



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

**2386 East Mall - Suite 111
Vancouver, BC Canada
V6T 1Z3**

CCMs / MEAs

Catalyst Coated Membranes / Membrane Electrode Assemblies

Ionomr Innovations 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.

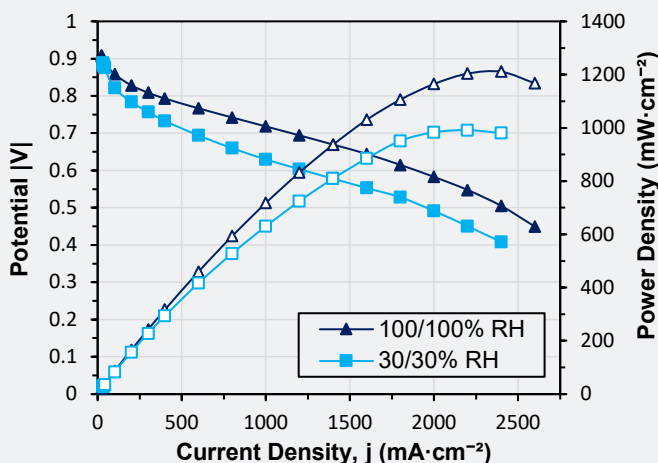
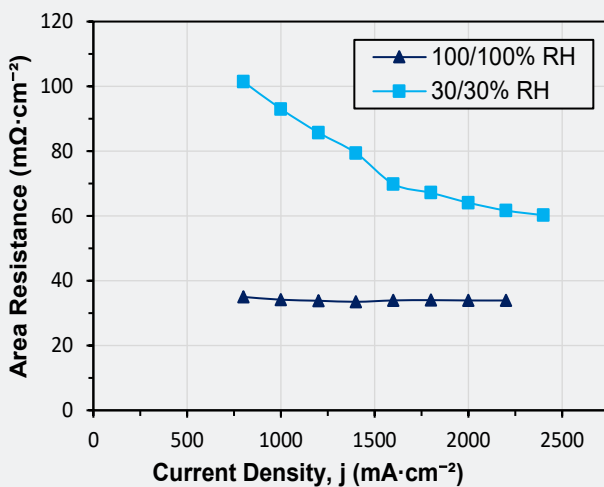
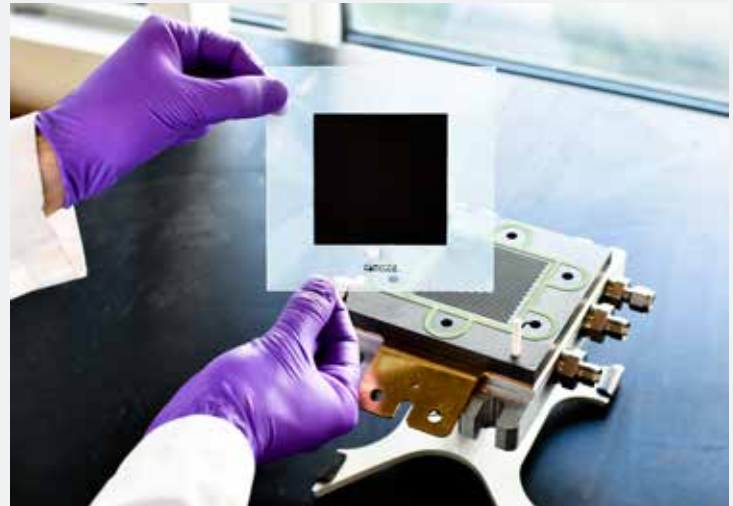


Figure 1. Performance and area resistance reference data for a 5-layer PF1-HLF8-15-X MEA, 150 kPa_g under H₂/Air at 80 °C

Hydrogen Fuel Cell CCMs

- Active area:** 5, 25, 50 cm²
Custom configurations up to 450 cm²
- Membranes:** PF1-HLF8-15-X
- Ionomers:** SSC PFSA
Pemion PP1-HNN8-00-X **(coming soon)**
- Catalysts:** 0.4 mg/cm² total Pt/C
0.3 | 0.1 mg/cm²
Cathode | Anode
- H₂ Crossover:** < 2 mA/cm² (ambient)
< 6 mA/cm² (150 kPag)

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-B	Pemion Catalyst Coated Membranes and Membrane Electrode Assemblies		
Revision	Prepared By	Approved By	Effective Date
B	Omid Toussi	Andrew Belletti	March 3, 2021

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
B	March 2, 2022	General Updates	Andrew Belletti