

Preliminary Call for Papers

Separations for the Nuclear Fuel Cycle in the 21st Century Revisited

251st National Meeting of the American Chemical Society
San Diego, CA
March 13-17, 2016

Twelve years have passed since the first *Separations for the Nuclear Fuel Cycle in the 21st Century* symposium, which was held March 30 – April 30, 2004 at the 227th National Meeting of the American Chemical Society in Anaheim, California. In the intervening years, substantial research has been conducted worldwide on this topic. Thus it is appropriate to revisit the subject of chemical separations as they relate to developing advanced nuclear fuel cycle options. This symposium will focus on assessing the current state-of-the art in nuclear separations science and technology, and identifying directions research and development should take to enable nuclear separations to meet 21st Century demands for waste minimization, environment protection, safety, and security. Future options must respond to considerations such as environmental sustainability and nuclear non-proliferation while at the same time improving separation efficiency. Analysis of the entire fuel cycle from uranium mining and plutonium production to fuel fabrication, actinide recycle/transmutation, and waste disposal is needed.

Papers related to all aspects of nuclear fuel cycle separations are solicited in this call. Potential topical subjects include new methodologies in uranium mining and processing, recycling of uranium and plutonium from irradiated fuel, recovery of useful isotopes from irradiated fuel, and partitioning and transmutation of long-lived isotopes in high-level waste. We also seek papers on the subject of the impact of separations on nuclear waste repositories.

Information regarding abstract submission will be issued in the coming month on the ACS website (www.acs.org). For more information regarding the symposium, contact one of the symposium organizers listed below.

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