

# Poster Programme of RANC 2023

Last modified: 2023-04-11

## Monday, 8 May, 2023

| Poster-1 17:00-17:45 |       |                           |   |  |
|----------------------|-------|---------------------------|---|--|
| FOR                  | A 213 | Oleksandr Zhukov          | <sup>90</sup> Sr source age dating by LSC and ICP-MS analysis   |  |
| B                    | 182   | Zsolt Varga               | Age dating measurements by laser ablation multi-collector ICP-MS in uranium materials   |  |
| C                    | 125   | Csaba Tóbi                | Applicability of Atomic Force Microscopy in Nuclear Forensic Examination  |  |
| D                    | 094   | Noam Elgad                | Star Segmentation and Classification Using Deep Learning in Nuclear Forensics FTA   |  |
| E                    | 202   | Ranhee Park               | Study on Uranium Age-dating using <sup>230</sup> Th/ <sup>234</sup> U Radio-chronometer with the upgraded Chemical Separation Method  |  |
| CMX                  | F 247 | Robert Steiner            | CMX-7: A Los Alamos National Laboratory Perspective   |  |
| G                    | 233   | Tara Kell                 | Use of Laser Ablation Inductively Coupled Plasma Mass Spectrometry in the 7 <sup>th</sup> Collaborative Materials Exercise  |  |
| H                    | 271   | Amélie Hubert             | Advantages and limitations of four mass spectrometry techniques for uranium isotopic measurement. Case of the 7 <sup>th</sup> collaborative material exercise of the International Technical Working Group    |  |
| I                    | 054   | Ivan Elantsev             | On the determination of uranium isotopic composition of nuclear forensic samples using Secondary Ion Mass Spectrometry  |  |
| J                    | 156   | Samuel T. J. Cross        | An overview of non-destructive analysis of the Collaborative Materials Exchange exercise within the 24 hour reporting window  |  |
| K                    | 046   | Florin Albota             | Age and Elemental Impurities Determination in Nuclear Materials by Single Quadrupole ICP-MS   |  |
| ACT                  | L 160 | Shauni N. Williams        | Current Capabilities at LANL for Measuring Interstitial Elements, (C, O, N & H) in Plutonium Materials  |  |
| M                    | 061   | Nicole A. DiBlasi         | Development of TEVA resin extraction chromatography separation for Np determination in Pu materials using gamma spectrometry  |  |
| N                    | 119   | Makoto Matsueda           | Simultaneous Determination of Actinide-isotopes by Online Solid-Phase Extraction-Inductively Coupled Plasma-Mass Spectrometry   |  |
| O                    | 022   | Ernst Artes               | The influence of water and carbon dioxide content in solvents on molecular-plating produced terbium thin films  |  |
| Poster-2 17:45-18:30 |       |                           |   |  |
| PHA                  | A 260 | Xiuyun Chai               | Development of a Separation Method for the Medical Radionuclide <sup>47</sup> Sc from Bulk Amounts of Ti  |  |
| ECO                  | B 195 | Gabriele Wallner          | Influence of Ba <sup>2+</sup> concentration on Ra and <sup>210</sup> Pb extraction from aqueous samples using EMPORE® radium RAD disk   |  |
| C                    | 170   | Petros Leivadarios        | XRF elemental analysis and <sup>236/238</sup> U ratios of samples from the Almyros' river outflow in Crete  |  |
| D                    | 085   | Ioannis Ioannidis         | Temperature effect on U-232 and Am-241 absorption by PN6 in environmental waters  |  |
| E                    | 051   | Ana Noguera               | First attempts to assess the radiological risk due to the presence of natural radionuclides in construction and building materials used in Uruguay  |  |
| F                    | 013   | Russel Rolphe             | Environmental and human health risks assessment of potentially toxic elements content in soils of a prospective phosphate mining area in Hinda district, Republic of Congo                                    |  |
| G                    | 007   | Malgorzata Dymecka        | Low-level tritium measurements in freshwater and seawater samples   |  |
| NAA                  | H 256 | Jan Kučera                | Modernized control of a pneumatic facility for short-time NAA at LVR-15 reactor in Řež, Czech Republic  |  |
| I                    | 242   | Jiří Mizera               | Oxygen determination in the Ti certified reference material ERM EB090b by instrumental photon activation analysis   |  |
| J                    | 232   | Alena Krechlerová         | Availability of Neutron Activation Facilities to Foreign Users at Research Center Řež, Czech Republic   |  |
| K                    | 228   | Huaiyu Heather Chen-Mayer | INAA of concrete  |  |
| L                    | 208   | Gwangmin Sun              | Self Shielding Effect in a Strong Absorber of Gd in Neutron Activation Analysis   |  |
| M                    | 201   | Amares Chatt              | Micelle-mediated extraction for simultaneous preconcentration of cadmium, cobalt, copper, manganese, nickel, and zinc with 1-(2-Pyridylazo)-2-naphthol and their determination by neutron activation analysis |  |

