Electrodeposited Mn-Co Alloy Coating For SOFC Interconnects

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Under funding from the Department of Energy, Faraday Technology and WVU are developing, optimizing and validating an electrodeposition process to apply Mn-Co alloy coatings to SOFC interconnects. The FARADAYICSM Electrodeposition Process is used to deposit a Mn-Co alloy that is subsequently oxidized to a spinel by thermal exposure at high temperatures in an oxidizing environment. Coatings exposed to extended thermal soaks exhibited relatively dense, crystalline microstructures that prevented chrome diffusion through the coating and maintained low area specific resistance. Faraday has scaled its process capabilities to industrial size SOFC interconnects with gas flow features. The poster will present the results obtained to date and provide a path forward for the technology.