

## PROGRAM OF APSORC13

Sunday, 22 September 2013

Lobby, Kanazawa Bunka Hall

15:00- Registration  
17:30-18:30 Welcome reception

Monday, 23 September 2013

Hall & Meeting Room, Kanazawa Bunka Hall

09:00- Registration (continued)

09:30-10:00 Opening Ceremony - Welcome address

Hall Y. Nagame, APSORC13 co-chair, *Japan Atomic Energy Agency, Japan*  
T. Kishikawa, APSORC chair, *Kumamoto University, Japan*

10:00-11:00 Hevesy Medal Award Ceremony

Hall Chair : A. Chatt

HMA-01 R. S. Dybczyński, *Institute of Nuclear Chemistry and Technology, Poland*  
50 years of adventures with neutron activation analysis with the special  
emphasis on radiochemical separations

11:00-11:10 Coffee Break

11:10-12:10 Plenary Session

Hall Fukushima issues  
Chairs : N. Momoshima and H. Nitsche

11:10-11:40 PL-01 M. Yamamoto, *LLRL, Kanazawa University, Japan*  
Overview of the Fukushima Dai-ichi nuclear power plant (FDNPP) accident  
with amounts and nuclear compositions of the released radionuclides

11:40-12:10 PL-02 I. McKinley, *MCM Consulting, Switzerland*  
Fukushima challenges in perspective

12:10-13:20 Lunch

13:20-18:20 Parallel session

Hall Fukushima issues (continued)  
Chairs : S. Nagao and I. McKinley

13:20-13:50 FKI-01 H. Tsuruta, M. Takigawa, T. Nakajima, *The University of Tokyo, Japan,*  
*Japan Agency for Marine-Earth Science and Technology, Japan*  
Atmospheric transport of radioiodine and radiocesium released in the early

- phase by the Fukushima Daiichi Nuclear Power Plant accident from field measurements and a simulation model
- 13:50-14:20 **FKI-02** **Y. Takahashi**, Q. Fan, Y. Togo, A. Sakaguchi, K. Tanaka, *Hiroshima University, Japan, National Institute of Advanced Industrial Science & Technology, Japan*  
 Migration of radiocesium and radioiodine released by FDNPP accident in the terrestrial environment and its interpretation by their speciation analyses
- 14:20-14:50 **FKI-03** **M. Aoyama**, Y. Hamajima, *Meteorological Research Institute, Japan, Kanazawa University, Japan*  
 Oceanic and coastal dispersion of  $^{134}\text{Cs}$  and  $^{137}\text{Cs}$  released from the TEPCO Fukushima NPP1 accident: past present and prediction
- 14:50-15:20 **FKI-04** **B. Grambow**, *Université de Nantes, France*  
 Interactions between nuclear fuel and water at the Fukushima Daiichi Reactors
- 15:20-15:40 **Coffee Break**

Hall	Fukushima issues (continued) Chairs : M. Yamamoto and B. Grambow	
15:40-16:00	<b>FKO-01</b>	<b>A. Shimada</b> , K. Sakatani, Y. Kameo, K. Takahashi, <i>Japan Atomic Energy Agency, Japan</i> Determination of $^{129}\text{I}$ in the accumulated radioactive water and processing water of Fukushima Daiichi Nuclear Power Plant
16:00-16:20	<b>FKO-02</b>	<b>Y. Miyake</b> , H. Matsuzaki, T. Fujiwara, T. Saito, T. Yamagata, M. Honda, <i>The University of Tokyo, Japan, Nihon University, Japan</i> Measurement of Iodine-129 in surface soil collected near the Fukushima Daiichi Nuclear Power Plant accident site
16:20-16:40	<b>FKO-03</b>	<b>T. Ohta</b> , T. Kutoba, Y. Mahara, H. Matsuzaki, T. Igarashi, <i>Hokkaido University, Japan, Kyoto University, Japan, The University of Tokyo, Japan</i> Speciation of $^{137}\text{Cs}$ and $^{129}\text{I}$ in surface soil in Kanto loam layer after the Fukushima NPP accident
16:40-17:00	<b>FKO-04</b>	<b>Y. Muramatsu</b> , T. Ohno, N. Inagawa, K. Oda, M. Sato, H. Matsuzaki, <i>Gakushuin University, Japan, Fukushima Agricultural Technology Centre, Japan, The University of Tokyo, Japan</i> Transfer of radiocesium and radioiodine in the environment following the Fukushima nuclear accident
17:00-17:20	<b>FKO-05</b>	<b>Y. Satou</b> , K. Sueki, K. Sasa, J. Kitagawa, S. Ikarashi, <i>University of Tsukuba, Japan, High Energy Accelerator Research Organization and J-PARC Center, Japan</i> States of existence of the cesium and silver radionuclides at the sandy beach in Iwaki city, Fukushima
17:20-17:40	<b>FKO-06</b>	<b>M. C. Honda</b> , H. Kawakami, S. Watanabe, T. Saino, S. Nagao, K. Buesseler, C. German, S. Manganini, <i>Japan Agency for Marine-Earth Science and Technology, Japan, Kanazawa University, Japan, Woods Hole Oceanographic Institution, USA</i> Vertical transport of FNPP1-derived radiocesium by settling particles in the Western North Pacific
17:40-18:00	<b>FKO-07</b>	<b>Z. J. Zhang</b> , S. Kakitani, K. Ninomiya, N. Takahashi, Y. Yamaguchi, T. Yoshimura, T. Saito, K. Kita, H. Tsruta, S. Higaki, A. Shinohara, <i>Osaka University, Japan, Shokei Gakuin University, Japan, Ibaraki University, Japan, The University of Tokyo, Japan</i> Strontium-90 determination in air dust filter using solid phase extraction after the accident of FD-NPS

