



### Jasper O. Hardesty, PhD



**Jasper (Joe) Hardesty** is a Principal Member of Technical Staff at Sandia National Laboratories in Albuquerque, New Mexico. Dr. Hardesty is a chemical engineer and architect, having received his PhD in Chemical Engineering from Stanford University in 2008, a BS in Chemical Engineering from the University of New Mexico in 2001, and a BS in Architecture and Urban Planning from the University of Illinois in 1981. For over 20 years, Dr. Hardesty has been a licensed architect with extensive experience on commercial and public projects including university laboratories, hospitals, prisons, industrial semiconductor fabrication facilities, atmospheric research facilities, and campus master plans, among others. He joined Sandia National Laboratories in 2008, following completion of his dissertation on the study of enzymatic catalysis at interfaces. While at Stanford, he was responsible for developing and implementing a safety and security program; with specific oversight of four chemical research labs for over four years. At Sandia, Dr. Hardesty has been involved in research that includes enzymatic and hydrothermal processing of biofuels, enzymatic and chemical processes for decontamination of surfaces, food safety/defense and consequence analysis of contaminated foods, analysis of environmental sampling methods of contaminated surfaces, modeling of electrical utilities and applications of microgrids, solar-thermal building systems analysis, evaluation of disaster-resistant building design, and energy-water resource assessments for Native American Tribes. To date, he has authored/coauthored 8 scientific papers, and has served to review domestic and international research funding proposals to the US Department of Energy.

### Christine Straut, PhD



**Christine Straut** is a Postdoctoral Appointee at Sandia National Laboratories in Albuquerque, New Mexico. Dr. Straut is an Analytical Chemist, having received her PhD in Analytical Chemistry from the Clemson University in Clemson, South Carolina in 2009, and Bachelors of Science degrees in Chemistry from Longwood University in Farmville, Virginia in 2002. Her dissertation research involved the characterization of Capillary-Channeled Polymer (C-CP) fibers by as a stationary phase in HPLC analyses. Her primary research focused in the area of adsorption chromatography of small molecules and macromolecules (proteins) to determine the kinetic, thermodynamic properties as well as overall adsorption capacity. Additionally she did research on the application and method development of alkali-derivatized polyester and nylon-6 fibers for the ion-exchange separation of a synthetic protein suite. Prior to coming working at Sandia National Laboratories, Dr. Straut was a Battelle contractor at the US Army Natick Labs for three years. Her primary research focus was in developing, and modifying, chemical testing methods for chemical protection on fabrics, fibers, and films. She also developed HPLC methods for water soluble polymers and condensed tannins from fruit extracts. While at the US Army Natick Labs, she was also responsible for developing and implementing safety protocols (i.e., SOPs, JHA) for chemical protection based GC testing. To date, she has authored/coauthored 4 five peer-reviewed articles published in scientific journals and has served to review draft standards on Chemical Vapor Detectors for the ASTM Draft Standards Task Group.