

## Performance of Membrane-Electrode Assemblies Using Anion-Exchange Membranes and Non-Precious Catalysts

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Membrane-electrode assemblies employing commercially available anion-exchange membranes (Neosepta<sup>TM</sup>, ASTOM, Japan) and non-precious catalysts (e.g., Ni, Ag) were fabricated to investigate their H<sub>2</sub>/air-performance. Neosepta<sup>TM</sup> anion-exchange membranes (ASTOM, Japan) have different physical and electrochemical properties. Ni-based electrocatalysts and commercially available Ag/C (E-Tek, USA) were employed at anode and cathode, respectively. The catalyst slurries were prepared by mixing the catalyst powder, deionized water and the ionomer binder. PTFE-impregnated Toray 250 carbon paper (waterproof by 8% PTFE) was used and sandwiched the membranes. Fabricated MEAs were characterized and evaluated at H<sub>2</sub>/air, 50~100% RH, 60~80 °C and ambient pressure.