



Poster Session 1

Date / Time September 7 (Mon.), 2026 / 16:00~17:00

Place 3F, Foyer

[MP_1]

Solubility and Spectroscopic Studies of Am(III)-OH-Isosaccharinate Complexation under Alkaline Conditions

Hee-Kyung Kim, Sangki Cho, So Yeon Chun, Hye-Ryun Cho, Wansik Cha

Korea Atomic Energy Research Institute

[MP_2]

The Study of National Wide Groundwater Tritium Content Distribution in Korea

Yoon Yeol Yoon

Korea Institute of Geoscience and Mineral Resources

[MP_3]

Radioactivity Concentrations of ^3H and ^{137}Cs in Coastal Groundwater in Korea

Yoon Yeol Yoon

Korea Institute of Geoscience and Mineral Resources

[MP_4]

HPLC Method for Simultaneous Determination of Residual Chelating Agents on Metal Surfaces

Jin Young Yang, Hee-Jung Im

Jeju National University

[MP_5]

Feasibility Test of an In-Situ Underwater ^{137}Cs Detection System with Cesium Preconcentration

Hyemi Cha¹, Jiyoung Park¹, Jungmin Seo², Mee Jang¹, Min Sun Lee³, Soo Mee Kim²

¹Korea Atomic Energy Research Institute, ²Korea Institute of Ocean Science and Technology, ³Daegu Gyeongbuk Institute of Science & Technology

[MP_6]

A Study of the Content of Radionuclides in Coastal Seawater and Saline Groundwater in Jeju, Korea

Chung-Hun Han, Hee-Jung Im

Jeju National University

[MP_7]

Machine Learning of Axial Neutron Flux Weighted Splitting GPR (Gaussian Process Regression) for Reactor Structure Activation of OPR1000

Nak Woong Yang¹, Seokjun Hong¹, Tae-Hyeong Kim², Jeongmook Lee^{2,3}, Jong-Yun Kim^{2,3}, Chang Je Park¹

¹Sejong University, ²Korea Atomic Energy Research Institute, ³University of Science and Technology



[MP_8]

A Preliminary Study on Ultra-Low-Level Tritium (^3H) in Precipitation over the Korean Peninsula

Yun Ji Heo^{1,2}, Sang-Han Lee¹, Yoonhee Jung¹, Jiyeon Ryoo^{1,2}, Aran Kim^{1,3}

¹Korea Research Institute of Standards and Science, ²Chungnam National University, ³Korea University

[MP_9]

Interpretable Machine Learning with Prediction Intervals for Distribution Coefficients of Radionuclides in Bentonite Systems

Do-Hyeon Kim, Jun-Yeop Lee

Pusan National University

[MP_10]

Integrated Nuclear Analytical Techniques for Quantitative and Isotopic Characterization of Uranium in Environmental Fly Ash

Kishore Babu Dasari^{1,3}, Hana Cho^{2,3}, Seongpyo Hong³, J.H. Park¹, Gwang-Min Sun³

¹Jeonbuk National University, ²Korea Research Institute of Standards and Science, ³Korea Atomic Energy Research Institute

[MP_11]

A Study on the Most Efficient Volume of Detection of Voluminous Gamma-Ray Source for Safety Management of Radiation Worksite

Minyoung Kang, Geun-Ho Kim, Junhyuck Im, Dooseong Hwang, Joone Lee, Insu Chang

Korea Atomic Energy Research Institute

[MP_12]

Development of Oxide Blocks Fabricated by Slip Casting Process

Yunmock Jung¹, Kweonho Kang¹, Daeuk Kang², Kyungho Roh³, Beomgyu Kim³, Eunyoung Choi¹

¹Korea Atomic Energy Research Institute, ²University of Science and Technology, ³Korea Hydro and Nuclear Power Central Research Institute

[MP_13]

Influence of Iron and Cobalt on Oxalic Acid Degradation during Underwater Plasma Treatment of Chemical Decontamination Solutions

