Session Program

October 29, 2017 to November 3, 2017

MRS2017 - Scientific Basis for Nuclear Waste Management Symposium 2017

Ceramic and Glass-Ceramic Wasteforms

Wed, November 1

8:30 AM

Ceramic and Glass-Ceramic Wasteforms: Session Chairs Stéphanie Szenknect & Yingjie Zhang

Session

8:30 – 9:00 AM

Hot isostatic pressing of ion exchange materials, from the Fukushima and Sellafield sites, to produce ceramic wasteforms.

Speaker
Prof. Neil Hyatt

9:00 – 9:15 AM

Synthesis and Structure of Novel Oxide Compounds Containing RE = Y, Yb, Gd, Sm, and La and M = Zr, Ti, and Sn

Speaker
Dr Greg Lumpkin

9:15 – 9:30 AM **Synthesis and characterization of brannerite UTi2O6**

Speaker
Dr adel mesbah

9:30 – 9:45 AM

Synthesis and characterisation of rare Ce3NbO7 compounds for use as nuclear space batteries by neutron powder diffraction and X-ray absorption spectroscopy

Speaker
Mr Sean Barlow

9:45 – 10:00 AM

Partitioning of Ce, as a Simulant for Pu, in a Multiphase Ceramic Nuclear Waste Form

Speaker
Dr Zhaoming Zhang

10:00 – 10:15 AM

The Fabrication and Characterisation of Novel Complex Ceramic Oxides (Ln2TiO5) For Polyphase Ceramic Waste-Forms.

Speaker
Mr Robert Aughterson

10:15 AM

10:45 AM

Ceramic and Glass-Ceramic Wasteforms: Session Chairs Massey De Los Reyes & Eugenia Kuo

Session

10:45 – 11:15 AM

Solubility of the rhabdophane, LnPO4.0.667 H2O (Ln = La to Dy): implications for the long-term stability of monazite matrices.

Speaker
Dr Stéphanie Szenknect

11:15 – 11:30 AM

Preparation of Ln1-2xCaxThxPO4.nH2O rhabdophane-type as low precursors to monazite-Cheralite ceramics

Speaker
Dr adel mesbah

11:30 – 11:45 AM

Structural incorporation of Cm3+ and Pu3+ in phosphate ceramics with monazite structure.

Speaker
Dr Stefan Neumeier

11:45 AM – 12:00 PM

Thorium incorporation in phosphates matrices: the case of xenotime

Speaker
Dr adel mesbah

12:00 PM

1:30 PM

Ceramic and Glass-Ceramic Wasteforms: Session Chairs Zhaoming Zhang & Maik Lang

Session

1:30 – 1:45 PM **U-rich ceramics for Spent Fuel or Acidic 99Mo Production ILW**

Speaker
Dr Eric R Vance

1:45 – 2:00 PM

Current advances on titanate-based glass-ceramics for actinide immobilization

Speaker
Dr Yingjie Zhang

2:00 – 2:15 PM

The development of zirconolite glass-ceramics for the immobilisation of Pu-residues in the UK.

Speaker
Ms Stephanie Thornber

2:15 – 2:30 PM **A New Method for Production of Glass-Y2Ti2O7 Pyrochlore**

Speaker
Dr Linggen Kong

2:30 – 2:45 PM

Atomistic simulation of interfaces in glass/crystal composites for nuclear waste forms

Speaker
Dr Paul C. M. Fossati

2:45 PM

3:15 PM

Ceramic and Glass-Ceramic Wasteforms: Session Chairs Lou Vance & Stephanie Thornber

Session

3:15 – 3:45 PM

Efficient remediation of radiodine with silver-functionalized silica aerogel

Speaker
Dr Josef Matyas

3:45 – 4:00 PM **Sodalite waste forms for iodine**

Speaker
Prof. John McCloy

4:00 – 4:15 PM

Radioactive Iodine-129 Capture in Mixed Cation Sodalites: ab initio modelling

Speaker
Dr EUGENIA KUO

4:15 – 4:45 PM

New aspects of U(V) chemistry in oxo-materials: from ambient to extreme conditions

Speaker
Prof. Evgeny Alekseev

4:45 – 5:00 PM

Unique capabilities and methods for analysing nuclear waste form materials using ANSTO’s landmark infrastructure

Speaker
Mr Gabriel Murphy

5:00 – 5:15 PM

New route for synthesis of Synroc-like ceramic using non-selective sorbent LHT-9

Speaker
Ms Bella Zubekhina

5:15 PM