



Contribution ID: 397

Type: **Poster**

Fission Product Behavior in High-Temperature Water: CsI vs MoO₄

Wednesday 24 May 2017 15:45 (15 minutes)

Fission product behaviors of Cs, a major element released in a severe nuclear accident, still remain unclear. The question frequently addressed is whether Cs released will be in the form of CsMoO₄ or CsOH. This is a challenging issue since it has been demonstrated that the reaction between CsMoO₄ and water leading to CsOH production is thermodynamically favored. The present research aims at investigation of CsOH generation through this chemical channel. A high-temperature setup with a flow system based on the cooling system of a water-cooled nuclear reactor has been assembled. The reaction between aqueous solutions of CsI and NaMoO₄ in a high-corrosion-resistant hot cell (Hastelloy) has been studied up to 80°C both in air and deoxygenated system. The products have been characterized using XRD and FTIR.

Primary author: Dr KANJANA, Kotchaphan (Thailand Institute of Nuclear Technology)

Co-authors: Dr SILVA, Kampanart (Thailand Institute of Nuclear Technology); Mr CHANNUIE, Jatechan (Thailand Institute of Nuclear Technology)

Presenter: Dr KANJANA, Kotchaphan (Thailand Institute of Nuclear Technology)

Session Classification: Poster Presentation I

Track Classification: Plasma and Ion Physics, Nuclear and Radiation Physics