

# THIS WEEK IN CHEMISTRY

2<sup>ND</sup> AUGUST - 8<sup>TH</sup> AUGUST 2015

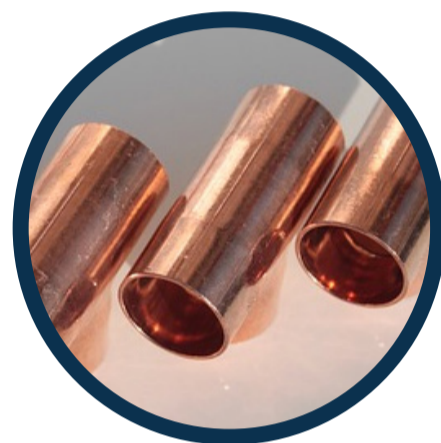
## COMPOUNDS PROTECT WORMS FROM PLANT POLYPHENOLS

Researchers have discovered new chemical compounds in the earthworm gut, which they have named drilodefensins, that help counteract the toxic effects of plant polyphenols, and make it possible for the worms to digest plant matter.



## NON-MAGNETIC METALS TURNED INTO MAGNETS

Copper and manganese are not usually magnetic metals, but combining thin films of these metals with layers of carbon-based buckyballs turns them into magnets. The magnetism is only weak and fades in a few days, but could lead to new hybrid magnets.



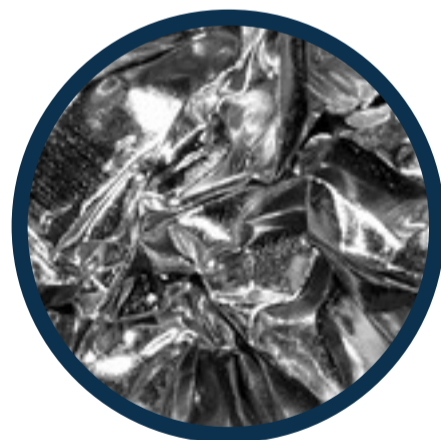
## HOW MUSSELS PRIME SURFACES TO STICK TO THEM

A new study found the mixtures of adhesive proteins mussels secrete to 'prime' surfaces contains lysine groups which replace salt-derived cations on surfaces; catechol groups then allow mussels to adhere to rocks or boat hulls.



## FIRST OBSERVATION OF GRAPHENE'S TIN COUSIN, STANENE

It's been predicted previously that tin could form an atom-thick film, much like graphene, and this week researchers have made it for the first time. Stanene is predicted to be able to conduct electricity without generating waste heat, but this has yet to be confirmed.



## SUGAR SUPPRESSES & MASKS CAFFEINE'S BITTER TASTE

A new study suggest that as well as masking the bitter taste of caffeine, there is a direct caffeine-sugar interaction that suppresses the bitterness. Previously, it was thought that bitterness was suppressed by sugar affecting water structure around the caffeine.