Ki-baek Shin¹, Kilyoung Ko¹, Sunjin Kim¹, Jong-bum Kim¹, Jin Kim¹, Jin-joo Kim¹, Jintae Hong¹, Yong Cheol Hong², Kangil Kim²

¹Korea Atomic Energy Research Institute, ²Korea Institute of Fusion Energy

[MP_14]

Cs Pollucite-Based Ceramic-Metal Composite Waste Forms for Cesium Immobilization

Ga-Yeong Kim, Ki Rak Lee, Jung-Hoon Choi, Hyun Woo Kang, Jae-Young Pyo, Hwan Seo Park

Korea Atomic Energy Research Institute



[MP_15]

Development and Chemical Durability of Silver Molybdate-Tellurite Glasses for Radioactive Iodine Immobilization

Ga-Yeong Kim, Hyun Woo Kang, Jung-Hoon Choi, Ki Rak Lee, Jae-Young Pyo, Hwan Seo Park

Korea Atomic Energy Research Institute

[MP_16]

Chemical Considerations for Improving the Disposal Compatibility of Cellulose-Based Radioactive Waste: Pyrolysis, Modeling, and Irradiation

Jaehun Lee, Gun woo Yoon, Yongheum Jo

Hanyang University

[MP_17]

Local Coordination Structure of Iodide Immobilized on a Bismuth-Impregnated Mixed Metal Oxide: An Iodine K-Edge EXAFS Study

Sang-Ho Lee¹, Yoshio Takahashi²

¹Korea Atomic Energy Research Institute, ²The University of Tokyo

[MP_18]

Sequential Correlation Evaluation Strategy for the Scaling Factor Method Using Multiple Correlation Measures

Tae-Hyeong Kim¹, Byungman Kang¹, Dong Woo Lee^{1,2}, Sang Ho Lim^{1,2}, Jong-Yun Kim^{1,2}, Jeongmook Lee^{1,2}

¹Korea Atomic Energy Research Institute, ²University of Science and Technology

[MP_19]

Validation of a PIPS-Based Detection System for Strontium-90 Analysis in Seawater Using Spiked Samples

Younghak Kim, Gahyun Kim, Hyemi Cha, Hyuncheol Kim, Mee Jang

Korea Atomic Energy Research Institute

[MP_20]

Fast and Thermal Neutron Output Measurement of a Compact D-D Neutron Generator Using Neutron-Induced Reactions in an HPGe Detector

Jaegi Lee, Gwang-Min Sun, Sun-Ho Kim

Korea Atomic Energy Research Institute

[MP_21]

Uranium Measurement Using FO-LIBS

Se-Hwan Park, Jonghui Han

Korea Atomic Energy Research Institute

[MP_22]

Neutron Dosimetry and Sensor Testing Preparation for the KAERI-CEA CORANI Project in HANARO

Junesic Park¹, Seong Woo Yang¹, Sung Jae Park¹, Byung Gun Park¹, Jong Woo Kim¹, Kishore Babu Dasari², Christophe Destouches³, Loïc Barbot³, Christophe Domergue³, Hervé Philibert³

¹Korea Atomic Energy Research Institute, ²Gyeongsang National University, ³CEA



[MP_23]

Defect and Transport Properties Governed by Compositional Engineering in CdZnTeSe Semiconductor

Yeong-Seo Gwon¹, Jihwan Boo¹, Beomjun Park¹, Jaegi Lee², Geehyun Kim¹

¹Seoul National University, ²Korea Atomic Energy Research Institute

[MP_24]

Design and Installation of an Underground Ultra-Low Background Gamma-Ray Spectrometry System for ¹³⁷Cs Analysis in Seawater

Chang-Jong Kim, Jaehyeon Seo, Eunjoong Lee

Korea Atomic Energy Research Institute

[MP_25]

