

Sunday, 22 September		Monday, 23 September				Tuesday, 24 September			
Time	Robby	Hall	Meeting Room		Hall	Meeting Room			
09:00-09:10					9:00	PL-03	Plenary		
09:10-09:20		Arrangement for presentation					A. Tuerler		
09:20-09:30					9:30	PL-04	Plenary		
09:30-09:40		Opening Ceremony					S. Nagao		
09:40-09:50					10:00	Coffee Break			
09:50-10:00					10:20	ENI-01	Invited	NCI-01	Invited
10:00-10:10							H. Foerstendorf		S. Dmitriev
10:10-10:20					10:50	ENO-01	General	NCI-02	Invited
10:20-10:30							Z.J. Guo		
10:30-10:40					11:00	ENO-02	General		Ch.E. Duellmann
10:40-10:50							H. Tuovinen	NCI-03	Invited
10:50-11:00					11:30	ENO-03	General		H. Haba
11:00-11:10							M.-C. Wu		
11:10-11:20					11:50	ENO-04	General	NCO-06	General
11:20-11:30							T. Ohnuki		V. Pershina
11:30-11:40					12:10	Lunch Time			
11:40-11:50					12:10	FKI-01	Invited	API-01	Invited
11:50-12:00							H. Tsuruta		H. Harada
12:00-12:10					13:20	FKI-02	Invited	API-02	Invited
12:10-13:20							Y. Takahashi (388)		Y.L. Zhao
13:20-13:30					13:50	FKI-03	Invited	APO-01	General
13:30-13:40							M. Aoyama	APO-02	General
13:40-13:50					14:20	FKI-04	Invited	APO-03	General
13:50-14:00							B. Grambow		M. Anvia
14:00-14:10					14:50	Coffee Break			
14:10-14:20					15:20	FKO-01	General	NCO-01	General
14:20-14:30							A. Shimada		Z. Qin
14:30-14:40					16:00	FKO-02	General	NCO-02	General
14:40-14:50							Y. Miyake		W.M. Kerlin
14:50-15:00					16:20	FKO-03	General	NCO-03	General
15:00-15:10							T. Ohta		Y.K. Ha
15:10-15:20					16:40	FKO-04	General	NCO-04	General
15:20-15:30							Y. Muramatsu		I. Laszak
15:30-15:40					16:50	FKO-05	General	NCO-05	General
15:40-15:50							Y. Satou		Y. Xu
15:50-16:00					17:00	FKO-06	General	NFO-01	General
16:00-16:10							M. C. Honda		Y. Miyamoto
16:10-16:20	Registration Desk OPEN				17:20	FKO-07	General	NFO-02	General
16:20-16:30							Z.J. Zhang		N. Gharibyan
16:30-16:40					17:40	FKO-08	General	NFO-03	General
16:40-16:50							D.R. Neville		R. Sudowe
16:50-17:00					18:00	Poster Session			
17:00-17:10					18:50	Poster Session			
17:10-17:20					20:00	Poster Session			
17:20-17:30						Poster Session			
17:30-17:40						Poster Session			
17:40-17:50						Poster Session			
17:50-18:00	Welcome Reception					Poster Session			
18:00-18:10						Poster Session			
18:10-18:20						Poster Session			
18:20-18:30						Poster Session			
18:30-18:40						Poster Session			
18:40-18:50						Poster Session			
18:50-19:00						Poster Session			
19:00-19:20						Poster Session			
19:20-19:40						Poster Session			
19:40-20:00						Poster Session			
20:00-						Poster Session			

