University of New Mexico Overview

Cassiano R. E. de Oliveira
Professor
Summary of Other Activities

• Trips to INL
  – Dr Osman Anderoglu and Dr Youho Lee invited to visit and give presentations, July 10-11, 2017

• Students funded:
  – Joe Morris, PhD 2017
  – Sara Pelka, MS 2017
  – Erin Husher-Vaughan, MS

• Post-graduate scholars support:
  – Dr. Amir Ali and Dr. Maolong Liu

• Publications and White Papers:
  – White paper on Defense Spent Nuclear Fuel reprocessing and disposal program and options based on impacts on facilities and possible repositories including investigation of recycling of other Defense Spent Nuclear Fuel using ER Salt technology, issues with LWBR fuels such as recriticality and seek alternative strategies such as separating out the U-233 and downblend, use of alternative cathode materials such as aluminum, or another metal, and possibly alter the chemistry of the molten salt system.

• Conference presentations and proceedings:
  – Nested Fabry-Perot in mode-locked lasers to monitor minute changes of index James Hendrie, Ladan Arissian, Koji Masuda, Adam Hecht, Jean-Claude Diels, CLEO: Science and Innovations 2015, San Jose, California
NEUP awarded FY18

- An Experimental and Analytical Investigation into Critical Heat Flux (CHF) Implications for Accident Tolerant Fuel (ATF) Concepts
  **PI:** Youho Lee, University of New Mexico

- Nanostructured Composite Alloys for Extreme Environments)
  **PI:** Osman Anderoglu, University of New Mexico
  **Collaborators:** Nathan A. Mara-Los Alamos National Laboratory

- Bimetallic Composite (Incoloy 800H/Ni-201) Development and Compatibility in Flowing FLiBe as a Molten Salt Reactor (MSR) Structural Material
  **PI:** Youho Lee, University of New Mexico
  **Collaborators:** Michael Short – Massachusetts Institute of Technology, Govindarajan Muralidharan – Oak Ridge National Laboratory, Mike Laufer – Kairos Power
Key Publications & Outcomes


• M Liu, NR Brown, KA Terrani, AF Ali, ED Blandford, DM Wachs, Potential impact of accident tolerant fuel cladding critical heat flux characteristics on the high temperature phase of reactivity initiated accidents, Annals of Nuclear Energy 110, 48-62


Plans for FY2018

• Organize a workshop on Material Science (Spring 2018)