



Preparation of highly loaded platinum nanoparticles on silica by intercalation of $[\text{Pt}(\text{NH}_3)_4]^{2+}$ ions into layered sodium silicate ilerite

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Abstract

Highly loaded Pt nanoparticles (20 wt%) on silica were prepared intercalation of $[\text{Pt}(\text{NH}_3)_4]^{2+}$ ions into layered sodium silicate ilerite at room temperature followed by calcination of the intercalated ilerite ($[\text{Pt}(\text{NH}_3)_4]^{2+}$ ilerite) in air at 380°C for 5 h. Transmission electron microscopy revealed that the size of the Pt particles was in the range 2-5 nm.