

### Bimetallic Tungsten Carbides as Anode Support Material for PEMFC

한승훈, 윤덕현, 배강홍, 이재성\*  
POSTECH  
(jlee@postech.ac.kr\*)

WC has been specified by various phases such as tungsten mono-carbide (WC), tungsten bi-carbide and tungsten partial oxidized from. Among them, WC has been reported as high electrochemical activity and stability in acidic condition like low temperature fuel cells than other WCs. In spite of those properties, electrochemical activity of WC for PEMFC is too low. In this point of view, various bimetallic WCs are synthesized including NiWC, NbWC and FeWC. The size of carbides was compared with Scherrer's equation. Cyclic voltammetry test was performed to analyzed electrochemical properties of bimetallic tungsten carbides. Pd was loaded on one of bimetallic tungsten carbide and characterization was performed in the view of metal-support interaction.