**Novel Interconnect Spinel Coating Process for Planar SOFC Stacks**

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Chromia-forming ferritic stainless steels are preferred interconnect materials for intermediate temperature SOFCs because of their resistance to oxidation and low cost. However, they produce Cr-containing volatile species at SOFC operating temperatures, which can cause cathode poisoning. Electrically conducting spinel coatings have been developed to prevent cathode poisoning and to maintain an electrically conductive pathway through SOFC stacks. However, this coating is not compatible with the formation of stable, hermetic seals between the interconnect frame component and the ceramic cell. Thus, a new aluminizing process has been developed by PNNL to enable durable sealing, prevent Cr evaporation, and maintain electrical insulation between stack repeat units. Hence, for optimized simultaneous fabrication of these two different types of coating, a novel interconnect spinel coating process is introduced in this paper. This paper will present recent progress regarding these novel coatings.