

Effect of reducing agents in preparing electro-catalyst for PEFCs

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Recent studies on electro-catalyst for PEFC is mainly focused on the catalyst durability as well as the catalyst activity. The catalyst performance including durability and activity is critically affected by the physicochemical properties of the electrocatalyst such as particle size and particle size distribution of the catalyst. These catalyst properties can be controlled by the catalyst preparation method and the selection of appropriate reducing agent is critical for tuning the catalyst characteristics.

In this study, we mainly investigated on the effect of reducing agents on the physicochemical properties of the electro-catalyst. Pt and Pt-Ru catalysts were prepared by using various reducing agents including NaBH₄, H₂O₂ and N₂H₄ and the catalyst properties were characterized by TEM, XRD, BET, ICP, cyclic voltametry.