Wednesday, 25 September				Thursday, 26 September				Friday, 27 September		Time	
Hall		Meeting Room		Hall		Meeting Room		Meeting Room			
9:00	PL-05	Plenary		9:00	PL-07	Plenary		9:00	AAI-01	Invited	09:00-09:10
		M. A. Denecke				S. B. Clark				A. Chatt	09:10-09:20
9:30	PL-06	Plenary		9:30	PL-08	Plenary		9:30	AAI-02	Invited	09:20-09:30
		J. Hatazawa				H. Ueno				T. Miura	09:30-09:40
10:00	Coffee Break			10:00	Coffee Break			10:00	Coffee Break		09:40-09:50
10:20	RPI-01	Invited	ACI-01	10:20	NPI-01	Invited	EDI-01	10:20	AAO-01	General	09:50-10:00
		D. S. Wilbur				W. Sato				J.H. Moon	10:00-10:10
											10:10-10:20
10:50	RPI-02	Invited	ACI-02	10:50	NPO-01	General	EDI-02	10:40	AAO-02	General	10:20-10:30
		S. Lahiri				K. Nomura				Y. Toh	10:30-10:40
											10:40-10:50
11:20	RPO-01	General	ACO-01	11:10	NPO-02	General	EDI-03	11:00	AAO-03	General	10:50-11:00
		E. Aneheim				J. Wang				K. Ninomiya	11:00-11:10
											11:10-11:20
11:40	RPO-02	General	ACO-02	11:30	NPO-03	General		11:20	AAO-04	General	11:20-11:30
		Y. Hatsukawa				S. Nakashima				M. Fukushima	11:30-11:40
											11:40-11:50
12:00	Group Photo (Hall)			11:50	NPO-04	General	EDO-01	11:40	AAO-05	General	11:50-12:00
	Lunch Time					G. Yoshida				N. Shirai	12:00-12:10
13:20	JNRS General Assembly (For Member of JNRS))			12:10	Lunch Time			12:00	Lunch Time		12:10-12:10
13:40	JNRS Meeting			13:00	Excursion (Shirakawa-go)			12:10	Lunch Time		12:10-13:20
14:00								13:20	API-03	Invited	13:20-13:30
14:20										Y. Hamajima	13:30-13:40
14:40											13:40-13:50
15:00								13:50	APO-04	General	13:50-14:00
15:20	Coffee Break									C. Gautier	14:00-14:10
15:40	RPO-03	General	ACO-03					14:10	APO-05	General	14:10-14:20
		L. Safavi-Tehrani								T.Yoshimura	14:20-14:30
								14:30	APO-06	General	14:30-14:40
16:00	FKO-11	General	ACO-04							J.D. Despotopoulos	14:40-14:50
		E. Rasmussen						14:50	Coffee Break		14:50-15:00
											15:00-15:10
16:20	FKO-12	General	NCO-13					15:10	Closing Ceremony		15:10-15:20
		K. Minami									15:20-15:30
											15:30-15:40
16:40	FKO-13	General	NCO-14								15:40-15:50
		T. Kawamoto									15:50-16:00
											16:00-16:10
17:00	FKO-14	General	NCO-15	17:00							16:10-16:20
		D. Parajuli									16:20-16:30
											16:30-16:40
17:20	Coffee Break										16:40-16:50
											16:50-17:00
17:50	JNRS Award Presentation (Open Session)										17:00-17:10
		T. Kimura									17:10-17:20
											17:20-17:30
18:30											17:30-17:40
											17:40-17:50
18:50	Poster Session										17:50-18:00
											18:00-18:10
											18:10-18:20
20:00				19:00	Banquet						18:20-18:30
											18:30-18:40
											18:40-18:50
											18:50-19:00
											19:00-19:20
											19:20-19:40
											19:40-20:00
											20:00-

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, <i>Hiroshima University, Japan, National Institute of Advanced Industrial Science & Technology, Japan</i> 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, <i>Meteorological Research Institute, Japan, Kanazawa University, Japan</i> Oceanic and coastal dispersion of ¹³⁴ Cs and ¹³⁷ Cs released from the TEPCO Fukushima NPP1 accident: past present and prediction
14:50-15:20	FKI-04	B. Grambow , <i>Université de Nantes, France</i> 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	FKO-01	A. Shimada , K. Sakatani, Y. Kameo, K. Takahashi, <i>Japan Atomic Energy Agency, Japan</i> Determination of ¹²⁹ I in the accumulated radioactive water and processing water of Fukushima Daiichi Nuclear Power Plant
16:00-16:20	FKO-02	Y. Miyake , 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	FKO-03	T. Ohta , T. Kutoba, Y. Mahara, H. Matsuzaki, T. Igarashi, <i>Hokkaido University, Japan, Kyoto University, Japan, The University of Tokyo, Japan</i> Speciation of ¹³⁷ Cs and ¹²⁹ I in surface soil in Kanto loam layer after the Fukushima NPP accident
16:40-17:00	FKO-04	Y. Muramatsu , 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	FKO-05	Y. Satou , 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	FKO-06	M. C. Honda , 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	FKO-07	Z. J. Zhang , 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 ⁹³Zr 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)/SiO₂-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*

