

Low Temperature Solid Oxide Fuel Cell

Disclosure Number

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Technology Summary

A solid oxide fuel cell has been developed that operates at temperatures less than 500°C and potentially as low as 300°C. This fuel cell is composed of base metal electrodes (anodes and cathode) and in the planar form can utilize inexpensive stainless steels as the interconnect. This fuel cell is capable of directly utilizing methanol or ammonia as a fuel and converting them via direct internal reforming to hydrogen on the base metal anode. The hydrogen diffuses through a proton conducting electrolyte and reacts with air at the cathode interface to produce electricity.

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