**18:00-18:20 FKO-08 D. R. Neville**, A. J. Phillips, K. A. Higley, *Oregon State University, USA*  
Dosimetric implications of the Fukushima release for Pacific albacore in the Northern California Current

**18:20-18:50 Mounting of posters**

**18:50-20:00 Poster session 1**

**13:20-18:20 Parallel session**

**Meeting Room** **Application of nuclear and radiochemical techniques**  
Chairs : **T. Yoshimura and C. Gautier**

**13:20-13:50 API-01 H. Harada**, *Japan Atomic Energy Agency, Japan*  
ANNRI at J-PARC

**13:50-14:20 API-02 Y. L. Zhao**, W. Q. Shi, L. Y. Yuan, Z. F. Chai, *Institute of High Energy Physics, China, National Center for Nanosciences and Technology, China*  
Nanomaterial and nanotechnology in nuclear energy chemistry

**14:20-14:40 APO-01 T. M. Nakanishi**, N. I. Kobayashi, A. Hirose, T. Saito, R. Sugita, H. Suzuki, R. Iwata, K. Tanoi, *The University of Tokyo, Japan, National Institute of Radiological Sciences, Japan, Tohoku University, Japan*  
Development of real-time radioisotope imaging system to study plant nutrition

**14:40-15:00 APO-02 S. H. Jung**, J. G. Park, J. B. Kim, J. H. Moon, C. H. Kim, *Korea Atomic Energy Research Institute, Korea, Hanyang University, Korea*  
MCNP study on the development of industrial SPECT in terms of a radiation measurement design and void influence in multiphase media

**15:00-15:20 APO-03 M. Anvia**, S. A. Brown, *Australian Nuclear Science and Technology Organization Minerals and The University of Sydney, Australia, The University of Sydney, Australia*  
Tracking the deportment of uranium chain daughters during alkaline leaching of an Australian monazite

**15:20-15:40 Coffee Break**

**Meeting Room** **Nuclear chemistry**  
Chairs : **A. Yokoyama and Z. F. Chai**

**15:40-16:00 NCO-01 Z. Qin**, F.-L. Fan, Y. Wang, F.-Y. Fan, X.-L. Wu, J. Bai, X.-J. Yin, L.-L. Tian, W. Tian, Z. Li, C.-M. Tan, *Institute of Modern Physics, China*  
Nuclear chemistry and radiochemistry studies at IMP

**16:00-16:20 NCO-02 W. M. Kerlin**, F. Poineau, P. M. Forster, A. P. Sattelberger, K. R. Czerwinski, *University of Nevada Las Vegas, USA, Argonne National Laboratory, USA*  
Preparation of low valent technetium metal-metal bonded species via solvothermal reduction of pertechnetate salts

**16:20-16:40 NCO-03 Y.-K. Ha**, S.-D. Park, Y.-S. Park, J.-S. Kim, K. Song, *Korean Atomic Energy Research Institute, Korea*  
The status of chemical characterization of a spent nuclear fuel

**16:40-17:00 NCO-04 I. Laszak**, J. P. Degros, C. Gautier, P. Fichet, F. Goutelard, J. N. Saas, A. Vian, J. F. Valéry, *CEA Saclay, France, AREVA, France*  
Determination of <sup>93</sup>Zr from intermediate level radioactive effluent

**17:00-17:20**    **NCO-05**    **Y. L. Xu**, S. Y. Kim, T. Ito, H. Tokuda, T. Tada, K. Hitomi, K. Ishii, *Tohoku University, Japan*  
Selective separation of cesium from simulated high level liquid waste using a silica-based (Calix[4] + Dodecanol)/SiO<sub>2</sub>-P adsorbent

**Meeting  
Room**

**Nuclear forensics**

Chairs : **A. Yokoyama and Z. F. Chai**

**17:20-17:40**    **NFO-01**    **Y. Miyamoto**, F. Esaka, D. Suzuki, M. Magara, *Japan Atomic Energy Agency, Japan*

Age determination of a single Pu and Pu/U mixed oxide particle

**17:40-18:00**    **NFO-02**    **N. Gharibyan**, K. J. Moody, T. A. Brown, J. D. Despotopoulos, J. M. Gostic, R. A. Henderson, E. Tereshatov, S. J. Tumey, D. A. Shaughnessy, *Lawrence Livermore National Laboratory, USA, Air Force Technical Applications Center, USA*

Radiochemical measurement of 10-15 MeV proton induced fission yields for U-238

**18:00-18:20**    **NFO-03**    **R. Sudowe**, E. M. Bond, A. R. Dailey, D. R. McLain, A. R. Roman, *University of Nevada Las Vegas, USA, Los Alamos National Laboratory, USA*

Effect of interferences on actinide and strontium separations in unusual matrices

**18:20-18:50**

**Mounting of posters**

**18:50-20:00**

**Poster session 1**

Tuesday, 24 September 2013

Hall & Meeting Room, Kanazawa Bunka Hall

09:00-10:00 Plenary Session

Hall Nuclear chemistry (continued) & Environmental radiochemistry  
Chairs : M. Schädel and Y. Muramatsu

09:00-09:30 PL-03 A. Türler, *Paul Scherrer Institut & University of Bern, Switzerland*  
Advances in the production and chemistry of the heaviest elements