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*

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

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*

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

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 : Y. Muramatsu and M. Schädel	
09:00-09:30	PL-03	A. Türler , <i>Paul Scherrer Institut & University of Bern, Switzerland</i>	Advances in the production and chemistry of the heaviest elements
09:30-10:00	PL-04	S. Nagao , <i>Kanazawa University, Japan</i>	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, <i>Helmholtz-Zentrum Dresden-Rossendorf, Germany, Rossendorf Beamline at the European Synchrotron Radiation Facility (ESRF), France</i>	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, <i>Lanzhou University, China</i>	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, <i>University of Helsinki, Finland, Geological Survey of Finland, Loughborough University, UK, Finnish Radiation and Nuclear Safety Authority, Finland</i>	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, <i>National Cheng Kung University, Tainan, National Central University, Taiwan, Institute of Nuclear Energy Research, Taiwan</i>	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, <i>Japan Atomic Energy Agency, Japan</i>	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, <i>Helmholtz-Zentrum Dresden-Rossendorf, Germany</i>	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, <i>Meiji University, Japan</i>	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 ²¹⁰Pb 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 , <i>Johannes Gutenberg-University of Mainz, Germany</i> 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, <i>Korea Atomic Energy Research Institute, Korea</i> The bulk analysis with TIMS measurements performed in KAERI for nuclear safeguards
16:30-16:50	ENO-12	W. Bu, J. Zheng , Q. Guo, T. Aono, K. Tagami, S. Uchida, <i>Peking University, China, National Institute of Radiological Sciences, Japan</i> 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, <i>Ruder Bošković Institute, Croatia</i> Semi-automated procedure for the determination of ^{89,90} Sr in environmental samples by Cherenkov counting
17:10-17:40	FKI-04	K. Minato , <i>Japan Atomic Energy Agency, Japan</i> 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, <i>Tokyo Metropolitan University, Japan, The University of Tokyo, Japan, National Institute for Environmental Studies, Japan</i> 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 , <i>Sophia University, Japan</i> 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	S. Dmitriev , <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	Ch. E. Düllmann , <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	H. Haba , <i>RIKEN, Japan</i> Production and decay studies of transactinide nuclides with GARIS at RIKEN
11:50-12:10	NCO-06	V. Pershina , <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	D. Rudolph , 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	A. Yakushev , <i>GSI Helmholtzzentrum für Schwerionenforschung, Germany</i> Chemistry at one-atom-per-week level
14:00-14:20	NCO-09	J. Even , 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) ₆ - The first organometallic transactinide complex opening a window to a new compound class
14:20-14:40	NCO-10	H. Nitsche , 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*

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*

Intermetallic actinide compounds for SHE production targets
 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 CyMe4-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*

17:40-18:00 NEO-04 **A. Braatz**, M. Nilsson, *University of California, Irvine, USA*
 Speciation and reactivity of heptavalent technetium in concentrated acids
 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 E. Simoni	
09:00-09:30	PL-05	M. A. Denecke , <i>University of Manchester, UK</i> Actinide speciation using synchrotron-based methods
09:30-10:00	PL-06	J. Hatazawa , <i>Osaka University, Japan</i> 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, <i>University of Washington, USA, Fred Hutchinson Cancer Research Center, USA</i> Addressing challenges in preparation of ²¹¹ At-labeled biomolecules for use in targeted alpha therapy
10:50-11:20	RPI-02	M. Maiti, S. Lahiri , <i>Indian Institute of Technology Roorkee, India, Saha Institute of Nuclear Physics, India</i> Generation of nuclear data for the production of ⁹⁷ Ru from ¹² C + ⁸⁹ Y reaction
11:20-11:40	RPO-01	E. Aneheim , S. Lindgren ¹ , 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, <i>Japan Atomic Energy Agency, Japan, Kyoto University, Japan, Tokai University, Japan</i> Production of ^{95m} Tc for compton camera imaging
12:00-13:20	Group photo (Hall) and Lunch	
10:20-12:00	Parallel session	
Meeting Room	Actinide chemistry (continued) Chairs : M. Watanabe and A. Goswami	
10:20-10:50	ACI-01	J. Su, J. Li , <i>Tsinghua University, China</i> Relativistic quantum chemical studies on electronic structures and photoelectron spectra of actinide complexes
10:50-11:20	ACI-02	Y. Kitatsuji , <i>Japan Atomic Energy Agency, Japan</i> Flow electrolysis of actinide ions utilizing electrocatalysis
11:20-11:40	ACO-01	A. Kirishima , N. Sato, <i>Tohoku University, Japan</i> 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, <i>Japan Atomic Energy Agency, Japan</i> 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 Room **Actinide chemistry & Nuclear chemistry (continued)**

