

**FC08**

## **The Performance of Air Cathode for Fuel Cells**

연료전지에서 공기전극의 성능

문성모 · 정용수

한국기계연구원 표면연구부

At present, about 80% of the energy being used world-wide comes from fossil fuels through combustion process which leads to air pollution and an increase of green house gases. The environmental hazards and a scarcity of the fossil fuels lead us to look for alternatives to the combustion process. Fuel cell is a promising alternative that can deliver electrical power to a broad spectrum of applications such as mobile equipments, electric vehicles, and distributed generations.

A fuel cell is basically composed of anode, cathode, membrane and electrolyte. A major contribution to the loss of efficiency in fuel cells is due to the poor performance of air cathode which is related with transport limitations of reactants to the catalyst. In this presentation, effects of various factors affecting the performance of air cathode will be introduced and some experimental results of the structural effect on the performance of air cathode will be presented in terms of the length of triple phase boundary and transport of gaseous oxygens.