

Postdoctoral position in geochemical modeling at the University of Texas at Austin

Applications are invited for a postdoctoral position in the area of chemical equilibria and kinetic modeling of cementitious systems with Drs. Lynn Katz and Maria Juenger in the Department of Civil, Architectural and Environmental Engineering at the University of Texas-Austin. Modeling efforts will investigate the chemical interactions between concrete and atmospheric CO₂, as well as the kinetics of systems used to sequester industrial by-products and energy-related residuals. The position involves research associated with several newly funded projects. The first project, funded by the Environmental Research and Education Fund (EREF), involves the development of a novel approach for characterizing leaching from cementitious materials. The second project is a joint US-UK collaboration (NSF and EPSRC) to elucidate the fundamental science controlling the long-term performance of concrete produced with natural supplementary cementitious materials (SCMs) in place of Portland cement to improve long-term durability and reduce CO₂ emissions. A third project focuses on development of a thermodynamic/kinetic modeling framework for cementitious systems that contain industrial by-products. Experience with geochemical modeling codes and/or reaction kinetics is desirable.

A Ph.D. in geochemistry, environmental chemistry, environmental engineering, chemical engineering, chemistry, material science or other relevant field is required. The postdoc will have the opportunity to collaborate with faculty, postdocs, and graduate students in environmental engineering and civil engineering materials at the University of Texas, Oregon State University, University of Leeds, University of Sheffield, Texas A&M and EPRI.

Review of applications will begin immediately and continue until the position is filled. The preferred start date is November 2019, but there is some flexibility. The position is available for multiple years; annual renewal is dependent on progress, performance and the individual's career goals. Successful candidates should have an outstanding record of scholarship and doctoral/postdoctoral research related to the areas of research described above. Excellent written and oral communication skills are essential. Candidates should be able to work independently and collaboratively with researchers in other science and engineering disciplines.

Interested applicants should contact Professor Lynn Katz at lynnkatz@mail.utexas.edu. Please e-mail:

- 1) a brief cover letter,
- 2) a curriculum vitae,
- 3) a brief statement of research interests, and
- 4) contact information for three references.

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