

Preparation of Pt_{shell}-Pd_{core} Electrocatalyst for Alcohol Oxidation

최인수†
강원대학교
(ischoi@kangwon.ac.kr†)

Carbon-supported Pt_{shell}-Pd_{core} electrocatalyst was synthesized by electroless deposition and galvanic displacement. The catalyst was active and suitable for oxidation of both methanol and ethanol. The stability of Ptshell-Pdcore toward alcohol oxidation was attributed to the modified electronic characteristics of the Pt overlayer in the Ptshell-Pdcore, leading to its weak binding with CO_{ad}. The binding property of the surface Pt with CO_{ad}, and the facile oxidation of CO_{ad} by OH_{ad} were investigated by X-ray spectroscopy, and by successive CO_{ad}-stripping experiment, respectively.