WHY WE DON'T SPONTANEOUSLY COMBUST — EXPLAINED

Almost every compound in the human could potentially combust with oxygen – so why don't we spontaneously combust? Chemists have worked out that this is because, due to resonance stabilisation, dioxygen is much less reactive than we'd expect it to be.

POLYMER NETWORK REMOVES 99% OF WATER CONTAMINANT

The contamination of water with perfluorinated compounds, from industrial pollution and fire-fighting foams, is a growing concern. A new study shows that a cross-linked cyclodextrin network can remove 99% of perfluorooctanoic acid (PFOA) from water.

NEURAL NETWORK ACCURATELY PREDICTS BOND ENERGIES

A computer program that mimics the behaviour of a brain, and analyses and classifies chemical bonds, can predict chemical bond energies with unerring accuracy. Such networks may have applications in designing new drugs and materials.

ENGINEERED BACTERIA MAKE ARTIFICIAL COLOUR REPLACEMENTS

Natural alternatives to artificial colours can be obtained from fruits and vegetables, but can vary in quality and are difficult to purify. A new method produces anthocyanin pigments by feeding glucose to four different strains of genetically-engineered bacteria.

THREAT OF HELIUM SHORTAGE DUE TO QATAR BLOCKAGE

The recent blockade of Qatar could lead to helium shortages around the world, as it is the source of 30% of the world's helium. Helium is used to cool the magnets in MRI scanners, and in electronics manufacturing. The shortage will likely impact helium prices.