

THIS WEEK IN CHEMISTRY

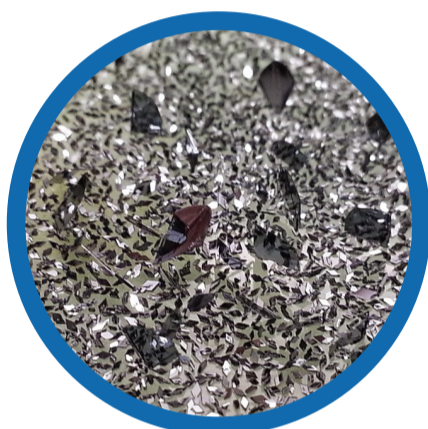
10TH JULY 2016 – 16TH JULY 2016

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



METALS FROM CIGARETTES CONTAMINATE PERSIAN GULF

A new study on metal contaminants in the Persian Gulf suggests that metals from discarded cigarette butts can leach into marine environments. These metals include cadmium and arsenic. Their impact on the marine environment is as yet unknown.



HONEYCOMB POLYMER SPHERES TRAP RADIOACTIVE IODINE

Porous polymers which capture large amounts of iodine may find use in the nuclear industry and in radiotherapy. Radioactive isotopes of iodine can be dangerous; the new polymers, formed from thiophene monomers, absorb up to three times their mass of iodine.



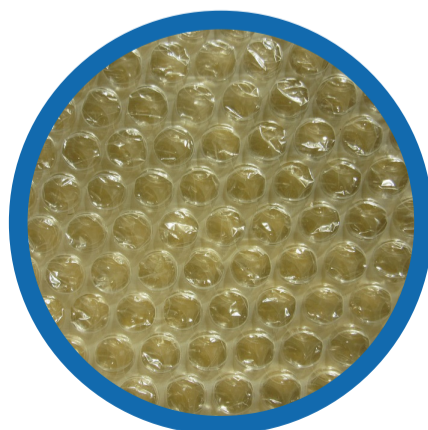
TAMIFLU SYNTHESIS TIME CUT FROM THIRTY HOURS TO ONE

Japanese chemists have cut the time required to make the antiviral drug Tamiflu from over thirty hours to just one hour. Though the final yield of the reaction is only 15%, and it generates isomeric products which must be separated, the chemists hope to improve this.



NEW FINGERPRINTING TECHNIQUES FOR POLYMER NOTES

Fingerprints can't be lifted from polymer bank notes in the same manner they can from traditional notes. A new technique deposits copper on polymer notes, allowing fingerprints to be imaged, or lifted using gelatine sheets and using rubeanic acid to make them visible.



GRAPHENE PACKAGING VASTLY REDUCES WATER PERMEABILITY

A plastic packaging problem is that it still lets some water molecules through. This can reduce the lifespan of electronic and medicinal goods. A new study uses packaging incorporating a single layer of graphene, and found it reduced water permeability a million fold.

