Highly active PdCo on carbon electrocatalyst for ethanol oxidation reaction

한승훈, 윤덕현[1], 이재성[1,*]
POSTECH; [1]UNIST
(jlee1234@unist.ac.kr*)

Carbon-supported Pd and PdCo(1:2, 1:1, 2:1 and 3:1) catalysts are synthesized by chemical reduction with $NaBH_4$. Their electrochemical properties are investigated by cyclic voltammetry, chronoamperometry and CO stripping voltammetry. In the cyclic voltammetry, the current density and onset potential of PdCo(1:1)/C are comparable to those of commercial catalysts and the current density increases according to the amount of Co. The onset potential of PdCo(1:1)/C in CO stripping test is negatively shifted by 40mV compared to that of Pd/C catalyst. Thus, PdCo(1:1)/C catalyst has possibility of replacing commercial Pt-based catalysts as an anode catalyst for DEFCs.