Chairs : **H. Habu 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 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		Plenary Session	
Hall		Education in nuclear and radiochemistry & Nuclear probes for material science Chairs : K. Kubo and J. John	
09:00-09:30	PL-07	S. B. Clark , <i>Washington State University, USA</i> Preparing the next generation of radiochemists for global challenges	
09:30-10:00	PL-08	H. Ueno , <i>RIKEN, Japan</i> Researches with stopped radioisotopes at the RIKEN RIBF facility	
10:00-10:20		Coffee Break	
10:20-12:10		Parallel session	
Hall		Nuclear probes for material science (continued) Chairs : Y. Yamada and Y. Kobayashi	
10:20-10:50	NPI-01	W. Sato , 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	K. Nomura , 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	J. Wang , 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	M. Kaneko, H. Dote, S. Nakashima , <i>Hiroshima University, Japan</i> Theoretical study on Mössbauer parameters of iron assembled complexes	
11:50-12:10	NPO-04	G. Yoshida , 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		Lunch	
10:20-12:10		Parallel session	
Meeting Room		Education in nuclear and radiochemistry (continued) Chairs : A. Shinohara and Y. H. Chung	
10:20-10:50	EDI-01	J. John , 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. Ansoborlo, 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}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 tetracyanonitridotechnetium (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

Monday, 23 September 2013, Poster Session

- 23-FKP-01** **^{137}Cs accumulation enhanced by potassium starvation in lotus japonicus**
J. Furukawa¹, H. Noda², R. Sugita³, K. Tanoi³, T. M. Nakanishi³, S. Satoh¹
¹Faculty of Life and Environmental Sciences, University of Tsukuba, ²Graduate School of Life and Environmental Sciences, University of Tsukuba, ³Graduate School of Agricultural and Life Sciences, The University of Tokyo
- 23-FKP-02** **Decontamination of the contaminated water on severe nuclear accidents by titanium oxide adsorption**
Y. Takahatake¹, M. Nakamura¹, A. Shibata¹, K. Nomura¹, Y. Koma¹, Y. Nakajima¹
¹Japan Atomic Energy Agency
- 23-FKP-03** **Iodine-129 in the aquatic environment adjacent to a spent nuclear fuel reprocessing plant, Rokkasho, Japan**
S. Ueda¹, H. Kakiuchi¹, H. Hasegawa¹, N. Akata¹, H. Kawamura², S. Hisamatsu¹
¹Department of Radioecology, Institute for Environmental Sciences, Japan, ²Kyushu Environmental Evaluation Association, Japan
- 23-FKP-04** **Specific activity and time dependence of radionuclides in soils affected by the accident of the Fukushima Dai-ichi nuclear power plant (Part 2).**
T. Shimasaki¹, Y. Shiraishi¹, O. Kawahara¹, K. Goto¹, M. Shimamoto¹, A. Kojima¹, S. Okada²
¹Institute of Source Development and Analysis, Kumamoto University, ²Center for AIDS Research, Kumamoto University
- 23-FKP-05** **Differences between year 2011 and 2012 in Cs-137 concentration in brown rice grown in Fukushima Prefecture**
S. Fujimura^{1,2}, Y. Sakuma¹, T. Yamauchi¹, K. Niitsuma¹, N. Sato³, M. Sato¹, T. Saito¹, K. Yoshioka¹
¹Fukushima Agricultural Technology Centre, ²NARO Tohoku Agricultural Research Center, ³Inawashiro Town, Japan
- 23-FKP-06** **Size-distribution of airborne radioactive particles from the Fukushima accident**
H. Muramatsu¹, K. Kawasumi¹, T. Kondo¹, and K. Matsuo²
¹Department of Chemistry, Faculty of Education, Shinshu University, Japan, ²Graduate School of Education, Shinshu University, Japan
- 23-FKP-07** **Long-term effects of radionuclides originating from the Fukushima nuclear power plant accident in airborne particulate matters in Kawasaki**
K. Nakamachi¹, H. Matsuno¹, T. Honda¹, Y. Kikawada²
¹Graduate School of Engineering, Tokyo City University, ²Faculty of Science and Technology, Sophia University
- 23-FKP-08** **Measurement of Iodine-129 concentration in water samples in relation with Fukushima Daiichi Nuclear Power Plant accident**
H. Matsuzaki¹, H. Tokuyama¹, Y. Miyake¹, M. Honda², T. Yamagata³, Y. Muramatsu⁴
¹Department of Nuclear Engineering and Management, School of Engineering, The University of Tokyo, Japan, ²Graduate School of Integrated Basic Sciences, Nihon University, Japan, ³College of Humanities and Sciences, Nihon University, Japan, ⁴Department of Chemistry, Gakushuin University, Japan
- 23-FKP-09** **Observed radioactivities and activity ratios in aerosols from April 2011 at the geological survey of Japan, Tsukuba, Japan**
Y. KANAI¹
¹Geological Survey of Japan, National Institute of Advanced Industrial and Technology
- 23-FKP-10** **Chemical forms of radioactive Cs in soils originated from Fukushima Dai-ichi nuclear power plant accident, as studied by extraction experiments**
M. Hirose¹, Y. Kikawada¹, A. Tsukamoto², T. Oi¹, T. Honda², K. Hirose¹, H. Takahashi³
¹Faculty of Science and Technology, Sophia University, ²Graduate School of Engineering, Tokyo City University, ³Graduate School of Engineering, Tohoku University
- 23-FKP-11** **Thermal Oxidation of Cesium Loaded Prussian Blue as a Precaution for Exothermic Phase Change in Extreme Conditions**

