Generation IV International Forum SM

EDUCATION AND TRAINING TASK FORCE

Join us on June 19, 2019
for the next GEN IV webinar

Interactions Between Sodium and Fission Products in Case of a Severe Accident in a Sodium-cooled Fast Reactor

An overview of severe accident scenarios in Sodium-cooled Fast Reactors will be presented, focusing on the thermochemistry aspects and how the CALPHAD method could be used to enhance the prediction of the different phases that could form depending on the conditions of the system. CALPHAD, which stands for CALculation of PHAse Diagram, is a semi-empirical method that enables to develop a thermodynamic model based on the Gibbs free energy of the gas, liquid and solid phases as a function of temperature, pressure and composition of the system. Experimental measurements of the thermodynamic properties of some fission product compounds formed in the Joint Oxide Gain after interaction with sodium will be presented. These data will be used as input for the thermodynamic modeling.

Free webcast

June 19, 2019 at 8:30 am EDT (UTC-4)

Register NOW at www.gen-4.org

Who should attend: policy makers, managers, regulators, students, general public

Meet the Presenter...

Mr. Guilhem Kauric is a second year PhD student at CEA Saclay in the "Service de la corrosion et du comportement des matériaux dans leur environnement" (SCCME) in the "Laboratoire de Modelisation de Thermodynamique et de Thermochimie (LM2T)". His PhD research aims at investigating the chemical interactions between MOX fuel, fission products and sodium for the safety assessment of the Sodium-cooled Fast Reactor in case of severe accident. As the chemical system contains many elements, the CALPHAD method approach is the most suitable to develop a model for this study. His research activities, funded by CEA and the ENEN + program, are based on a multidisciplinary approach combining experimental work and modelling. In 2017, he graduated from Chimie Paristech ENSCP (diplome d'ingenieur option chimie des materiaux) and from INSTN with a Master's Degree in Nuclear Engineering option Fuel Cycle.

The Generation IV International Forum invites you to attend web-based lectures on the next generation of nuclear energy systems and other cross-cutting subjects. Join internationally recognized subject matter experts and leading scientists in the nuclear energy arena for these short presentations.

Upcoming Webinars	
31 July 2019	Security study of Sodium-Gas Heat Exchangers in Frame of Sodium-cooled Fast Reactors, Dr. Fang Chen
29 August 2019	Lead Containing Mainly Isotope ^{208}Pb: New Reflector for Improving Safety of Fast Reactors, Dr. Evgeny Kulikov
25 September 2019	Gen IV Coolants Quality Control, Dr. Christian Latge

For more information, please contact: Patricia Paviet at Patricia.Paviet@pnnl.gov or visit the GIF website at www.gen-4.org