Neutron Irradiation Test of Spent Nuclear Fuel Dry Storage Cask Materials Using an Instrumented Capsule

Ye-eun Na, Seong Woo Yang, Kee-Nam Choo, Jong-woo Kim, Junesic Park, Sung-Jae Park

Korea Atomic Energy Research Institute

[MP_26]

Physics-Based Gamma Spectrum Decomposition Using Geometry Specific MCNP Simulation for Multi-Nuclide Analysis

Seokhan Kim^{1,2}, Seungho Lee², Eunmi An², Seoha Kim², Homyung Lee², Minjoo Kwak², Jeongmin Park², Yeong Su Ha², Dong Yeon Lee¹

¹Dong-Eui University, ²Korea Research Institute of Decommissioning

[MP_27]

Monte Carlo Simulation of ³H and ¹⁴C Detection Efficiency in a Liquid Scintillation Counter Using OpenGate (GEANT4)

Aran Kim^{1,2}, Sang-han Lee¹, Ajin Jo², Yoon-hee Jung¹, Yun-ji Heo^{1,3}, Ji-yeon Ryoo^{1,3}, Jung-Yeol Yeom²

¹Korea Research Institute of Standards and Science, ²Korea University, ³Chungnam National University

[MP_28]

Radiation Source-Dependency of Charge Transport Evaluation in CdMnTeSe Crystals

Beomjun Park¹, Ill-Hyuk Han¹, Seungho Song², Yonghoon Kim², Jung-Yeol Yeom², Geehyun Kim¹

¹Seoul National University, ²Korea University

[MP_29]

Development and Proof-of-Concept Testing of a Gas-Filled Self-Powered Neutron Detector at the HANARO Research Reactor

Jong Woo Kim^{1,2}, Yong Kyun Kim²

¹Korea Atomic Energy Research Institute, ²Hanyang University

[MP_30]

Optimization of Measurement Strategies for ²¹⁰Po, ²³⁵U, and ²³⁸U in Environmental Samples by Alpha and Gamma-Ray Spectrometry

Minjoo Kwak, Jeongmin Park, Eunmi An, Seoha Kim, Seokhan Kim, Homyung Lee, Yeong Su Ha, Seungho Lee

Korea Research Institute of Decommissioning



[MP_31]

Charge Collection Efficiency Weighted Simulation for the Design of Pm-147 Betavoltaic Batteries

Changyu Ko, Kilyoung Ko, Deokseong Kim, Jongbum Kim, Sunjin Kim, Jinjoo Kim, Jintae Hong

Korea Atomic Energy Research Institute

[MP_32]

Optimization of Multi-Spectral CT Acquisition Configurations for Enhanced Material Decomposition

Yunsub Jung¹, Izabela Ewa Nielsen¹, Sangmin Lee², Ho Lee²

¹Aalborg University, ²Yonsei University College of Medicine

[MP_33]

Unrolling Based Analysis of Cylindrical Lithium-Ion Batteries Using Black Body Corrected Neutron Tomography

Junyoung Son^{1,2}, Tae Joo Kim¹, Jongyul Kim¹, Youngju Kim¹, Seung Wook Lee²

¹Korea Atomic Energy Research Institute, ²Pusan National University

[MP_34]

Development of a Hybrid Digital Timing System based on TDC and FADC for Positron Annihilation Lifetime Spectroscopy

Youngsu Jeong, Jaegi Lee, Bo-Young Han

Korea Atomic Energy Research Institute

[MP_35]

Evaluating Neutron Shielding Efficiency of Concrete Samples Using Thermal Neutron Beam Facility at KAERI

Jinyu Kim, Bo-Young Han, Gwang-Min Sun

Korea Atomic Energy Research Institute

[MP_36]

Optimization of Concrete Mixes for Low-Activation Bio-Shields in Commercial Reactors: A Monte Carlo Simulation Approach