09:30-10:00 PL-04 S. Nagao, *Kanazawa University, Japan*  
Study on transport of particulate organic matter in river and coastal marine systems using radiocarbon

10:00-10:20 Coffee Break

10:20-18:30 Parallel session

Hall Environmental radiochemistry (continued)  
Chairs : H. Tsuruta and W. S. Wu

10:20-10:50 ENI-01 H. Foerstendorf, K. Gückel, N. Jordan, A. Rossberg, V. Brendler, *Helmholtz-Zentrum Dresden-Rossendorf, Germany, Rossendorf Beamline at the European Synchrotron Radiation Facility (ESRF), France*  
Surface speciation of dissolved radionuclides on mineral phases – A vibrational and X-ray absorption spectroscopic study

10:50-11:10 ENO-01 Z. J. Guo, Z. Y. Chen, Q. Jin, W. S. Wu, *Lanzhou University, China*  
Adsorption of Eu(III) and Am(III) on granite

11:10-11:30 ENO-02 H. Tuovinen, E. Pohjolainen, D. Vesterbacka, C. Kirk, D. Read, D. Solatie, J. Lehto, *University of Helsinki, Finland, Geological Survey of Finland, Loughborough University, UK, Finnish Radiation and Nuclear Safety Authority, Finland*  
Behaviour of radionuclides and secondary mineral formation in the Talvivaara mining process

11:30-11:50 ENO-03 C.-P. Lee, M.-C. Wu, C.-Y. Liu, C.-H. Pan, T.-L. Tsai, H.-J. Wei, L.-C. Men, *National Cheng Kung University, Tainan, National Central University, Taiwan, Institute of Nuclear Energy Research, Taiwan*  
Evaluation of HTO and selenium diffusion behavior in compacted bentonite with different lengths

11:50-12:10 ENO-04 T. Ohnuki, N. Kozai, F. Sakamoto, *Japan Atomic Energy Agency, Japan*  
Sorption behavior of Dy(III) and Np(V) on microbial consortia

12:10-13:20 Lunch

Hall Environmental radiochemistry (continued)  
Chairs : M. Aoyama and H. Foerstendorf

13:20-13:40 ENO-05 S. Sachs, A. Heller, G. Bernhard, *Helmholtz-Zentrum Dresden-Rossendorf, Germany*  
Interaction of Eu(III) with mammalian cells as a function of Eu(III) concentration and nutrient composition

13:40-14:00 ENO-06 Y. Iwahana, Y. Koike, M. Kitano, T. Nakamura, *Meiji University, Japan*  
Monitoring and elution characteristics of radioactive Cs in incinerator fly ashes of municipal solid waste

- 14:00-14:20 **ENO-07** **J. Krmela**, *Ústav Jaderného Výzkumu Řež a.s., The Czech Republic*  
The issue of separation of uranium from drinking water in the Czech Republic
- 14:20-14:40 **ENO-08** **K. Masumoto**, A. Toyoda, H. Matsumura, T. Kunifuda, *High Energy Accelerator Research Organization, Japan, Tokyo Nuclear Service, Japan*  
Air-born contamination caused in a high-energy proton accelerator room
- 14:40-15:00 **ENO-09** **H. W. Gäggeler**, L. Tobler, M. Schwikowski, *Paul Scherrer Institut, Switzerland*  
Application of <sup>210</sup>Pb in Glaciology
- 15:00-15:20 **ENO-10** **A. Sakaguchi**, A. Kadokura, P. Steier, Y. Takahashi, K. Shizuma, T. Nakakuki, M. Yamamoto, *Hiroshima University, Japan, University of Vienna, Austria, Kanazawa University, Japan*  
Depth distributions of uranium-236 and cesium-137 in the Japan Sea; toward the potential use as a new oceanic circulation tracer

15:20-15:40 **Coffee Break**

**Hall** **Environmental radiochemistry & Fukushima issues (continued)**  
Chairs : **S. Nakayama and R. Sudowe**

- 15:40-16:10 **ENI-02** **J. V. Kratz**, *Johannes Gutenberg-University of Mainz, Germany*  
Ultratrace Analysis of Long-lived Radionuclides by Resonance Ionization Mass Spectrometry (RIMS)
- 16:10-16:30 **ENO-11** **J.-H. Park**, S. Lee, Y.-G. Ha, S. A Lee, K. Jeong, K. Song, *Korea Atomic Energy Research Institute, Korea*  
The bulk analysis with TIMS measurements preformed in KAERI for nuclear safeguards
- 16:30-16:50 **ENO-12** W. Bu, **J. Zheng**, Q. Guo, T. Aono, K. Tagami, S. Uchida, *Peking University, China, National Institute of Radiological Sciences, Japan*  
Determination of plutonium isotopes at ultratrace level in seawater samples by sector-field ICP-MS combined with chromatographic separation
- 16:50-17:10 **ENO-13** **I. Milanović**, Ž. Grahek, *Ruder Bošković Institute, Croatia*  
Semi-automated procedure for the determination of <sup>89,90</sup>Sr in environmental samples by Cherenkov counting
- 17:10-17:40 **FKI-04** **K. Minato**, *Japan Atomic Energy Agency, Japan*  
Research and development towards decommissioning of Fukushima Daiichi Nuclear Power Plants
- 17:40-18:00 **FKO-09** **Y. Oura**, M. Ebihara, H. Tsuruta, T. Nakajima, T. Ohara, M. Ishimoto, Y. Katsumura, *Tokyo Metropolitan University, Japan, The University of Tokyo, Japan, National Institute for Environmental Studies, Japan*  
Determination of atmospheric radiocesium on filter tapes used at automated SPM monitoring stations for estimation of transport pathways of radionuclides from Fukushima Daiichi Nuclear Power Plant
- 18:00-18:20 **FKO-10** **K. Hirose**, *Sophia University, Japan*  
Two-years trend of monthly Cs-137 deposition observed within 300 km of the Fukushima Dai-ichi Nuclear Power Plant

