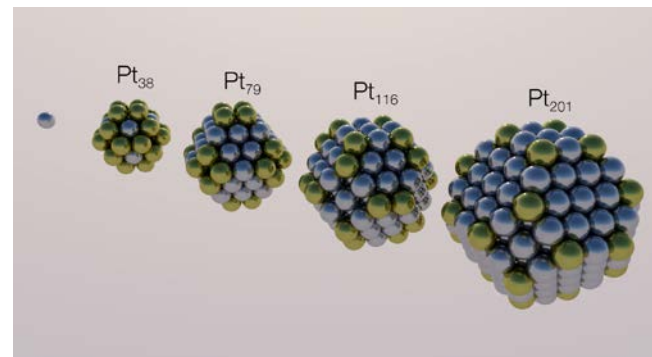


Platinum catalyst makes greener PVC

Read the full article at rsc.li/2UuR9c3

A single-atom platinum catalyst could replace the highly toxic mercury one that is used to make the monomer chloroethene involved in the production of PVC. The new platinum catalyst is twice as efficient as the one currently used by industry and could cut mercury pollution.

Chloroethene production is one of the world's most common industrial processes. Up to a third is produced using a mercury catalyst. Scientists investigated various metals including gold and ruthenium as potential catalysts. They found one of the best was single atoms of platinum deposited on activated carbon. This catalyst should be attractive to industry, because platinum is cheaper than gold and only small amounts were used.



Platinum nanoparticles. From one atom (left), to a 201-atom nanoparticle (furthest right)



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1. In which part of the periodic table are the metals in this article found?
2. Explain how catalysts work.
3. Draw a repeating unit of the polymer PVC formed from chloroethene.