

#CHEMMONTHLY APRIL 2019



NEW PLASTIC FAMILY CAN BE RECYCLED AND UPCYCLED

A new family of polymers, polydiketoenamides can be made from ketones and amines at room temperature. They can then be converted back into their building blocks by adding concentrated acid. These could subsequently be remade into the polymer.



LEAD CONTAMINATION RISK AFTER NOTRE DAME FIRE

Hundreds of tons of lead, used in the roof of the Notre Dame cathedral, melted during the recent fire. Lead particles were deposited in the dust and debris from the fire, with elevated levels found around the cathedral. The risk of poisoning is low, however.



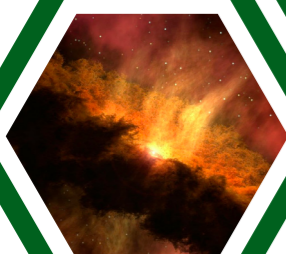
HARMFUL PARTICULATES IN AIR ON BOARD DIESEL TRAINS

A new study shows that air pollution levels on board diesel passenger trains built in the 1980s can reach five times those found beside a busy street. The levels of air pollutants were particularly heightened in the carriages close to the engine.



HAIR REMOVAL WAX CREATES HIGH QUALITY GRAPHENE

Persian wax, used for hair removal, helps make large amounts of high quality layers of graphene in a recent study. Graphite sheets are fed through a Persian wax-coated three-roll mill. The wax-coated rollers rip off layers of graphene. It could be used for mass production.



THE UNIVERSE'S FIRST MOLECULE FOUND IN SPACE

Approximately 380,000 years after the big bang, the first molecule to form in the universe was helium hydride (HeH^+). It was first made laboratories in the 1920s, and it has now finally been observed in a planetary nebula, formed by collapsing stars.



NEONICOTINOID PESTICIDE EXPOSURE MAY HARM MAMMALS

A study has shown that exposure to neonicotinoid pesticides in groundwater could have health effects in mammals. Low and moderate levels of the pesticides added to deer drinking water in the study led to decreases in body weight and fawn survival.



CHEMISTRY BOOK WRITTEN ENTIRELY BY MACHINE PUBLISHED

A book on research on lithium-ion batteries has been written entirely by machine algorithms. The algorithm identified relevant articles, ordered them, and wrote summaries. Although the book contains some grammatical mistakes, large parts of it are free from mistakes.



PIZZA-BAKING GENERATES FLUORESCENT NANOPARTICLES

Cooking can generate carbon nanoparticles on food - and a new study shows it can happen during pizza-baking. The fluorescent carbon nanoparticles formed from proteins, polysaccharides, and lipids. Tests in animals show they can have effects in the body.

For links to articles and studies, visit: bit.ly/chemmonthlyapr19. Follow @Chemunicate or #ChemMonthly on Twitter to keep up with the latest chemistry news!



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