

## **Session Program**

**May 15 - 20, 2022**



## **RadChem 2022**

### ***Nuclear Fuel Cycle***

Casino Conference Centre  
Reitenbergerova 4/95, Mariánské Lázně, Czech Republic

# Mon, May 16

1:30 PM

## Nuclear Fuel Cycle: NFC 1

Session | Location: Red Hall | Conveners: Václava Havlová, Nicholas Evans

1:30 – 2:00 PM

### Reducing Uncertainties in the Management of Higher Activity Nuclear Wastes

**Speaker**

Prof. David Read

2:00 – 2:20 PM

### Experimental activation determination in and on components of nuclear power plants and comparison with activity calculations

**Speaker**

Astrid Barkleit

2:20 – 2:40 PM

### Uranium(VI) retention by calcium aluminosilicate hydrates (C-A-S-H) - Impact of temperature, ionic strength, and organic ligands

**Speaker**

Dr Katja Schmeide

2:40 – 3:00 PM

### Coprecipitation of the actinides Th(IV), U(IV) and actinide homologues Y(III), La(III), Ce(III) and Yb(III) in secondary minerals from crystalline fracture systems: A natural analogue study from Forsmark, Simpevarp and Laxemar (Sweden)

**Speaker**

Annemie Kusturica

3:00 PM

5:15 PM

## Nuclear Fuel Cycle: NFC Poster

Session | Location: Gallery

5:15 – 5:18 PM

### Statics and kinetics of sorption of Co-60 with composite sorbent T35 in the presence of humic acids

**Speakers**

Prof. Evgeny Denisov, Dr Ilya Volkov

5:18 – 5:21 PM

### Effect of background electrolyte composition on the formation of Th(IV) nanoparticles on the muscovite (001) basal plane

**Speaker**

Moritz Schmidt

5:21 – 5:24 PM

### Barium reactions on calcite-water interface

**Speaker**

Michaela Matulová

5:24 - 5:27 PM

**HLW evaporation technology which includes decomposition of bottom solution components using reductants as applied to the highly burnt-up spent nuclear fuel reprocessing**

**Speaker**

Nadezhda Mishina

5:27 - 5:30 PM

**Sorption of Nickel on Calcite based on Surface Chemistry Studies**

**Speaker**

Dr Xiaodong Li

5:30 - 5:33 PM

**Plutonium losses reduction during the separation of precipitating elements from SNF solutions before extraction processing**

**Speaker**

Nadezhda Ryabkova

5:33 - 5:36 PM

**Chemical Behavior of Long-Lived Fission and Activation Products in the Near Field of a Nuclear Waste Repository and the Possibilities of their Retention (Vespa II)**

**Speaker**

Natalia Mayordomo

5:36 - 5:39 PM

**Microbiologically Influenced Corrosion of Cast Iron Containers for HLW Storage**

**Speakers**

Klemens Kirsch, Prof. Thorsten Stumpf, Dr Andrea Koerdt

5:39 - 5:42 PM

**Spectroscopic investigation of the complexation of U(VI) with 2-Phosphonobutane-1,2,4-tricarboxylic acid (PBTC) in the pH range of 2 to 10**

**Speaker**

Dr Margret Acker

5:42 - 5:45 PM

**Complexation studies of Eu(III) with NTA at high ionic strengths**

**Speaker**

Claudia Sieber

5:45 - 5:48 PM

**Characterization of graphite reflector shielding emerged from NPP A1**

**Speaker**

Boris Andris

5:48 - 5:51 PM

**Sorption of Ni on natural calcite**

**Speaker**

Dr Václava Havlová

5:51 - 5:54 PM

**Radiolytic and hydrolytic degradation of a polycarboxylate superplasticizer**

**Speaker**

Tamara Gajšt

5:54 - 5:57 PM

**Application of MSO technology for radioactive waste retreatment****Speaker**

Jan Hadrava

5:57 - 6:00 PM

**THE INFLUENCE OF BATCH SORPTION METHODOLOGIES ON CESIUM, NICKEL UPTAKE ONTO GRANITIC ROCK****Speaker**

Karol Kočan

6:00 - 6:03 PM

**Fundamental investigations of actinide immobilization by incorporation into solid phases relevant for final disposal****Speaker**

Nina Huittinen

6:03 - 6:06 PM

**Stability & Physico-Chemical Characterisation of Reconditioned Waste Form Relevant to Radioactive Wastes****Speaker**

Gianni Vettese

6:06 - 6:09 PM

**Interaction of  $^{137}\text{Cs}$  with synthetic geopolymer and cementitious materials****Speaker**

Dr Pavel Řezanka

6:09 - 6:12 PM

**Uptake of  $^{85}\text{Sr}$  onto cementitious materials and synthetic geopolymer****Speaker**

Mr Václav Znamínko

6:12 - 6:15 PM

**Sorption of radionuclides from aqueous solutions onto zeolites****Speaker**

LORANT SZATMARY

6:15 - 6:18 PM

**Sorption of europium on cementitious materials in the presence of organic substances****Speaker**

Marta Burešová

6:18 - 6:21 PM

**Geopolymer materials for nuclear industry****Speaker**

Václav Tyrpekl

6:21 - 6:24 PM

**Alternative infill materials for disposal of NPP decommissioning radioactive waste - ALMARA project introduction****Speaker**