D. Parajuli, H. Tanaka, A. Takahashi, T. Kawamoto
Nanosystem Research Institute, AIST, Japan

23-FKP-12 Analysis of ^{134}Cs and ^{137}Cs distribution in soil of Fukushima prefecture and their specific adsorption on clay minerals

A. Maekawa¹, N. Momoshima², S. Sugihara², R. Ohzawa¹, A. Nakama¹
¹*Graduate School of Sciences, Kyushu University, Japan, ²Radioisotope Center, Kyushu University, Japan*

23-FKP-13 Distribution of radionuclides in seabed sediments off Ibaraki coast after the Fukushima Daiichi Nuclear Power Plant accident

M. Nagaoka¹, H. Yokoyama¹, H. Fujita¹, M. Nakano¹, H. Watanabe¹, S. Sumiya¹
¹*Nuclear Fuel Cycle Engineering Laboratories, Japan Atomic Energy Agency*

23-FKP-14 Radiocesium concentration change in tree leaves before and after defoliation

S. Uchida¹, K. Tagami¹
¹*Office of Biospheric Assessments for Waste Disposal, National Institute of Radiological Sciences*

23-FKP-15 Distributions and concentrations of radionuclides in giant butterbur after the Fukushima Nuclear Power Plant Accident

K. Tagami¹, S. Uchida¹
¹*Office of Biospheric Assessment for Waste Disposal, National Institute of Radiological Sciences, Japan*

23-FKP-16 The Behavior of Cs adsorption of microcapsule beads nano-prussian blue

A. Kitajima¹, H. Ogawa¹, K. Yoshino², M. Takasaki², H. Tanaka¹, T. Kawamoto¹
¹*Nanosystem Research Institute, Japan, ²Kanto Chemical Company Inc., Japan*

23-FKP-17 Transfer of radiocesium from soil to cut flowers

Y. Suzuki^{1,2}, H. Munakata¹, Y. Yajima¹, Y. Tooyama³, H. Suzuki¹, H. Tsukada⁴, K. Inubushi²
¹*Fukushima Agricultural Technology Centre, ²Graduate School of Horticulture, Chiba University, ³Ken-poku District Agriculture and Forestry Office, Japan, ⁴Fukushima University*

23-FKP-18 CLEVASOL, a novel radiation hard cation exchanger suitable for treatment of liquid radioactive waste with high salinity

A. Yakushev¹, A. Türler², Z. Dvorakova³, K. von Bremen²
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23-FKP-19 Estimation of I-131/I-129 ratios and vertical distribution of radioiodine in soil collected from Fukushima Prefecture

N. Inagawa¹, Y. Muramatsu¹, T. Ohno¹, T. Toyama¹, C. Satou², M. Outsuki³, T. Matsuzaki⁴
¹*Gakushuin University, ²Fukushima Agricultural Technology Centre, ³Tohoku University, ⁴University of Tokyo*

23-FKP-20 Effects of soil types on the transfer of radiocesium to plant

K. Oda¹, Y. Muramatsu¹, T. Ohno¹, T. Kobayashi², S. Fujimura²
¹*Gakushuin University, ²Fukushima Agricultural Technology Centre*

23-FKP-21 Temporal distribution of plutonium isotopes in marine sediments off Fukushima and Ibaraki after the Fukushima Dai-ichi Nuclear Power Plant accident

W. Bu^{1,2}, J. Zheng^{*2}, T. Aono², S. Ootosaka³, K. Tagami², Q. Guo¹, S. Uchida²
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23-FKP-22 Evaluation of Iodine-129 mobility and deposition amount in the soil contaminated by the Fukushima Daiichi nuclear power plant accident

M. Honda¹, H. Matsuzaki², T. Yamagata³, Y. (S.) Tuchiya², C. Nakano², Y. Matsushi⁴, Y. Maejima⁵, H. Nagai³
¹*Graduate School of Integrated Basic Sciences, Nihon university, Japan, ²Department of Nuclear Engineering and Management, School of Engineering, The University of Tokyo, Japan, ³College Humanities and Sciences, Nihon University, Japan, ⁴Disaster Prevention Research Institute, Kyoto University, Japan, ⁵National Institute for Agro-Environmental Sciences, Japan*

