

THIS WEEK IN CHEMISTRY

15TH MARCH - 21ST MARCH 2015

COMPOUND DEACTIVATES CHEMICAL WEAPONS IN MINUTES

A new zirconium-containing metal organic framework material is extraordinarily effective at breaking down nerve agents. It broke down soman, a G series nerve agent more toxic than sarin, 80 times faster than previous compounds. The compound is also reusable.



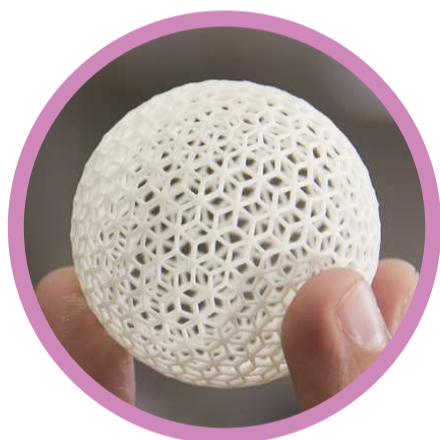
MICROBE SPECTRA COULD DETECT LIFE ON OTHER PLANETS

Researchers have created a catalogue of the wavelengths of light reflected by 137 microorganisms, which could help in detection of life on other planets. The remote-sensing ability of the technique would be limited, but could prove helpful in some circumstances.



NEW TECHNIQUE ENABLES 3D PRINTING IN MINUTES

A new 3D printing method uses a liquid resin reservoir, with an oxygen permeable polymer window through which UV light shines to cure the resin. It cures resin in the bulk liquid, rather than on top, allowing printing up to 100 times faster than current methods.



INDUCING ERECTIONS IN RATS USING BLUE LIGHT

Researchers injected a modified gene into the erectile tissue of rats; when the erectile tissue was exposed to blue light, a surge of a second messenger molecule was observed, leading to erection. The method could eventually be used to treat erectile dysfunction.



PENCIL SKETCHES CAN HELP MAKE PAPER-BASED SENSORS

A rectangle drawn on paper with pencil conducts electricity, due to the graphite that makes up pencil leads. Its resistance varies when bent; by measuring the resistance, bend angle can be determined. It could be scaled up to produce sensors for a range of purposes.



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