## Tuesday, 9 May, 2023

| Poster-3 17:00-17:45 |       |                      |   |  |
|----------------------|-------|----------------------|---|--|
| NAA                  | A 165 | Georg Steinhauser    | Characterization of silicone wristbands as passive underwater samplers for radionuclides  |  |
| B                    | 129   | Katalin Gméling      | Qualifying the raw materials of additive manufacturing for use in Neutron Activation Analysis   |  |
| C                    | 014   | Yonggang Yao         | Perspective and Progress of Neutron activation analysis at CARR   |  |
| PGA                  | D 176 | Massimo Rogante      | Applications of PGAA to investigate Cultural Heritage Items from the Marche Region, Italy   |  |
| E                    | 082   | Tariq A. Al-Abdullah | Developing a PGNA Setup for Heavy Metal Detection in Solid Samples  |  |
| SEP                  | F 267 | Susanta Lahiri       | Separation of long-lived <sup>109m</sup> Ag from <sup>152</sup> Eu and <sup>60</sup> Co using environmentally benign PEG based ABS  |  |
| G                    | 216   | Daniel A. Stubbs     | Hafnium separation for high-precision isotopic abundance analysis   |  |
| H                    | 183   | Jakub Sochor         | Electrochemical adjustment of the oxidation state of short-lived nihonium homologues  |  |
| I                    | 169   | Alice Bulíková       | Microfluidic liquid-liquid extraction of Mo and W in sub-minute contact times   |  |
| J                    | 095   | Laura N. Lambert     | CERN-MEDICIS: an offline mass separation facility dedicated to nuclear medicine   |  |
| K                    | 155   | Pavel Bartl          | Fast on-line KCl-aerosol dissolution for liquid-phase chemistry with homologues of superheavy elements  |  |
| L                    | 148   | Miroslava Semelová   | Enhancing radionuclide extraction by using ionic liquids  |  |
| Poster-4 17:45-18:30 |       |                      |   |  |
| SEP                  | A 280 | Lóránt Szathmáry     | Development of processes for the solidification of high level radioactive wastes after NPP sever accident and evaluation of their disposal in radioactive waste repository              |  |
| B                    | 278   | Rainer Kadan         | The determination of a nuclide vector in concrete and soil samples: Verification of a method  |  |
| C                    | 109   | Da-Young Gam         | Method validation of radiochemical analysis for the bioshield concrete samples from decommissioning process of research reactor   |  |
| D                    | 108   | Katerina Horova      | Separation of molybdenum-93 in waste from the decommissioning of nuclear power plants and determination of separation efficiency by cuvette tests                                       |  |
| E                    | 081   | Jan Houzar           | Liquid-liquid extraction of strontium from acidic solutions into ionic liquids using crown ethers   |  |
| F                    | 283   | Straka Martin        | Uranium Recovery From U/Lns Ionic Liquids Solutions   |  |
| G                    | 057   | Jan Gut              | Use of inorganic sorbents in the treatment of liquid radioactive waste  |  |
| H                    | 041   | Junqiang Yang        | Ultrafast and selective separation of <sup>99m</sup> Tc from molybdenum matrix using DBDGA deliberately tailored macrocyclic crown-ethers   |  |
| I                    | 006   | Grażyna Kaczyńska    | The study of distribution coefficient of polonium between toluene or cyclohexane solutions of tri-octylphosphine oxide (TOPO) and tri-butylphosphate (TBP) and selected inorganic acids |  |
| J                    | 279   | Laura N. Lambert     | Production and mass-separation of 44-47Sc radionuclides at the CERN-MEDICIS facility  |  |