- 23-FKP-23 Vertical distribution of the Fukushima-derived radiocesium in the western North Pacific in January and February 2011**
Y. Kumamoto¹, A. Murata¹, T. Kawano¹, M. Aoyama²
¹Japan Agency for Marine-Earth Science and Technology, Japan, ²Meteorological Research Institute, Japan
- 23-FKP-24 Effect of application timing of potassium fertilizer on root uptake of ¹³⁷Cs in brown rice**
T. Saito¹, K. Takahashi¹, T. Makino², H. Tsukada^{3,4}, M. Sato¹, K. Yoshioka¹
¹Fukushima Agricultural Technology Centre, ²National Institute for Agro-Environmental Sciences, ³Institute for Environmental Sciences, ⁴Fukushima University
- 23-FKP-25 Low levels of ¹³⁴Cs and ¹³⁷Cs in bottom sediments along the Japanese archipelago side of the Sea of Japan after the Fukushima Dai-ichi NPP accident**
M. Inoue^{1,*}, S. Ochiai¹, T. Murakami¹, S. Oikawa², M. Yamamoto¹, S. Nagao¹, Y. Hamajima¹, H. Kofuji¹, J. Misonoo²
¹Low Level Radioactivity Laboratory, Kanazawa University, ²Marine Ecology Research Institute, Japan
- 23-NCP-01 The heavy-ion reactions ²³⁸U + ²³⁸U and ²³⁸U + ²⁴⁸Cm and actinide production close to the barrier revisited**
J.V. Kratz^{1a}, M. Schädel^{1b}, H.W. Gäggeler^{1c}
¹Gesellschaft für Schwerionenforschung mbH, ^acurrently at Institut für Kernchemie, Johannes Gutenberg-Universität, Germany, ^bcurrently at Advanced Science Research Center, Japan Atomic Energy Agency, Japan, ^ccurrently at Paul Scherrer Institute, Switzerland
- 23-NCP-02 Mechanism of Mo-99 adsorption and Tc-99m elution from zirconium-based material in Mo-99/Tc-99m generator column using neutron-irradiated natural molybdenum**
R. Awaludin¹, A. H. Gunawan¹, H. Lubis¹, Sriyono¹, Herlina¹, A. Mutalib¹, A. Kimura², K. Tsuchiya², M. Tanase³, M. Ishihara²
¹Center for Radioisotope and Radiopharmaceutical, National Nuclear Energy Agency of Indonesia, ²Neutron Irradiation and Testing Reactor Center, Oarai Research and Development Center, Japan Atomic Energy Agency, ³Chiyoda Technol Corporation, Japan
- 23-NCP-03 Startup of a new gas-filled recoil separator GARIS-II**
D. Kaji¹, K. Morimoto¹, H. Haba¹, Y. Wakabayashi¹, Y. Kudou¹, M. Huang¹, S. Goto², M. Murakami², N. Goto², T. Koyama², N. Tamura², S. Tsuto², T. Sumita³, K. Tanaka³, M. Takeyama⁴, S. Yamaki⁵, K. Morita¹
¹Nishina Center for Accelerator Based Science, RIKEN, ²Niigata University, Japan, ³Tokyo University of Science, Japan, ⁴Yamagata University, ⁵Saitama University, Japan
- 23-NCP-04 Purification of scintillation cocktails containing the alpha emitters americium and plutonium**
E. Löfström-Engdahl^{*}, G. Skarnemark, K. El Tayara, J. Eriksson, N. Halldin, J. Halleröd, M. Malmberg, J. Mattiasson Bjugren
Nuclear chemistry, Department of Chemical and Biological Engineering, Chalmers University of Technology, Sweden
- 23-NCP-05 Formation and stability of sulfides of the superheavy elements Cn and Fl**
N.M. Chiera^{1,2}, R. Eichler^{1,2*}, A. Türler^{1,2}
¹Department of Chemistry & Biochemistry, University of Berne, Switzerland, ²Laboratory for Radiochemistry and Environmental Chemistry, Paul Scherrer Institute, Switzerland
- 23-NCP-06 Development of a batch-type solid-liquid extraction apparatus for repetitive extraction experiment of element 104, Rf**
Y. Kasamatsu¹, T. Yokokita¹, A. Kino¹, K. Nakamura¹, K. Toyomura¹, Y. Komori¹, N. Takahashi¹, H. Haba², J. Kanaya², M. Huang², Y. Kudou², T. Yoshimura³, A. Shinohara¹
¹Graduate School of Science, Osaka University, ²Nishina Center for Accelerator-Based Science, RIKEN, ³Radioisotope Research Center, Osaka University
- 23-NCP-07 Coprecipitation of Zr, Hf and Th with Sm hydroxide for chemical study of Rf**
K. Toyomura¹, Y. Kasamatsu¹, N. Shiohara¹, T. Yokokita¹, Y. Komori¹, K. Nakamura¹, N. Takahashi¹, T. Yoshimura², H. Haba³, Y. Kudou³, H. Kikunaga⁴, T. Ohtsuki⁴, K. Takamiya⁵, T. Mitsugashira⁶, and A. Shinohara¹
¹Graduate School of Science, Osaka University, ²Radioisotope Research Center, Osaka University, ³Nishina Center for Accelerator-Based Science, ⁴Research Center for Electron Photon Science, Tohoku University, ⁵Research Reactor Institute, Kyoto University, ⁶International Research Center for Nuclear Materials Science,

