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Title: Synthesis of multiwall carbon nanotube-supported platinum catalysts by solution plasma processing for oxygen reduction in polymer electrolyte fuel cells

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1 Highlight

- 2 ● Pt/MWCNTs were synthesized by “the two-step method” and “the Pt precursor  
3 adsorption method” using a solution plasma irradiation.
- 4 ● The bulk of PtNPs produced by a solution plasma irradiation was metal state.
- 5 ● Oxygen reduction activity and lifetime for the Pt/MWCNTs were studied by a  
6 rotating ring-disk electrode method.
- 7 ● The lifetimes of the catalysts made by “the Pt precursor adsorption method” were  
8 longer than that of the catalysts made by “the two step method”.

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