18:20-18:50 **Mounting of posters**

18:50-20:00 **Poster session 2**

10:20-15:20 **Parallel session**

Meeting Room		Nuclear chemistry (continued) Chairs : H. Kudo and H. W. Gäggeler
10:20-10:50	NCI-01	<b>S. Dmitriev</b> , <i>The Flerov Laboratory of Nuclear Reactions, Russia</i> Synthesis and study of properties of superheavy elements: status, problems, and prospects
10:50-11:20	NCI-02	<b>Ch. E. Düllmann</b> , <i>Johannes Gutenberg University of Mainz, Germany</i> The search for new chemical elements and the possibilities to synthesize transactinide "chemistry" isotopes
11:20-11:50	NCI-03	<b>H. Haba</b> , <i>RIKEN, Japan</i> Production and decay studies of transactinide nuclides with GARIS at RIKEN
11:50-12:10	NCO-06	<b>V. Pershina</b> , <i>GSI Helmholtzzentrum für Schwerionenforschung, Germany</i> Theoretical predictions of the electronic structure and properties of the heaviest elements
12:10-13:20		Lunch

Meeting Room		Nuclear chemistry (continued) Chairs : Y. Nagame and S. Dmitriev
13:20-13:40	NCO-07	<b>D. Rudolph</b> , U. Forsberg, P. Golubev, L. G. Sarmiento, A. Yakushev, L.-L. Andersson, Ch. E. Düllmann, J. M. Gates, K. E. Gregorich, F. P. Heßberger, R.-D. Herzberg, J. Khuyagbaatar, J. V. Kratz, K. Rykaczewski, M. Schädel, S. Åberg, D. Ackermann, M. Block, H. Brand, B. G. Carlsson, D. Cox, X. Derkx, A. Di Nitto, K. Eberhardt, J. Even, C. Fahlander, J. Gerl, C. J. Gross, E. Jäger, B. Kindler, J. Krier, I. Kojouharov, N. Kurz, B. Lommel, A. Mistry, C. Mokry, H. Nitsche, J. P. Omtvedt, P. Papadakis, I. Ragnarsson, J. Runke, H. Schaffner, B. Schausten, P. Thörle-Pospiech, T. Torres, A. Türler, A. Ward, D. Ward, N. Wiehl, <i>Lund University, Sweden, GSI Helmholtzzentrum für Schwerionenforschung, Germany, Helmholtz Institute Mainz, Germany, Johannes Gutenberg-University of Mainz, Germany, Lawrence Berkeley National Laboratory, USA, University of Liverpool, Oak Ridge National Laboratory, USA, Japan Atomic Energy Agency, Japan, Paul Scherrer Institut, Switzerland</i> Spectroscopy of element 115 decay chains
13:40-14:00	NCO-08	<b>A. Yakushev</b> , <i>GSI Helmholtzzentrum für Schwerionenforschung, Germany</i> Chemistry at one-atom-per-week level
14:00-14:20	NCO-09	<b>J. Even</b> , A. Yakushev, Ch. E. Düllmann, H. Haba, M. Asai, T. Sato, H. Brand, A. Di Nitto, R. Eichler, F. Fangli, W. Hartmann, M. Huang, E. Jäger, D. Kaji, J. Kanaya, Y. Kaneya, J. Khuyagbaatar, B. Kindler, J. V. Kratz, J. Krier, Y. Kudou, N. Kurz, B. Lommel, S. Miyashita, K. Morimoto, K. Morita, Y. Nagame, H. Nitsche, K. Ooe, M. Schädel, J. Steiner, T. Sumita, K. Tanaka, A. Toyoshima, K. Tsukada, A. Türler, I. Usoltsev, Y. Wakabayashi, Y. Wang, N. Wiehl, S. Yamaki, Q. Zhi, <i>Helmholtz-Institut Mainz, Germany, GSI Helmholtzzentrum für Schwerionenforschung, Germany, Johannes Gutenberg-University of Mainz, Germany, RIKEN, Japan, Japan Atomic Energy Agency, Japan, University of Bern, Switzerland, Paul Scherrer Institut, Switzerland, Institute of Modern Physics, China, University of California, USA, Lawrence Berkeley National Laboratory, USA, Niigata University, Japan, Saitama University, Japan</i> Sg(CO) <sub>6</sub> - The first organometallic transactinide complex opening a window to a new compound class
14:20-14:40	NCO-10	<b>H. Nitsche</b> , G. K. Pang, J. M. Gates, K. E. Gregorich, N. E. Esker, O. R. Gothe, <i>University of California, USA, Lawrence Berkeley National Laboratory, USA</i> Superheavy element <i>Z</i> and <i>A</i> measurements at the Berkeley Gas-Filled

Separator

14:40-15:00 NCO-11 **R. Eichler**, I. Usoltsev, J. P. Omtvedt, O. V. Petrushkin, D. Piguet, A. V. Sabel'nikov, A. Türler, G. K. Vostokin, A. V. Yeremin, *Paul Scherrer Institute, Switzerland, University of Bern, Switzerland, The Flerov Laboratory of Nuclear Reactions, Russia, University of Oslo, Norway*

