

Hydrogen Storage Behaviors of Metal Alloy-decorated Porous Carbon Nanofibers

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In this work, the hydrogen storage behaviors of porous carbon nanofibers (CNFs) decorated by Pt/Ni nanocomplex were investigated. The Pt/Ni nanocomplexes were introduced onto the CNF surfaces using a well-known chemical reduction method. We investigated the hydrogen storage capacity of the Pt/Ni-doped CNFs for the platinum and nickel content range of 0.2~1.5 and 0.1~0.5 wt.%, respectively. The microstructure of the Pt/Ni/porous CNFs was characterized by X-ray diffraction and transmission electron microscopy. The hydrogen storage behaviors of the Pt/Ni/CNFs were studied using a PCT apparatus at 298K and 10 MPa.