MOLECULAR MACHINES WIN 2016 CHEMISTRY NOBEL PRIZE

This year’s Nobel Prize in Chemistry was awarded to Jean-Pierre Sauvage, Sir Fraser Stoddart, and Bernard Feringa for their work on the design and production of molecular machines, which could find applications in medicine and electronic devices.

MAKING SUNSCREENS MORE SUSTAINABLE WITH LIGNIN

Sunscreens use titanium dioxide to absorb and scatter UV light, but it can also form free radicals that can damage the skin. The particles are coated with other compounds to prevent this; a new study uses lignin (polymers from plants) to make sustainable coatings.

FEEDING SILKWORMS CARBON NANOTUBES STRENGTHENS SILK

Silkworms that were fed mulberry leaves sprayed with a 0.2% solution by weight of graphene or carbon nanotubes were able to subsequently produce tougher silk. It withstood 50% higher stress before breaking, and was also able to conduct electricity.

MOF ‘NANOKEBABS’ BREAK DOWN CHEMICAL WARFARE AGENTS

A nanoscale fibre material was coated with titanium dioxide and then a metal organic framework (MOF) material to form kebab-like structures. It was able to rapidly degrade the nerve agent soman. The researchers hope to integrate it into field chemical suits.

AVOCADO RADIATION EQUAL TO THAT OF SMOKE DETECTORS

A new study aiming to put radiation readings in context has shown that the radiation given off by smoke detectors (which contain the radioactive element americium) is roughly equal to that given off by an avocado. Both are hugely below recommended safe levels.