Intermetallic actinide compounds for SHE production targets

15:00-15:20 NCO-12 **T. K. Sato**, M. Asai, N. Sato, Y. Kaneya, K. Tsukada, A. Toyoshima, S. Miyashita, Y. Nagame, M. Schädel, A. Osa, S. Ichikawa, K. Ooe, T. Stora, J. V. Kratz, *Japan Atomic Energy Agency, Japan, Ibaraki University, Japan, RIKEN, Japan, Niigata University, Japan, ISOLDE, CERN, Switzerland, Johannes Gutenberg-University of Mainz, Germany*

The first successful observation of mass-separated lawrencium (Lr,  $Z = 103$ ) ions with ISOL technique

15:20-15:40

Coffee Break

Meeting  
Room

Nuclear energy chemistry  
Chairs : **Z. Yoshida and S. Clark**

- 15:40-16:10 NEI-01 **Z. F. Chai**, *Institute of High Energy Physics, China*  
Nuclear energy chemistry in China: present status and future perspectives
- 16:10-16:40 NEI-02 **A. Goswami**, *Bhabha Atomic Research Centre, India*  
Evaluation of new extractants relevant to the back-end of nuclear fuel cycle
- 16:40-17:00 NEO-01 **E. Löfström-Engdahl**, E. Aneheim, C. Ekberg, H. Elfversson, G. Skarnemark, *Chalmers University of Technology, Sweden*  
Hexanoic acid as alternative diluent in a GANEX process based on TBP and CyMe<sub>4</sub>-BTBP
- 17:00-17:20 NEO-02 **Y. Tomobuchi**, Y. Tachibana, M. Nomura, T. Suzuki, *Nagaoka University of Technology, Japan, Tokyo Institute of Technology, Japan*  
Effect of alcohols on separation behavior of rare earth elements using benzimidazole-type anion-exchange resin in nitric acid solutions
- 17:20-17:40 NEO-03 **F. Poineau**, P. Weck, B. P. Burton-Pye, A. Maruk, G. Kirakosyan, I. Denden, D. B. Rego, E. V. Johnstone, W. Kerlin, E. Kim, M. Ferrier, A. P. Sattelberger, W. Lukens, M. Fattahi, L. C. Francesconi, K. E. German, K. R. Czerwinski, *University of Nevada Las Vegas, USA, Sandia National Laboratories, USA, Hunter college of the City University of New York, USA, A. N. Frumkin Institute of Physical Chemistry and Electrochemistry, Russia, Ecoles des Mines de Nantes, France, Argonne National Laboratory, USA, Lawrence Berkeley National Laboratory, USA*  
Speciation and reactivity of heptavalent technetium in concentrated acids
- 17:40-18:00 NEO-04 **A. Braatz**, M. Nilsson, *University of California, Irvine, USA*  
Fluorescence studies of complex stoichiometry of metal ions in extraction systems combining dibutyl phosphoric acid and tri-n-butyl phosphate
- 18:00-18:20 NEO-05 **R. Chen**, H. Tanaka, M. Asai, C. Fukushima, T. Kawamoto, M. Ishizaki, M. Kurihara, M. Arisaka, T. Nankawa M. Watanabe, *National Institute of Advanced Industrial Science and Technology, Japan, Yamagata University, Japan, Japan Atomic Energy Agency, Japan*  
Column study on electrochemical separation of cesium ions from wastewater using copper hexacyanoferrate film

18:20-18:50

Mounting of posters

18:50-20:00

Poster session 2



Wednesday, 25 September 2013

Hall & Meeting Room, Kanazawa Bunka Hall

09:00-10:00 Plenary Session

Hall Actinide chemistry & Radiopharmaceutical chemistry and Nuclear medicine  
Chairs : T. Yaita and S. Srivastava

09:00-09:30 PL-05 M. A. Denecke, *University of Manchester, UK*  
Actinide speciation using synchrotron-based methods

09:30-10:00 PL-06 J. Hatazawa, *Osaka University, Japan*  
Radionuclides in diagnostic nuclear medicine

10:00-10:20 Coffee Break

10:20-12:00 Parallel session

Hall Radiopharmaceutical chemistry and Nuclear medicine (continued)  
Chairs : J. Hatazawa and A. Türler

10:20-10:50 RPI-01 D. S. Wilbur, D. K. Hamlin, M.-K. Chyan, E. Balkin, J. M. Pagel, O. W. Press,  
B. M. Sandmaier, *University of Washington, USA, Fred Hutchinson Cancer  
Research Center, USA*

Addressing challenges in preparation of  $^{211}\text{At}$ -labeled biomolecules for use in  
targeted alpha therapy

10:50-11:20 RPI-02 M. Maiti, S. Lahiri, *Indian Institute of Technology Roorkee, India, Saha  
Institute of Nuclear Physics, India*

Generation of nuclear data for the production of  $^{97}\text{Ru}$  from  $^{12}\text{C} + ^{89}\text{Y}$  reaction

11:20-11:40 RPO-01 E. Aneheim, S. Lindegren<sup>1</sup>, H. Jensen, Sahlgrenska Academy at Gothenburg  
University, Sweden, Cyclotron and PET Unit, Denmark

