDANTS

A new lithium battery safety feature releases a flame retardant chemical if they are damaged, overheat, or short-circuit. The flame retardant is encased in a polymer-based separator in the battery, which melts if the temperature of the battery gets too high.



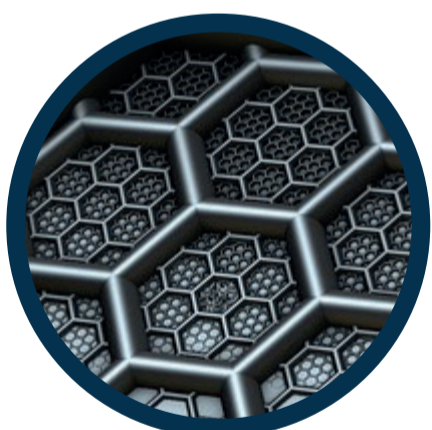
TRIGGERING PAIN RELIEF ON DEMAND USING LIGHT

Painkilling drugs in liposome sacs can be released in the body by exposure to near-infrared light. The liposome surface is coated with nanorods, which absorb near-IR and generate heat. This breaks a lipid free of the membrane, opening pores and releasing the drug.



BPA DESIGNATED 'SUBSTANCE OF VERY HIGH CONCERN' IN EU

Bisphenol-A (BPA), used to make some plastics and resins, has been added to the European Chemicals Agency's list of substances of high concern. Though there is no consumer health risk at current exposures, this ruling may lead to restrictions on BPA's use.



RESEARCH UNLEASHES GRAPHENE'S SUPERCONDUCTIVITY

New research unlocks graphene's ability to act as a superconductor – carrying an electrical current with no resistance. Previously, this had only been achieved by adding an already superconducting material. The type of superconductivity seen may be an as yet unverified form.



GECKO-INSPIRED ADHESIVE STICKS AND UNSTICKS WITH LIGHT

A new adhesive pad inspired by gecko feet can also be triggered to unstick from objects with light. Polydimethylsiloxane microstructures provide the adhesive effect. Underneath, a layer contains azobenzene, which isomerises in UV light and bends the pad to unstick it.