Institute for Material Research, Tohoku University

23-NCP-08 Development of modified epoxy paint films to reduce the volatile iodine source term in the containments of LWRs during severe nuclear accidents

S. Tietze¹

¹*Severe Nuclear Accident Chemistry, Nuclear Chemistry Department, Department of Chemical and Biological Engineering, Chalmers University of Technology, Sweden*

23-NCP-09 New insights into the formation and stability of molybdenum carbonyl compounds

I. Usoltsev^{1,2}, Wang Yang³, R. Eichler^{1,2}, A. Türler^{1,2}, Qin Zhi³

¹*Department of Chemistry & Biochemistry, University of Berne, Switzerland*, ²*Laboratory for Radiochemistry and Environmental Chemistry, Paul Scherrer Institut, Switzerland*, ³*Institute of Modern Physics Lanzhou: Chinese Academy of Sciences, China*

23-NCP-10 Adsorption behavior of super-heavy elements ($Z \geq 112$) on metal and inert surfaces

J. Anton¹, T. Jacob¹, V. Pershina²

¹*Institut für Elektrochemie, Universität Ulm, Germany*, ²*Gesellschaft für Schwerionenforschung, Germany*

23-ACP-01 Structural studies of the Eu(III) and U(VI) interactions with pentapeptides

A. Jeanson¹, J. Roques¹, S. Safi¹, E. Simoni¹, D. Aitken²

¹*IPN Orsay UMR 8608 - Université Paris Sud, France*, ²*ICMMO - Université Paris Sud, France*

23-ACP-02 Solubility of amorphous UO₂ and NpO₂ in nitrate media containing platinum catalyst

A. Kitamura¹, S. Shimoda²

¹*Japan Atomic Energy Agency*, ²*Mitsubishi Materials Corporation, Japan*

23-ACP-03 Apparent formation constants of actinide complexes with humic substances determined by solvent extraction

T. Sasaki¹, Y. M. Kulyako², K. Müller³, T. Kobayashi¹, M. Samsonov², B. F. Myasoedov²

¹*Department of Nuclear Engineering, Kyoto University, Japan*, ²*V.I. Vernadsky Institute of Geochemistry and Analytical Chemistry, Russia*, ³*Helmholtz-Zentrum Dresden-Rossendorf e.V., Institute of Resource Ecology, Germany*

23-ACP-04 The solubility of Np(IV) under alkaline and anoxic conditions

G. Källvenius¹, S. Allard², C. Ekberg²

¹*AB SVAFO, SE-611 23 Nyköping, Sweden*, ²*Chalmers University of Technology, Nuclear Chemistry, Sweden*

23-ACP-05 Separation of Am and Cm by using TODGA and DODA(C8) adsorbents with hydrophilic ligand-nitric acid solution

S. Usuda¹, K. Yamanishi¹, H. Mimura¹, Y. Sasaki², A. Kirishima³, N. Sato³, Y. Niibori¹

¹*Department of Quantum Science and Energy Engineering, Graduate School of Engineering, Tohoku University*, ²*Research Group for Aqueous Separation Chemistry, Japan Atomic Energy Agency*, ³*Institute of Multidisciplinary Research for Advanced Materials, Tohoku University*

23-ACP-06 Growth of uranyl hydroxide nanowires and nanotubes with electrodeposition method

L. Wang, L.-Y. Yuan, Z.-F. Chai, W.-Q. Shi*

Key Laboratory of Nuclear Analysis Techniques, Institute of High Energy Physics, Chinese Academy of Sciences, China

23-ACP-07 Adsorption behavior of neptunium ions on pyridine resin in hydrochloric acid solutions

Y. Tachibana¹, Y. Tomobuchi¹, M. Inaki¹, Y. Yamazaki¹, T. Suzuki¹, T. Yamamura²

¹*Department of Nuclear System Engineering, Nagaoka University of Technology*, ²*Institute of Material Research, Tohoku University*