Towards an automatic procedure for the production of astatinated antibodies

11:40-12:00 RPO-02 Y. Hatsukawa, K. Hashimoto, K. Tsukada, T. Sato, M. Asai, A. Toyoshima, Y.  
Nagai, T. Tanimori, S. Sonoda, S. Kabuki, H. Saji, H. Kimura, *Japan Atomic  
Energy Agency, Japan, Kyoto University, Japan, Tokai University, Japan*  
Production of  $^{95\text{m}}\text{Tc}$  for compton camera imaging

12:00-13:20 Group photo (Hall) and Lunch

10:20-12:00 Parallel session

Meeting Actinide chemistry (continued)  
Room Chairs : M. Watanabe and A. Goswami

10:20-10:50 ACI-01 J. Su, J. Li, *Tsinghua University, China*  
Relativistic quantum chemical studies on electronic structures and  
photoelectron spectra of actinide complexes

10:50-11:20 ACI-02 Y. Kitatsuji, *Japan Atomic Energy Agency, Japan*  
Flow electrolysis of actinide ions utilizing electrocatalysis

11:20-11:40 ACO-01 A. Kirishima, N. Sato, *Tohoku University, Japan*  
Determination of the thermodynamic quantities of U(VI) complexation with  
"aliphatic" and "aromatic" di-carboxylic acids by calorimetry

11:40-12:00 ACO-02 H. Hayashi, M. Akabori, K. Minato, *Japan Atomic Energy Agency, Japan*  
Electrochemical behavior of americium in NaCl-2CsCl melt

12:10-13:20 **Group photo (Hall) and Lunch**

13:20-15:20

Hall **Japan Society of Nuclear and Radiochemical Sciences (JNRS) General Assembly for Member of JNRS**

13:20-14:20 **JNRS General Assembly**

14:20-15:20 **JNRS Meeting**

15:20-15:40 **Coffee Break**

15:40-17:20 **Parallel session**

Hall **Radiopharmaceutical chemistry and Nuclear medicine & Fukushima issues (continued)**

Chairs : **T. Ohnuki and D. S. Wilbur**

15:40-16:00 **RPO-03 L. Safavi-Tehrani**, G. E. Miller, M. Nilsson, *University of California Irvine, USA*

Production of high specific activity radiolanthanides for medical purposes using the UC Irvine TRIGA Reactor

16:00-16:20 **FKO-11 S. LaZar, E. Rasmussen**, P. Stamets, *Department of Energy (DOE), USA, San Diego State University, USA, Fungi Perfecti Research Laboratories, USA*

Mycoremediation: fungus-based soil remediation of radioisotope contamination

16:20-16:40 **FKO-12 K. Minami**, T. Funabashi, R. Kamimura, T. Yasutaka, H. Tanaka, A. Kitajima, H. Ogawa, T. Kawamoto, *National Institute of Advanced Industrial Science and Technology, Japan, Tokyo Power Technology Ltd., Japan*

Automatic Cs-uptake device for radioactive-Cs evaluation in environmental water

16:40-17:00 **FKO-13 K. Minami**, H. Ogawa, H. Tanaka, A. Takahashi, T. Uchida, A. Kitajima, D. Parajuli, **T. Kawamoto**, M. Yamaguchi, M. Osada, N. Otake, S. Sato, R. Kamimura, Y. Hakuta, *The National Institute of Advanced Industrial Science and Technology, Japan, Tokyo Power Technology Ltd., Japan*

Pilot plant for volume reduction of Cs-contaminated combustible materials

17:00-17:20 **FKO-14 D. Parajuli**, H. Tanaka, S. Fukuda, R. Kamimura, T. Kawamoto, *The National Institute of Advanced Industrial Science and Technology, Japan, Tokyo Power Technology Ltd., Japan*

Decontamination of radioactive cesium from ash and soil

15:40-17:20 **Parallel session**

Meeting **Actinide chemistry & Nuclear chemistry (continued)**

Room Chairs : **H. Haba and Ch. E. Düllmann**

15:40-16:00 **ACO-03 T.-H. Park**, Y. S. Choi, J.-H. Park, J.-Y. Kim, S.-E. Bae, Y.-H. Cho, J.-W. Yeon, K. Song, *Korea Atomic Energy Research Institute, Korea*

Rapid radioanalytical determination of U, Pu, and Am in radioactive wastes via extraction chromatography, alpha spectrometry, and thermal ionization mass spectrometry

16:00-16:20 **ACO-04 N. Aoyagi**, M. Watanabe, A. Kirishima, N. Sato, T. Kimura, *Japan Atomic Energy Agency, Japan, Tohoku University, Japan*

Luminescence spectroscopy of uranium complexes in non-aqueous media

- 16:20-16:40 NCO-13 A. Toyoshima**, S. Miyashita, M. Asai, T. K. Sato, Y. Kaneya, K. Tsukada, Y. Kitatsuji, Y. Nagame, M. Schädel, H. V. Lerum, J. P. Omtvedt, Y. Oshimi, K. Ooe, Y. Kitayama, A. Yokoyama, A. Wada, Y. Oura, H. Haba, J. Kanaya, M. Huang, Y. Komori, T. Yokokita, Y. Kasamatsu, A. Shinohara, V. Pershina, J. V. Kratz, *Japan Atomic Energy Agency, Japan, University of Oslo, Norway, Niigata University, Japan, Kanazawa University, Japan, Tokyo Metropolitan University, Japan, RIKEN, Japan, Osaka University, GSI Helmholtzzentrum für Schwerionenforschung, Germany, Johannes Gutenberg-University of Mainz, Germany*  
Chemical studies of Mo and W in preparation of a seabogrium (Sg) reduction experiment using MDG, FEC, and SISAK
- 16:40-17:00 NCO-14 P. Steinegger**, R. Dressler, R. Eichler, A. Türlér, *Paul Scherrer Institute, Switzerland, University of Bern, Switzerland*  
Diamond detectors for isothermal vacuum chromatography
- 17:00-17:20 NCO-15 R. Tripathi**, S. Sodaye, K. Mahata, P. K. Pujari, *Bhabha Atomic Research Centre, India*  
Angular distribution of projectile like fragments in  $^{16}\text{O} + ^{89}\text{Y}$  reaction

