

# PEMFC용 담지촉매의 담지비에 따른 성능평가

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## Optimal Amount of Carbon in Pt/C for PEMFC

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**Key words** : PEMFC(고분자전해질연료전지), Catalyst(촉매), Electrode(전극), Impedance, single cell(단위전지)

**Abstract** : This study focuses on a determination of amount of carbon in the Pt/C for catalysts of polymer electrolyte membrane fuel cells (PEMFC). PEMFC offer low weight and high power density and being considered for automotive and stationary power applications. The PEMFC behavior is quite complex is influenced by several factors, including catalysts and structure of electrode and membrane type. Catalyst of electrode is important factor for PEMFC.

One of the obstacles preventing polymer electrolyte membrane fuel cells from commercialization is the high cost of noble metals to be used as catalyst, such as platinum. To effectively use these metals, they have to be will dispersed to small particles on conductive carbon supports. The optimal amount of Pt in Pt/C was investigated by using impedance spectroscopy and polarization curves in single cell with H<sub>2</sub>/O<sub>2</sub> operation.

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