

Influence of water behavior in the gas diffusing layer on the performance of PEMFC

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Experimentally, the affect of water behavior on the performance of polymer electrolyte membrane fuel cell(PEMFC) was investigated. To understand the water transportation phenomena systematically, the gas diffusion layers were divided to two parts. One is gas diffusion medium(GDM) and the other is micro-layer(ML). In this work, GDM with different PTFE contents was intensively investigated at various single cell operation conditions. I-V performance curves of single cells were compared and analyzed with respect to water transportation in the GDM. By this work, the dominant driving forces of the water transportation in the gas diffusion layer were suggested for the design of gas diffusion layers.