

THIS WEEK IN CHEMISTRY

6TH AUGUST 2017 – 12TH AUGUST 2017

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TWO-FACED BARREL REMOVES OIL FROM WATER

A two-faced 'Janus barrel' can quickly remove oil from water. Its fluorinated outer face attracts oil, but not water, and the oil passes through microscopic holes into the barrel. The inner face is precoated with water and stops the oil passing back through.



US RULING REMOVES RESTRICTION ON HFC REFRIGERANTS

A US court has removed an EPA restriction of the use of HFC refrigerants. Used as replacements for CFC refrigerants, HFCs don't damage the ozone layer, but have a high global warming potential. The Montreal protocol requires their eventual phaseout.



GOLDFISH SURVIVE WITHOUT OXYGEN BY PRODUCING ALCOHOL

Goldfish and carp can survive for five months without breathing oxygen. New research shows that this is because they have a unique set of enzymes which converts carbohydrates into alcohol, which can then be easily removed from their bodies via the gills.



NEW ELECTROCHEMICAL METHOD FOR MAKING 1,2-DIAMINES

1,2-diamines are present in many pharmaceuticals, but current routes to make them produce toxic by-products. A new method reacts alkenes with sodium azide (with a manganese catalyst) inside an electrochemical cell, producing a diazide which is then reduced.



DECACENE BECOMES LONGEST ACENE EVER MADE

Decacene, ten benzene rings fused together in a row, is the longest acene ever made, beating the previous record of nine in 2010. It was made by plucking oxygen atoms from a precursor on a gold surface. It has no practical uses, but may have interesting properties.

