

**MATERIAL DESIGN AND PROCESSING OF
CFCL'S CELL ASSEMBLY**

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CFCL has designed and fabricated cell assembly for its all-ceramic planar stack technology. The cell assembly consists of anode, electrolyte, cathode and gas distribution layers for anode and cathode. After evaluating a number of options CFCL focused on 10YSZ-alumina composite for its electrolyte. Anode, cathode and gas distribution layer, materials have been designed, so that the whole cell assembly is electrochemically and mechanically stable during all SOFC operating modes. The cell assembly has been tested in single and multi layer configurations in hydrogen and natural gas fuel environments. Performance tests continue to show promising results. Further development works are continuing to improve the performance and stability of the cell assembly.