

Electrodeposition of Ag on Ni-Ni/YSZ for SOFC Interconnect Application

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Today, many researchers focus on solid oxide fuel cell (SOFC) technology which is very attractive chemical energy conversation system into the electrical and heat energies. Much effort is aimed at reducing cost, improving efficiency, finding new materials and increasing the operation life time. One of most logical approaches is to introduce new interconnect material. In this paper, Ni and Ag which are deposited on Ni/yttria-stabilized zirconia (YSZ) button cell by electrochemical deposition are investigated. A uniform Ni layer is produced throughout the porous substrate. Ag layer on Ni layer protects Ni layer from oxidezing atmosphere. The observations by SEM-EDS show Ni layer were coated into pores and Ag layer were coated uniformly. In redox atmorphere, these coating layer were stable.