

Meet the Presenter...

Brian Powell



Dr. Brian Powell has extensive expertise with the mobility of radionuclides in soil and groundwater systems through his research in the Department of Environmental Engineering and Earth Sciences at Clemson University, as well as previous work at the Lawrence Livermore National Laboratory and the Lawrence Berkeley National Laboratory. He has a B.S. in Chemistry from the University of Montevallo, and an M.S. and Ph.D. in Environmental Engineering and Science from Clemson University. He holds memberships in the Association of Environmental Engineering and Science Professors, the American Geophysical Union, Sigma Xi, and the American Chemical Society.

At Clemson University, Dr. Powell teaches courses in Actinide Environmental Chemistry, Environmental Radiation Protection (Lecture and Laboratory courses), Introductory Health Physics, Geochemistry, and Geochemical Reaction Modeling. Dr. Powell's major research interest is to understand interrelated chemical, biological, and physical processes that control the fate and transport of radionuclides and trace metals in the environment. These processes include sorption by minerals, interactions with nano-colloids, complexation by organic ligands, and interactions with microorganisms. He has published over 20 refereed journal publications, 16 research reports, and made nearly 50 technical presentations on these topical areas. He has conducted sponsored research dealing with topics such as nuclear forensics, evaluation of nanoparticle behavior, sorption and environmental transport of plutonium, development of radiation detection and radiation laboratory courses, evaluation of radionuclide geochemistry in wetland and subsurface sediments, solid waste performance assessments at the Savannah River Site, measurement of thermodynamic parameters supporting advanced nuclear fuel cycle chemistry, and related topics. These projects have garnered over \$5M in research awards. The knowledge gained from this work can be used to evaluate risk posed by subsurface contamination, to design remediation strategies for contaminated sites, and to facilitate the use of safe disposal practices.

Contact: (864)656-1004
Email: BPOWELL@clemson.edu

