FIU Applied Research Center

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FIU Arts & Sciences

FP&L Distinguished Nuclear Lecture Series

featuring

Dr. Mikael Nilsson

"Advances in Chemical Separations Processing in the Nuclear Fuel Cycle"

January 30, 2015 | 3:00 PM | School of International & Public Affairs Building (SIPA) | Room 220

Advanced fuel cycles all over the world rely on successful chemical separation of various elements in used nuclear fuel. Numerous solvent extraction processes have been developed and new systems are still being tested for recovery and purification of metal ions from this material. Classic molecular interaction is often useful for describing the interactions between metal ions and different reagents used in these processes but on occasion the results from slope analysis provide unreasonable results. At UC Irvine, we have an ongoing effort to study and attempt to describe synergistic extraction and possible ties with aggregate formation. The studies show the importance of combining and comparing several different analytical techniques, such as metal ion extraction, physicochemical measurements and colligative properties, spectroscopic measurements, thermodynamics studies and structural investigations.

Mikael Nilsson, Ph.D., is an Associate Professor of Chemical & Biological Engineering and Materials Science, Henry Samueli School of Engineering, UCI. He received his M.Sc. in Chemical Engineering in 2000 and his Ph.D. in Nuclear Chemistry in 2005 both from Chalmers University of Technology in Gothenburg, Sweden. His research interests include actinide chemistry, solvent extraction fundamental chemistry and process development, extraction and detection equipment development, radiolysis and phase composition of organic solvents.

This event is open to the public.
Please RSVP to 305-348-0431 or email aguirrec@fiu.edu
Refreshments will be provided

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