

عنوان مقاله:

Nano Pt/C Synthesized via modified borohydride reduction method as PEM fuel cell anode catalyst

محل انتشار:

چهارمین کنفرانس هیدروژن و پیل سوختی (سال: 1396)

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خلاصه مقاله:

Carbon supported Pt Nano catalyst is synthesized using direct reduction of platinum salt by sodium borohydride. All reaction steps is carried out in organic solvents to prevent oxidation of metal nanoparticles. Obtained Pt/C catalyst is characterized by X-ray diffraction and its electrochemical performance compared with commercial Pt20/C80. Electrochemical CV test procedure is used to evaluate the catalyst activity for Hydrogen Oxidation Reaction (HOR) and CO electro-oxidation and tolerance. CV tests are performed once in a media of electrolyte as blank CV, and a second time under continuous bubbling of hydrogen gas in the electrolyte as H2 CV and third time under continuous bubbling of CO gas in the electrolyte as CO CV. Electrochemical results for synthesized and commercial catalyst are presented and synthesized catalyst performs higher activity for HOR and permanent activity against CO bubbling .along with CV test

کلمات کلیدی:

Electrochemical CV, H2 and CO electrooxidation, Nano Pt/C

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