Thursday, 11 May, 2023

Poster-5 17:00-17:45

|            |              |           |               |  |
|------------|--------------|-----------|---------------|--|
| <b>FUE</b> | <b>A 185</b> | Kuan-Ying | Hsieh         | Study on advection–dispersion behavior for simulation of HTO and Tc-99 transport in crushed granite of column experiments                                |
| <b>B</b>   | <b>038</b>   | Byung Gi  | Park          | A Study of Reduction Reactions of Sm(II) and Eu(II) Ions on Inert W Electrode in Molten LiCl-KCl Eutectic with Bi(III) Ion                               |
| <b>LON</b> | <b>C 186</b> | Feng-chih | Chang         | Determination of <sup>135</sup> Cs activities in Spiked Radioactive Solids by ICP-MS and NAA   |
| <b>D</b>   | <b>127</b>   | Guosheng  | Yang          | Measurement of actinides and <sup>90</sup> Sr in faecal and urinary samples for PROCORAD 2022  |
| <b>E</b>   | <b>021</b>   | Marina    | Faure         | Development of a method to quantify Pd-107 in radioactive wastes   |
| <b>F</b>   | <b>277</b>   | Jia       | Tianyi        | Sequential Separation of Iodine Species in Nitric Acid Media for Speciation Analysis of I-129 in a PUREX Process of Spent Nuclear Fuel Reprocessing      |
| <b>MAS</b> | <b>G 263</b> | Jakub     | Kaizer        | Accelerator studies of tree rings in proximity of aluminium processing factory in Ladomerská Vieska (Slovakia)   |
| <b>H</b>   | <b>231</b>   | Pavel     | Povinec       | Sources of metals and plutonium isotopes in sediments of the south-eastern Baltic Sea  |
| <b>I</b>   | <b>210</b>   | Jung Youn | Choi          | Comparison and optimization of the TIMS analysis method for declared information verification of Special Nuclear Material                                |
| <b>J</b>   | <b>152</b>   | Grisel    | Mendez Garcia | Variations in beam currents using different carrier metals in small rain samples for <sup>10</sup> Be measurements by AMS                                |
| <b>K</b>   | <b>113</b>   | Filip     | Babčický      | Mass spectra analysis of ions produced from Ca and Ni fluoride target materials by caesium sputtering  |
| <b>L</b>   | <b>080</b>   | Janis     | Wolf          | Developing a chemical sample preparation procedure for accelerator mass spectrometry of <sup>231</sup> Pa in environmental samples                       |
| <b>M</b>   | <b>035</b>   | Hyun Ju   | Kim           | Optimization of measurement protocol for U particles in environmental samples by Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry (LA-ICP-MS) |

Poster-6 17:45-18:30

|            |              |             |            |  |
|------------|--------------|-------------|------------|--|
| <b>PRO</b> | <b>A 206</b> | Maryna      | Hryhorenko | Alpha-conversion electron coincidence in alpha spectra   |
| <b>B</b>   | <b>132</b>   | Jan         | Kujan      | Low-level Sr-90 measurements within the new concept of radiation monitoring of surface waters in the Czech Republic  |
| <b>C</b>   | <b>089</b>   | Katarzyna   | Szarłowicz | Case study: background fluctuations of gamma detectors in laboratories with a modern ventilation system  |
| <b>EDU</b> | <b>D 177</b> | Alžběta     | Horynová   | Optimizing decontamination procedures for educational applications   |
| <b>E</b>   | <b>138</b>   | Eros        | Mossini    | A radiochemistry laboratory exercise: estimation of Ba-137m half-life by its internal conversion electron  |
| <b>PRO</b> | <b>F 272</b> | Mohamend F. | Nawar      | Mesoporous Nanoceria Column-Based Separation of High-Purity <sup>99m</sup> TcO <sub>4</sub> <sup>-</sup> from Low Specific Activity <sup>99m</sup> Mo for Radiopharmaceutical Applications |