Preparation of Pt nano particles on MWNT

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Among the different types of carbon for catalyst supports, carbonnanotube (CNT) has attracted much attention due to its special characteristics, such as large surface area, mechanical strength, electric conductivity, resistance to acid/basic media, etc. We prapared Pt nano particles on multi-walled nanotube (MWNT) by chemical vapor deposition (CVD) method. Before Pt deposition, MWNT samples were pretreated by using HCl and the mixed acid of HNO_3 and H_2SO_4 for the enhancement of surface wettability and modification of the surface structures. As a result of CVD, Pt nano particles ranges from 1 nm to 2 nm were synthesized. The surface of Pt/MWNT catalyst was characterized by using HR-TEM, XRD, CO chemisorption, etc.