

Abstract for SECA Workshop poster, July 2011

## **Characterization of Barium Alkali Silicate Glasses for SOFC Sealing Applications**

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Non-crystallizing glasses are being considered for SOFC sealing applications because their viscosity, chemical composition and thermal expansion can be tailored to match specific SOFC designs and because of their self-healing characteristics and ability to relax stresses due to viscous flow at typical SOFC operating temperature.

In this presentation we report results from the characterization of two barium alkali silicate glasses after exposure to air and gas mixtures of  $\text{H}_2\text{O}+\text{H}_2+\text{N}_2$  for periods of time in excess of 10,000 hrs. Changes in the microstructure and physical properties of the glasses are reported along with models to predict their rate of crystallization and morphological changes. The results are discussed in the context of the potential use of these glasses for SOFC sealing applications.