Bo-Young Han¹, Seong Hee Park², Woo Yong Kim², Jung Ho Song², Yujin Lee³, Jong-Suk Lee³

¹Korea Atomic Energy Research Institute, ²Bridge between Radwaste & Clearance, ³Korea Institute of Civil Engineering and Building Technology

[MP_37]

Development of a Compact 10⁹ n/s-Class D–D Neutron Generator based on an ECR Ion Source for Prompt Gamma-Ray Neutron Activation Analysis (PGNAA)

Sung-Ryul Huh, Jong-Gab Jo, Tae-Seong Kim, Kihyun Lee, Dae-Sik Chang

Korea Atomic Energy Research Institute

[MP_39]

Development of an Analytical Procedure for Tc-99 Determination in Large-Volume Environmental Soil Samples

Hae-Ri Kim, Da-Young Kam, Mee Jang, Jong-Myoung Lim

Korea Atomic Energy Research Institute



[MP_40]

Cesium and Strontium Sorption Properties of Waste Concrete Powder for Radioactive Waste Management

Chan Woo Park, Hyung-Ju Kim, Hee-Man Yang, Ilgook Kim, Kirak Lee, Hwan Seo Park

Korea Atomic Energy Research Institute

[MP_41]

Comparison of MAC3 and FADC-Based Implementations of Coincidence Counting in a TDCR System

Ka-Young Park¹, Tanapol Dachviriyakij^{1,2}, Jong Man Lee^{1,2}, Kyoung Beom Lee^{1,2}, Young-Su Kim¹, Tae Hee Kim¹, Dong Hye Heo¹, Yeong Jae Park¹, Agung Agusbudiman¹, Byoung-Chul Kim¹

¹Korea Research Institute of Standards and Science, ²University of Science and Technology

[MP_42]

A Study on Asymmetric PMTs in TDCR System

Tanapol Dachviriyakij^{1,2}, Ka-Young Park¹, Jong Man Lee^{1,2}, Kyoung Beom Lee^{1,2}, Yeong Jae Park¹, Dong Hye Heo¹, Tae Hee Kim¹, Agung Agusbudiman¹, Byoung-Chul Kim¹

¹Korea Research Institute of Standards and Science, ²University of Science and Technology

[MP_43]

Defect-Engineered Rare-Earth-Doped Lithium-Based Materials for Visual–Luminescent Dual-Mode Radiation Dosimetry

Yuetong Ma, Menglin Qiu, Shasha Lv

Beijing Normal University

[MP_44]

Integrity Evaluation and Life Prediction of the HANARO CNS Moderator Vessel under Neutron Irradiation

Hun Young Kim, Dong Hyuk Lee, Byung Hun Hwang

Korea Atomic Energy Research Institute

[MP_45]

Estimation of Radiation Exposure Time and Dose Using OSL and ITL Fading Characteristics of Resistors in Electronic Personal Dosimeter

Hyunseok Lee^{1,2}, Jeong Wan Kwon¹, Hyungjoon Yu¹, Jeong Tae Lee¹, Hanjin Lee¹, Myung-Jin Kim³

¹Korea Institute of Nuclear Safety, ²Seoul National University, ³RADPION Inc.

[MP_46]

Application of the Organic Scintillator, Ultima Gold, Used for Radiation Detection, in Solar Light Detection

Hayun Jeong, Jin Young Yang, Hee-Jung Im

Jeju National University

[MP_47]

Production of Radionuclides with 30 MeV Cyclotron

Jeong Hoon Park, Jun Young Lee, Byeong Chan Lee, Young Bae Gong, Jin Sik Joo, Jong Cheol Lee, Dong Hyun Kwak, Min Goo Hur

Korea Atomic Energy Research Institute

[MP_48]

Radiation Induced Synthesis of Layer-Structured α -Co(OH)₂ for Supercapacitor

Jeong Hoon Park, Min Goo Hur

Korea Atomic Energy Research Institute