The Center for Frontiers of Subsurface Energy Security (CFSES) is seeking five new R&D post-doctoral fellows to work at Sandia National Laboratories (Sandia). CFSES is an Energy Frontier Research Center funded by the U.S. Department of Energy, Office of Science. The objective of CFSES is to understand and control emergent behavior arising from coupled physics and chemistry of geologic carbon dioxide storage in heterogeneous geomaterials. CFSES is a partnership between Sandia and the University of Texas at Austin. Sandia is the nation’s premier science and engineering lab for national security and technology innovation with a focus on cutting-edge research and technology, ranging from homeland defense, global security, and biotechnology to energy research, resource extraction and development, computer security, and nuclear defense (www.sandia.gov). We currently have openings in:

**Experimental Geomechanics** (ID# 646223) conduct fracture propagation, rock deformation, and bulk rock strengthening/weakening experiments to develop and validate constitutive hydro-mechanical-chemical models.

**Geochemistry** (ID# 646225) use laboratory experiments to examine how geochemical changes during reactions with carbon dioxide and brine control the geomechanical behavior of caprocks and reservoir rocks.

**Computational Fracture Mechanics** (ID# 646179) contribute to computational fracture mechanics with an emphasis on local crack-tip and phase-field modeling and multiscale/multiphysics coupling with pore-scale models. Develop fundamental models of multiphase flow in heterogeneous capillary-porous media.

**Molecular Simulation** (ID# 646226) contribute to classical molecular simulation of bulk and interfacial phenomena associated with multiluidis, and the interaction of water and carbon dioxide in clay interlayers, for comparison to experimental findings.

**Multiphase Flow Experiments and Modeling** (ID# 646224) experimentally and numerically characterize capillary/buoyancy driven flow of carbon dioxide from pore to meter scale and develop upscaling techniques for multiphase flow and reactive transport.

Positions require a PhD in a relevant science or engineering discipline. A strong academic record and a demonstrated commitment to publication are essential. The ability to obtain and maintain a DOE security clearance is normally required. Sandia National Laboratories is an Equal Opportunity Employer M/F/D/V. Please visit Sandia’s Careers website at www.sandia.gov/careers and access the position of interest by the above ID#.