



Hionic™ Electrolyte Supports

Using proprietary fabrication methods and materials, *fuelcellmaterials.com* has developed a high strength and high performance electrolyte support. The Hionic™ substrate is more than four times stronger than conventional fully stabilized YSZ-8 (8 mole% yttria stabilized zirconia) electrolytes. The high strength allows thin 150 μm (+/- 20 μm) substrates to be significantly more robust during handling, mounting and processing. The conductivity of the Hionic support rivals that of ScSZ-10 (10 mole% scandia stabilized zirconia). High conductivity combined with the thinness of the support minimizes the overall resistance of the Hionic platform, thus improving your ability to measure the properties of your electrodes and your cells.

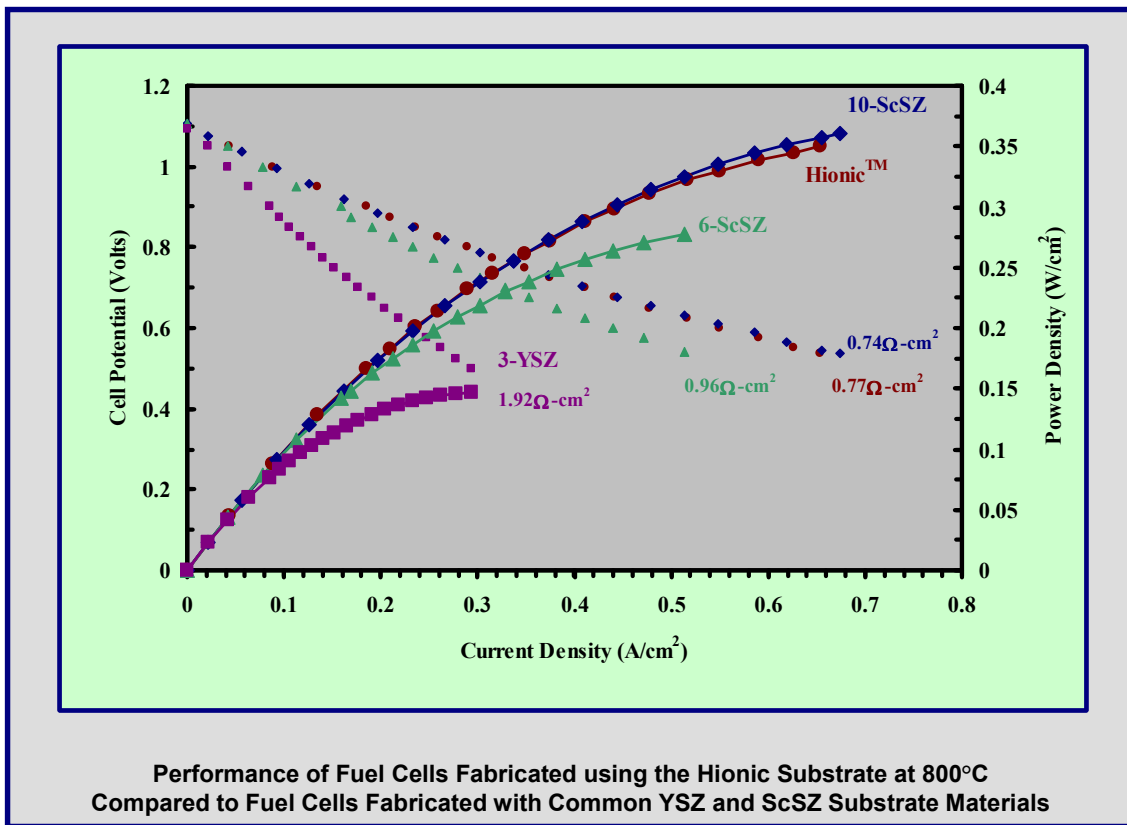
Applications

- The perfect starting point for the researcher who wants to test a variety of anode and cathode materials in SOFC development.

Benefits

- Robust support withstands stresses of handling during cell fabrication and testing.
- Dense membrane makes sealing easy allowing both compression and “hard” sealing with metals, glasses, etc.
- High conductivity enhances measurement of anode and cathode performance by reducing the contribution of the electrolyte even at intermediate temperatures.





Comparison Chart					
	Hionic™	YSZ-3	YSZ-8	ScSZ-6	ScSZ-10
Strength	High	High	Low	Moderate	Low
Conductivity	Excellent	Very Poor	Poor	Moderate	Excellent

The Hionic™ electrolyte support comes in standard sizes of 20, 25, 28 and 32 mm diameter disks

Cathode/Hionic and Anode/Hionic bilayer buttons (utilizing the electrodes from the NextCell™) are available

Custom substrate shapes and sizes are possible

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