**17:20-17:50 Coffee Break**

**17:50-18:30 Plenary session**

**Hall JNRS Award Presentation (Open session)**  
Chair : **T. Sasaki**

**17:50-18:30 T. Kimura**, *Japan Atomic Energy Agency, Japan*  
Studies on solution chemistry of actinides and lanthanides by time-resolved laser-induced fluorescence spectroscopy

**18:30-18:50 Mounting of posters**

**18:50-20:00 Poster session 3**

Thursday, 26 September 2013

Hall & Meeting Room, Kanazawa Bunka Hall

09:00-10:00	<b>Plenary Session</b>	
Hall	<b>Education in nuclear and radiochemistry &amp; Nuclear probes for material science</b> Chairs : <b>J. John and K. Kubo</b>	
09:00-09:30	PL-07	<b>S. B. Clark</b> , <i>Washington State University, USA</i> Preparing the next generation of radiochemists for global challenges
09:30-10:00	PL-08	<b>H. Ueno</b> , <i>RIKEN, Japan</i> Researches with stopped radioisotopes at the RIKEN RIBF facility
10:00-10:20	<b>Coffee Break</b>	
10:20-12:10	<b>Parallel session</b>	
Hall	<b>Nuclear probes for material science (continued)</b> Chairs : <b>Y. Yamada and Y. Kobayashi</b>	
10:20-10:50	NPI-01	<b>W. Sato</b> , S. Komatsuda, Y. Yamada, Y. Ohkubo, <i>Kanazawa University, Japan, Tokyo University of Science, Japan, Kyoto University, Japan</i> Local structure at the In impurity site in ZnO probed by the TDPAC technique
10:50-11:10	NPO-01	<b>K. Nomura</b> , P. de Souza, S. Hirai, N. Kojima, <i>The University of Tokyo, Japan, University of Tasmania, Australia, Tokyo Toshi University, Japan</i> Mössbauer analysis of iron ore and rapidly reduced iron ore by micro-discharge
11:10-11:30	NPO-02	<b>J. Wang</b> , A. I. Rykov, K. Nomura, <i>Dalian Institute of Chemical Physics, China, The University of Tokyo, Japan</i> Three ways to fix Cs in prussian blues
11:30-11:50	NPO-03	<b>M. Kaneko</b> , H. Dote, S. Nakashima, <i>Hiroshima University, Japan</i> Theoretical study on Mössbauer parameters of iron assembled complexes
11:50-12:10	NPO-04	<b>G. Yoshida</b> , K. Ninomiya, M. Inagaki, T. U. Ito, W. Higemoto, T. Nagatomo, P. Strasser, N. Kawamura, K. Shimomura, Y. Miyake, T. Miura, M. K. Kubo, A. Shinohara, <i>Osaka University, Japan, Japan Atomic Energy Agency, Japan, High Energy Accelerator Research Organization, Japan, International Christianity University, Japan</i> Study on muon capture process for gaseous molecules containing C and O atoms
12:10-13:00	<b>Lunch</b>	
10:20-12:10	<b>Parallel session</b>	
Meeting Room	<b>Education in nuclear and radiochemistry (continued)</b> Chairs : <b>A. Shinohara and Y. H. Chung</b>	
10:20-10:50	EDI-01	<b>J. John</b> , V. Čuba, M. Němec, T. Retegan, C. Ekberg, G. Skarnemark, J. Lehto, T. Koivula, P. J. Scully, C. Walther, J.-W. Vahlbruch, N. Evans, D. Read, E. Ansoberlo, B. Hanson, L. Skipperud, B. Salbu, J. P. Omtvedt, <i>Czech Technical University in Prague, Czech Republic, Chalmers University of Technology, Sweden, University of Helsinki, Finland, University of Hanover, Germany, Loughborough University, Great Britain, Commissariat à l'énergie atomique et aux énergies alternatives, France, Leeds University, UK, Norwegian</i>

*University of Life Sciences, Norway, University of Oslo, Norway*  
CINCH-II Project - Next step in the coordination of education in nuclear and radiochemistry in Europe

- 10:50-11:20**    **EDI-02**    **W. S. Wu**, Z. F. Chai, *Lanzhou University, China, Institute of High Energy Physics, China*  
Fostering of personnel for nuclear and radiochemistry according to China's NPP prospects after Fukushima Daiichi accident
- 11:20-11:50**    **EDI-03**    **A. Yokoyama**, *Kanazawa University, Japan*  
Post-Fukushima situation on radiation awareness activities and nuclear and radiochemistry education in Japan
- 11:50-12:10**    **EDO-01**    **S. B. Sarmani**, R. B. Yahaya, M. S. Yasir, A. Ab. Majid, K. S. Khoo, I. A. Rahman, F. Mohamed, *Universiti Kebangsaan, Malaysia*  
Radiochemistry course in the undergraduate nuclear science program at Universiti Kebangsaan Malaysia

