UNIVERSITY OF
SOUTH CAROLINA

# Post-Doctoral Positions

## Modeling and Properties of High Temperature Materials

There are immediate opportunities for post-doctoral fellows at the University of South Carolina to support a significant and growing effort on the development and assessment of novel high temperature materials including structural materials, oxide and metallic nuclear fuels, molten salts, and porous materials. Projects include efforts on understanding nano and framework materials for novel phases; developing thermochemical models for complex, multi-element systems using CALPHAD approaches; integrating results from related first principles calculations into thermochemical phase descriptions; development of formalisms for high temperature species transport; and generation of thermochemical relations and data for phase field modeling. In addition, new approaches such as computational topological characterization, volumetric free energy correlations, and machine learning applied to *ab initio* calculations are being developed and used, and which the individual could have the opportunity to learn to apply and further develop.

The positions require a PhD in chemistry, physics, materials science, or engineering, with experience in high temperature materials being helpful.

For further information, or to provide a CV for consideration, contact

Theodore (Ted) M. Besmann, PhD
Professor and General Atomics Chair for
Transformational Nuclear Technologies
E-mail: besmann@cec.sc.edu