Simple Strategy Generating Hydrothermally Stable Core–Shell Platinum Catalysts with Tunable Distribution of Acid Sites

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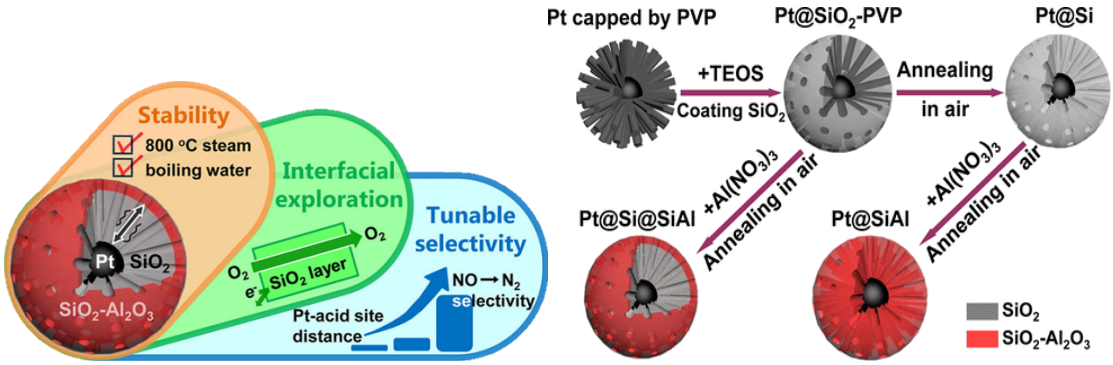
Abstract:

When using platinum as catalysts, the hydrothermal stability and controlling the distance of Pt-acid site are important. To achieve these goals, traditional methods are no longer effective. So authors develop another simple way-- SiO_2 alumination containing core shell structure.

Authors produce three kinds of sample with different structure. These products are used to compare their hydrothermal stability. Besides, they use several tests, including propane oxidation and NO_x reduction etc. The experiments mentioned in this article, not only prove the advantage of this product, also show its application.



Main reference:

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2. Zecevic, J.; Vanbutsele, G.; de Jong, K. P.; Martens, J. A. Nanoscale Intimacy in Bifunctional Catalysts for Selective Conversion of Hydrocarbons. Nature 2015, 528, 245−248.