

Fabrication and Characterization of an Anode Side, Substrated-Supported Planar Type SOFC

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This paper describes a simple and low-cost method to fabricate an Anode-Side, Substrate-Supported (AS-SS) unit cell constructed of a porous 3YSZ support and thin, selective-area layers of anode and electrolyte sequentially coated on the support to create a single fuel cell which was tested in dual chamber mode from 650 to 800oC using humidified hydrogen as a fuel and air as an oxidant. At 700oC, open circuit voltage (OCV) reached 1.096V and a maximum power density of 570 mW.cm⁻² was attained.