

Showcasing research from Dr. Zili Wu's laboratory, Chemical Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN, USA.

Insights into size effects of  $Pt/Al_2O_3$  catalysts on hydrogen production from methylcyclohexane dehydrogenation

The intermediately sized Pt clusters exhibit higher atomic efficiency than the small Pt clusters and larger Pt nanoparticles in hydrogen production from catalytic dehydrogenation of methylcyclohexane to toluene over  $Pt/Al_2O_3$  whose catalytic stability is also Pt-size dependent. Colour coding: Pt – yellow balls; methylcyclohexane- orange molecules; toluene – blue molecules; hydrogen – pale bubbles.



