

THIS WEEK IN CHEMISTRY

10TH SEPTEMBER 2017 — 16TH SEPTEMBER 2017

Links to articles & studies for the featured stories are provided at: <https://goo.gl/jL5Bh9>



TURNING HAGFISH SLIME INTO AN ULTRA-STIFF FIBRE

Hagfish produce slime when threatened, which is made up of proteins. Researchers used genetically engineered *E coli* cells to produce these proteins, which they then turned into stiff fibres by adding magnesium ions and cross-linking sheets with lysine.



DNA ROBOT PICKS UP, SORTS, AND DELIVERS CARGO

Using a strand of DNA 53 nucleotides long, scientists have created a robot that picks up a molecular cargo, sorts it, and delivers it to the correct location. It was able to sort two types of DNA 'cargoes', and will help understand how to build further DNA robots.



A CHEAPER WAY TO MAKE A MOTH SEX PHEROMONE

The European grapevine moth sex pheromone can be used to control their numbers, as spraying it can disrupt mating. However it is more expensive to make than traditional pesticides. A new two-step route produces it more cheaply and with an 80% yield.



TELLURENE JOINS THE 2D MATERIALS FAMILY

Tellurium has become the first element in the chalcogens group of the periodic table to join to join the 2D materials family. Tellurene joins the more well-known graphene and others. It could potentially be useful for ultrathin electronic devices in the future.



CHEMICALLY MODIFIED COTTON GIVES TAILORED PROPERTIES

Cotton is made from cellulose, a polymer formed from monomers in the ovules of the cotton plant. Researchers found that by altering monomer building blocks they can alter the properties of the resulting cotton. They were able to make fluorescent and magnetic fibres.

