Abstract #1:

SECA CTP Stack Fixture Testing at PNNL

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Pacific Northwest National Laboratory is developing a stack test fixture for the SECA Core Technology Program. The objectives are to test new materials and fabrication processes under realistic stack conditions, and to bridge the science and technology gap between small "button" cells and industrial-sized full stacks. In this poster PNNL will report results from the latest stack fixture design, using 2"x 2" NiO/YSZ anode-supported YSZ cells and AISI441 stainless steel interconnect materials. Both single cell and 3 cell stack results will be presented. Impedance, I-V sweep, and power density data will be reported for cells tested at 800^{o}C and constant current conditions. Post mortem analyses will also be reported to assess the performance of SOFC candidate materials and processes, including coatings, sealing materials, contacts, and interconnects.