**12:10-13:00**                                    **Lunch**

**13:00-17:30**                                    **Excursion : Shirakawa-go**

**19:00-21:00**                                    **Banquet at Kanazawa Excel Hotel Tokyu**

Friday, 27 September 2013

Meeting Room, Kanazawa Bunka Hall

09:00-10:00

**Meeting Room**                      **Activation analysis**  
Chairs : **M. Ebihara and J. H. Moon**

09:00-09:30    **AAI-01**    W. M. Sanchez, Y. Shi, **A. Chatt**, *Dalhousie University, Canada*  
Simultaneous analysis for As, Sb, and Se species in water by chemical separation and neutron activation

09:30-10:00    **AAI-02**    **T. Miura**, R. Okumura, Y. Iinuma, S. Sekimoto, K. Takamiya, M. Ohata, A. Hioki, *National Metrology Institute of Japan, Japan, Kyoto University Research Reactor Institute, Japan*  
Precise determination of bromine in PP resin pellet by instrumental neutron activation analysis using internal standardization

10:00-10:20                                      **Coffee Break**

10:20-12:00

**Meeting Room**                      **Activation analysis (continued)**  
Chairs : **T. Miura and A. Chatt**

10:20-10:40    **AAO-01**    **J. H. Moon**, B. F. Ni, R. M. Theresia, N. A. Abd. Salim, B. Arporn, C. D. Vu, *Korea Atomic Energy Research Institute, Korea, China Institute of Atomic Energy, China, National Nuclear Energy Agency, Indonesia, Malaysian Nuclear Agency, Malaysia, Thailand Institute of Nuclear Technology, Thailand, Vietnam Atomic Energy Agency, Vietnam*  
Analysis of most popular and/or consumed fish species by neutron activation analysis in six Asian countries

10:40-11:00    **AAO-02**    **Y. Toh**, M. Ebihara, K. Hara, A. Kimura, H. Harada, S. Nakamura, M. Koizumi, K. Furutaka, F. Kitatani, *Japan Atomic Energy Agency, Japan, Tokyo Metropolitan University, Japan*  
Current status and future perspective on time-of-flight prompt gamma-ray analysis combined with gamma-ray coincidence technique development

11:00-11:20    **AAO-03**    **K. Ninomiya**, M. K. Kubo, T. Nagatomo, G. Yoshida, M. Inagaki, A. Shinohara, T. Suzuki, N. Kawamura, P. Strasser, K. Shimomura, Y. Miyake, Y. Kobayashi, K. Ishida, W. Higemoto, S. Sakamoto, T. Saito, *Osaka University, Japan, International Christianity University, Japan, High Energy Accelerator Research Organization, Japan, RIKEN, Japan, Japan Atomic Energy Agency, Japan, National Museum of Japanese History, Japan*  
Simultaneous and multielemental analysis by muonic X-rays for inside Japanese bronze and gold coin

11:20-11:40    **AAO-04**    **M. Fukushima**, A. Chatt, Y. Nakamura, M. Haga, S. Hoshi, T. Sakata, *Ishinomaki Senshu University, Japan, Dalhousie University, Canada, Meiji Co., Ltd., Japan, Shokei Gakuin University, Japan*  
Rapid analysis for selenium in urine samples using the 17.4-s neutron activation product  $^{77m}\text{Se}$

11:40-12:00    **AAO-05**    **N. Shirai**, Y. Hidaka, S. Sekimoto, M. Ebihara, H. Kojima, *Tokyo Metropolitan University, Japan, Kyoto University Research Reactor Institute, Japan, National Institute of Polar Research, Japan, Graduate University for Advanced Sciences, Japan*

Neutron activation analysis of iron meteorite

12:00-13:20

Lunch

**Meeting Room**                      **Application of nuclear and radiochemical techniques (continued)**  
Chairs : **W. Sato and Y. L. Zhao**

- 13:20-13:50**    **API-03**    **Y. Hamajima**, *Kanazawa University, Japan*  
What has been revealed in the low-level radioactivity measurement? - low level gamma-ray counting in Ogoya underground laboratory
- 13:50-14:10**    **APO-04**    **C. Gautier**, M. Coppo, C. Caussignac, I. Laszak, P. Fichet, F. Goutelard, *CEA Saclay, France*  
Zr and U determination at trace level in simulated deep groundwater by Q ICP-MS using TRU-based and TODGA-based extraction chromatography
- 14:10-14:30**    **APO-05**    **T. Yoshimura**, H. Ikeda, A. Ito, E. Sakuda, N. Kitamura, T. Takayama T. Sekine, A. Shinohara, *Osaka University, Japan, Hokkaido University, Japan, Daido University, Japan, Tohoku University, Japan*  
Photoluminescence of five- and six-coordinate tetracyanonitridotecnium (V) and -rhenium (V) complexes
- 14:30-14:50**    **APO-06**    **J. D. Despotopulos**, N. Gharibyan, R. A. Henderson, W. Kerlin, K. J. Moody, D. A. Shaughnessy, E. Tereshatov, R. Sudowe, *Lawrence Livermore National Laboratory, USA, University of Nevada Las Vegas, USA*  
Studies of flerovium and element 115 homologs with macrocyclic extractants

14:50-15:10

Coffee Break

15:10-15:30

Closing Ceremony

**Meeting Room**                      **M. Yamamoto**, APSORC13 co-chair, *Kanazawa University, Japan*  
Student Poster Award