

**Surface pretreatment of carbon black and CNTs for the effective deposition of Pt nanoparticles for fuel cell electrode**

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Various carbon supports are widely used as support of catalyst, especially for fuel cell electrode. However, the surface of them is mostly neutral such that the deposition of metal particles in highly dispersed manner is very difficult. In this study, carbon black and carbon nanotubes (CNTs) were treated by mixed acid solution for the manufacture of surface defects. Then, Pt nanoparticles were selectively deposited on them. The interaction between the metal and carbon support was measured by X-ray photoelectron spectroscopy (XPS) and its catalytic activity as a fuel cell catalyst was tested by cyclic voltammetry.