

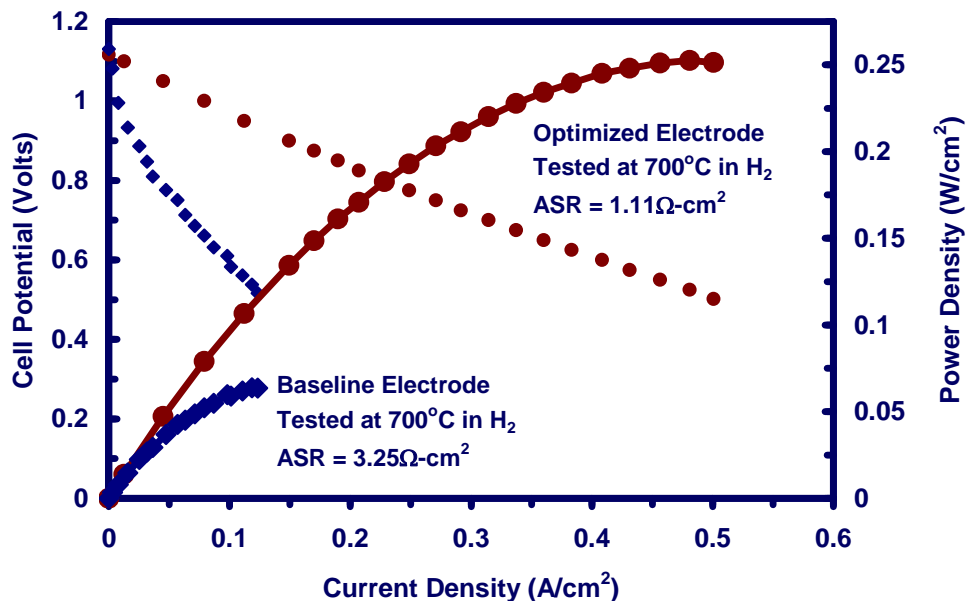


Tailoring Materials and Components: Cathode for Low Temperature Processing

In the race to commercialize fuel cells, attempting to fit standard products to your highly designed processing methods costs money and can delay product development. **fuelcellmaterials.com**, through its parent NexTech Materials, Ltd., offers custom development services to tailor materials and components to your specific processing and performance requirements. We encourage you to bring us your unmet needs at any time in your development cycle so we can help you move rapidly to commercialization.

In one example, a customer had an unusual and proprietary technique for depositing cathodes onto their cells. Most important to the customer was improving performance while maintaining low processing temperature. This customer purchased and applied the standard cathode from **fuelcellmaterials.com** to their cell. The I-V and power curves of this cell are the diamonds/blue line in the figure below. At 700°C under their test conditions, the cell had low power density and high ASR.

NexTech, in concert with the customer developed a customized cathode with modified composition, particle size distribution and surface area designed for low processing temperatures. This optimized material dramatically reduced cell resistance. As a result the power density at 0.7V increased nearly 5-fold while cell ASR dropped by a factor of three, as can be seen by the circles/red line below. Pleased with these results, this customer continues to partner with **fuelcellmaterials.com** for additional tailored products.



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