



## **PEMION® FUEL CELL OFFERINGS:** **Catalyst Coated Membranes / Membrane Electrode Assemblies**

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# CCMs / MEAs

## Catalyst Coated Membranes / Membrane Electrode Assemblies

Ionomr Innovations, Inc., provides ion-exchange materials and core components for polymer electrolyte membrane fuel cells as a convenient assessment tool for evaluation and integration of its proton exchange membrane and ionomer technologies:

### Catalyst coated membranes

in standard and custom sizes coated with standardized catalyst layers

### Membrane electrode assemblies

in standard and custom sizes in multi-layer configurations comprising standardized catalyst layers, framing materials, and gas diffusion layers.

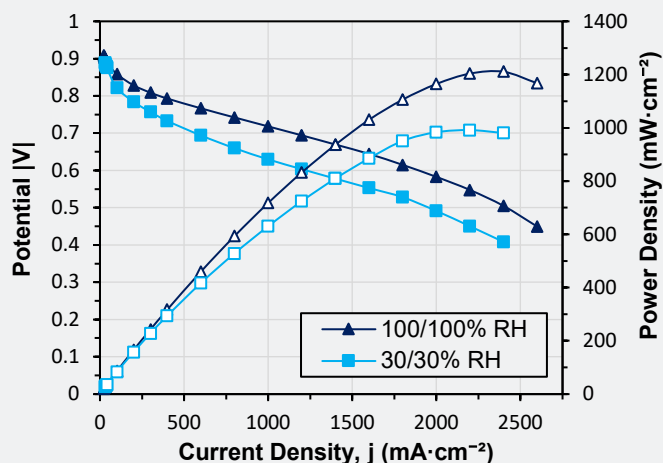
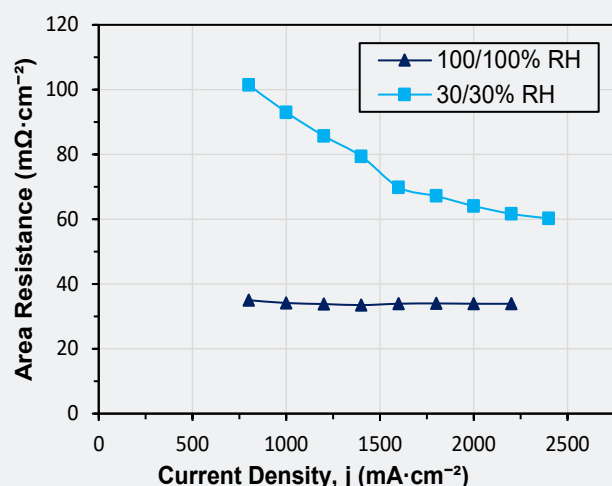
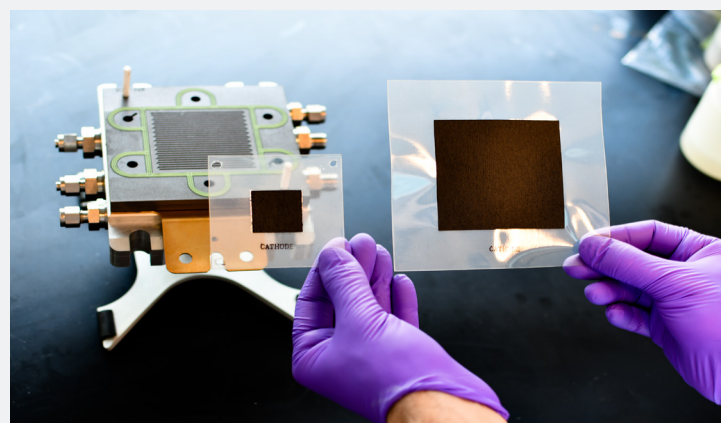


Figure 1. Performance and area resistance reference data for a 5-layer PF1-HLF8-15-X MEA, 150 kPa<sub>g</sub> under H<sub>2</sub>/Air at 80 °C

### Hydrogen Fuel Cell CCMs

**Active area:** 5, 25, 50 cm<sup>2</sup>  
Custom configurations up to 450 cm<sup>2</sup>

**Membranes:** PF1-HLF9-15-X  
PF1-HLF8-15-X

**Catalysts:** 0.4 mg/cm<sup>2</sup>  
total Pt/C loading

**H<sub>2</sub> Crossover:** < 5 mA/cm<sup>2</sup>

### Hydrogen Fuel Cell MEAs

**3-layer:** A Pemion® membrane coated with standard anode and cathode catalyst layers

**5-layer:** The aforementioned CCM, with framing materials affixed to both sides

**7-layer:** A CCM with frames, as well as gas diffusion layers (GDLs) affixed to both sides

# DOCUMENT CHANGE HISTORY

Document ID	Document ID
FM-7041-A	Pemion Catalyst Coated Membranes and Membrane Electrode Assemblies

Revision	Prepared By	Approved By	Effective Date
A	Omid Toussi	Ben Britton	<b>Nov 30, 2021</b>

This document is reviewed to ensure its continuing relevance to the systems and process that it describes.

## REVISION HISTORY:

Revision	Date	Description of Changes	Approved By
A	Nov 30, 2021	Initial Draft	Bill Haberlin