Novel SOFC Anodes with Enhanced Tolerance to Coal Contaminants

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(Brief description of poster contents)

While a complete replacement of the current nickel and zirconia cermet anode is neither practically beneficial nor technically feasible for many reasons, some modification on the current anode may enhance resistance to the key coal contaminants. Slightly modified cermet anodes are being developed at MSRI for the purpose of demonstrating electrochemical performance as well as tolerance to coal contaminants.

In the small business innovation research Phase-I, we showed that the current state-of-the-art cells have significant tolerance to hydrogen sulfide. We also successfully demonstrated our capability of designing and fabricating cells with various anode formulations.