Petr Večerník

6:24 - 6:27 PM

**$^{14}\text{C}$  labelled organic molecules migration and interaction in/with the cement based materials**

**Speaker**

Petr Večerník

6:27 - 6:30 PM

**Structural Characterisation of Heavy Lanthanide Oxalates Synthesized by Homogeneous Precipitation**

**Speaker**

Daniela Veronika Ciesarová

6:30 - 6:37 PM

**Characterization of f-element complexes with soft-donor ligands for selective Americium separation**

**Speaker**

Fynn Sören Sauerwein

7:03 PM

## Tue, May 17

3:30 PM

### Nuclear Fuel Cycle: NFC 2

Session | Location: Marble Hall | Conveners: Gareth Law, Thorsten Stumpf

3:30 - 3:50 PM **The Sorption of Tc(IV) to some Clay Minerals**

**Speaker**

Nicholas D. M. Evans

3:50 - 4:08 PM

**Influence of Surface Nanotopography on the Adsorption of Europium on Muscovite (001)**

**Speaker**

Jonas Schabernack

4:08 - 4:26 PM

**The products of radiolysis and hydrolysis of polyacrylonitrile**

**Speaker**

Barbora Drtinová

4:26 - 4:44 PM

**Tc(VII) reductive immobilization by Sn(II) pre-sorbed on alumina nanoparticles.**

**Speaker**

Natalia Mayordomo

4:44 - 5:02 PM

**Sr behaviour Flow-Through Columns Representative of Near-Surface Disposal of Very Low Level Radioactive Wastes**

**Speaker**

Gianni Vettese

5:02 PM

## Thu, May 19

8:30 AM

### Nuclear Fuel Cycle: NFC 3

**Session** | **Location:** Marble Hall | **Conveners:** Boris Andris, David Read

8:30 - 8:50 AM

#### Activated biopolymer hydrogel composites for strontium remediation - a mechanistic study

**Speaker**

Stella Foster

8:50 - 9:08 AM

#### Paw process: Assessing lipophilicity in mixtures of contaminants and radioactive waste

**Speaker**

Mrs Zoé Disdier

9:08 - 9:26 AM

#### Sorption of uranium and lead on CSH

**Speaker**

Jana Kittnerová

9:26 - 9:44 AM

#### Diffraction and Raman spectroscopy studies of zirconia solid phases containing cerium

**Speaker**

Luiza Braga Ferreira dos Santos

9:44 - 10:02 AM

#### \*\*Screening of modified diglycolamide diastereomers to increase Am(III) selectivity during the partitioning of PUREX raffinate\*\*

**Speaker**

Laura Johana Diaz Gomez

10:02 AM

3:30 PM

### Nuclear Fuel Cycle: NFC 4

**Session** | **Location:** Marble Hall | **Conveners:** Christian Schreinemachers, Luis Gonzalez

3:30 - 4:00 PM

#### Dissolution of irradiated MOx fuel with high Pu content

**Speaker**

Eva de Visser - Týnová

4:00 - 4:20 PM

#### Evaluation of the new EURO-GANEX process resistance by gamma irradiation test loop

**Speaker**

Iván Sánchez García

4:20 - 4:40 PM

#### Investigations on the chemical behavior of cesium and iodine in lead-bismuth liquid metal solution

**Speaker**

Dr Lu Liu

4:40 - 5:00 PM

**Characterisation of Contaminated Stainless Steel from Acidic Reprocessing Environments**

**Speaker**

Daniel Barton

5:00 PM

## Fri, May 20

8:30 AM

### Nuclear Fuel Cycle: NFC 5

**Session** | **Location:** Marble Hall | **Conveners:** Eva De Visser - Týnová, Daniel Barton

8:30 - 8:50 AM

#### Corrosion behaviour of irradiated mixed oxide (MOX) fuels: Effects of environmental conditions on radionuclide leaching

**Speaker**

Dr Christian Schreinemachers

8:50 - 9:08 AM

#### Gd-doped UO<sub>2</sub> surface oxidation by H<sub>2</sub>O(g) in the presence of H<sub>2</sub>(g) at different temperatures

**Speaker**

Mrs Sonia García-Gómez

9:08 - 9:26 AM

#### STUDIES IN DUAL DOPING OF URANIUM NITRIDE FOR USE AS ADVANCE TECHNOLOGY FUELS

**Speaker**

Luis Gonzalez

9:26 - 9:44 AM

#### Development of tritium removal technology from large amount of contaminated water using a hybrid process.

**Speaker**

Seung-il Kim

9:44 - 10:02 AM

#### Radiation Stability of Extraction Systems with Hydrophobic CyMe<sub>4</sub>-BTBP and CyMe<sub>4</sub>-BTPPh Extracting Compounds and Hydrophilic (SO<sub>3</sub>H)<sub>2</sub>-BTP, (SO<sub>3</sub>H)<sub>2</sub>-BTBP, and (SO<sub>3</sub>H)<sub>2</sub>-BTPPh Masking Agents

**Speaker**

Petr Distler

10:02 AM