

### Effect of micro-porous layer in direct methanol fuel cells

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Micro-porous layer (MPL) in DMFC has challenged as an important candidate in enhancing the cell performance due to protection of water flooding and the reduction of methanol-crossover. Moreover, good conducting MPL offers the enhanced cell performance by making electron transfer facilitate easier, and also MPL with well-developed porosity proposes the improved cell performance by inducing good diffusion of reactant gas. Cell performance was measured by single cell test. The order of power density was cell used hydrophobic MPL only cathode side > MPL-free cell > cell used both hydrophobic MPL anode and hydrophobic MPL cathode side > cell used both hydrophilic MPL anode and hydrophobic MPL cathode side.