



Scientists produce a five-metal nanoparticle

Slide by Neil Goalby. Available from rsc.li/4vSARu1

Multi-metal nanocrystals are difficult to make because the different reactivities and structure of metals can lead to non-uniform crystals. Now scientists have made particles from a mixture of five metals. The metals were dissolved in solution and deposited onto ruthenium nanoparticle seeds. They made RuFeCoNiCu particles about 20–25 nm in size with a uniform composition. The nanoparticles were able to catalyse the decomposition of ammonia more effectively than single metal catalysts.



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New nanoparticle could boost hydrogen production

Questions

1. What part of the periodic table are the metals used found in?
2. Explain how catalysts speed up chemical reactions.
3. Suggest why these nanoparticles make effective catalysts.