Professor John R. Scully in the Center for Electrochemical Science and Engineering, Department of Materials Science and Engineering at the University of Virginia is seeking a Post-Doctoral Research Associate.

The research primarily will include working on a prestigious new DOE Energy Frontiers Research Project (EFRC) named FUTURE (Fundamental Understandings of Transport and Reaction under Reactor Extremes). Focus includes understanding how RTILs and low melting temperature molten salts affect the double layer, alter the air formed passive oxide, control the in-situ film formation/growth behavior, and create a diffusion control depletion zone. Moreover, we will study these factors regulate environmental reactivity of single elements and binary and ternary model alloys. The project has a structural materials focus, but model materials will be emphasized. Behavior in ILs will be compared to room temperature aqueous, dry air, hot water, and molten salt passivation. Additional responsibilities include studying the role of additional defects produced in such films induced by harsh environments compared to model passivating treatments. The project involves extensive collaboration within UVA and with US DOE National Labs, travel, conference attendance, and wide networking useful for establishing a research career. A secondary project will involve limited investigation of corrosion modes of attack, corrosion mechanisms of steel canisters subject to Kr-85 storage. A third project may be required on a limited basis which only involves partial participation at any one time. To manage these activities, the successful candidate must supervise undergraduate students to help conduct research necessary to meet project goals and work well with others.

A PhD degree in Materials Science and Engineering or a closely related field is required by the start date. Experience in electrochemistry, materials science, chemistry and surface science is required. Prior experience with ionic liquids, glove boxes, molten salts, surface characterization tools, and AC/DC electrochemical methods is preferred and the ideal candidate will possess several or most of these attributes. Candidates must also have the ability to manage multiple projects.

This is a one-year appointment; however, appointment may be renewed for an additional two, one-year increments, contingent upon available funding and satisfactory performance.

To apply, visit https://jobs.virginia.edu and search on posting number 0624161. Complete a Candidate Profile online, attach a cover letter, curriculum vitae, and contact information for three references. Review of applications will begin October 8, 2018; however, the position will remain open until filled.

For additional information about the position, please contact Prof. John Scully at jrs8d@virgina.edu.

Questions regarding the application, please contact Rich Haverstrom at rkh6j@virginia.edu.

With one of the highest graduation rates of minority undergraduate students and one of the highest percentages of women engineering students among public universities, the University
of Virginia is fundamentally committed to increasing the diversity of its faculty and staff. UVA is an affirmative action and equal opportunity employer. We welcome nominations of and applications from women, members of minority groups, veterans and individuals with disabilities. We also welcome others who would bring additional dimensions of diversity to the university's research and teaching mission. We believe diversity is excellence expressing itself through every person's perspectives and lived experiences.