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Characterization of glasses for SOFC sealing applications

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Preliminary results from a study to characterize the evolution of the microstructure and composition of glasses for SOFC sealing applications will be presented. Results for wetting behavior, viscosity, thermophysical and mechanical properties will be presented for a barium alkali silicate glass after a 5,000-hr exposure to air and a gas mixture of steam+H₂+N₂. It was found that the porosity and distribution of pores in the glass changed with time of exposure. Preliminary results from a study to compare the precision of four different techniques to determine the chemical composition of the glass will be presented.