

Electrochemical properties of size-controlled Pt nanoparticles for methanol oxidation and oxygen reduction

한대섭, 최종호, 남우현, 성영은*
광주과학기술원 고체전기화학실험실
(ysung@kjist.ac.kr*)

Pt nanoparticles highly dispersed on Vulcan X-72 with various sizes were synthesized by borohydride reduction method. TEM and XRD analysis were performed to confirm the real particle size. The methanol oxidation and oxygen reduction activity were observed with the change of particle size. The oxygen reduction activity in existing of methanol to apply to the cathode of DMFC, which experiences the competition between methanol oxidation and oxygen reduction, also was observed. The cubo-octahedral model was used to observe the comparison between the theory and experiment at result.