23-ACP-08 A method for ²³⁷Np determination with liquid scintillation counting in the experiment of neptunium sorption onto bentonite

L. Ping, L. Zhi, G. Zhijun, W. Wangsuo*

Radiochemistry Laboratory, School of Nuclear Science and Technology, Lanzhou University, China

23-ACP-09 Determination of stability constants for the thorium iminodiacetic acid complexes

D. Rama Mohana Rao, R. M. Sawant, B. S. Tomar.

Radioanalytical Chemistry Division, Bhabha Atomic Research Centre, India

- 25-ACP-03 Time-resolved laser fluorescence spectroscopy combined with parallel factor analysis: a robust speciation technique for UO_2^{2+}**
T. Saito¹, N. Aoyagi², T. Kimura²
¹*Nuclear Professional School, School of Engineering, The University of Tokyo*, ²*Nuclear Science and Engineering Directorate, Japan Atomic Energy Agency*
- 23-ENP-01 Determination of ^{56}Fe and $^{89,90}\text{Sr}$ in liquid samples using Sr and/or Pb resins for the mutual separation of Fe and Sr**
M. Nodilo, I. Milanović, Ž. Grahek
Division for marine and environmental research, Rudjer Bošković Institute, Croatia
- 23-ENP-02 Implementation of dry cow dung powder for biosorption of $^{90}\text{Sr}(\text{II})$ from simulated radioactive waste**
R. P. Khilnani, H. K. Bagla
Department of Nuclear and Radiochemistry, K. C. College, India
- 23-ENP-03 Application of simplified desorption method to sorption study: (1) sorption of americium (III) on bentonite and its major components**
N. Kozai¹, T. Ohnuki¹
¹*Japan Atomic Energy Agency, Japan*
- 23-ENP-04 Effect of aging on availability of iodine in grassland soil collected in Rokkasho, Japan**
A. Takeda, H. Tsukada, Y. Takaku, S. Hisamatsu
Department of Radioecology, Institute for Environmental Sciences
- 23-ENP-05 Study on ^{14}C spatial distribution around Qinshan nuclear power plant in China**
Z. Wang¹, D. Hu², Q. Guo¹
¹*State Key Laboratory of Nuclear Physics and Technology, Peking University, China*, ²*Radiation Monitoring Technical Center of Ministry of Environmental Protection, China*
- 23-ENP-06 Atmospheric deposition of radionuclides (^7Be , ^{210}Pb , ^{134}Cs , and ^{40}K) during 2000–2012 at Rokkasho, Japan, and impact of the Fukushima Dai-ichi Nuclear Power Plant accident**
N. Akata¹, H. Hasegawa¹, H. Kawabata¹, H. Kakiuchi¹, Y. Chikuchi², N. Shima³, T. Suzuki⁴, S. Hisamatsu¹
¹*Institute for Environmental Sciences, Japan*, ²*Aomori JGC PLANTECH, Japan*, ³*Fukushima University, Japan*, ⁴*Yamagata University, Japan*
- 23-ENP-07 Effect of aging on water extractability of radioactive iodine and cesium from soil**
H. Tsukada, A. Takeda, S. Hisamatsu
Department of Radioecology, Institute for Environmental Sciences, Japan
- 23-ENP-08 Background internal dose rates of earthworm and arthropod species in the forests of Aomori, Japan**
Y. Ohtsuka, Y. Takaku, S. Hisamatsu
Department of Radioecology, Institute for Environmental Sciences, Japan
- 23-ENP-09 An EXAFS study on the effect of natural organic matter and mineralogy composition on cesium mobility in environment**
Q. Fan, M. Tanaka, Y. Takahashi
Department of Earth and Planetary Systems Science, Graduate School of Science, Hiroshima University
- 23-ENP-10 Using factorial design to the robustness analysis of the classic sample preparation method for ^{90}Sr determination in tea leaf**
C.-C. Liu^{1*}, W.-H. Tsai¹, M.-C. Horng¹, C.-C. Huang¹, Y.-W. Wu²
¹*Radiation Monitoring Center, AEC, Taiwan, ROC*, ²*Department of Chemical Engineering, I-Shou University, Taiwan, ROC*
- 23-ENP-11 A simple method for dehydrogenase assay of soil microorganisms to evaluate the biospheric behavior of C-14 originated in transuranic waste**
K. Iwata, N. Ishii, K. Tagami, S. Uchida
Office of Biospheric Assessment for Waste Disposal, National Institute of Radiological Sciences

- 23-ENP-12** **Effect of humic acid on the sorption of selenium (VI) on ferric oxide hydrate**
N. Guo, Z. L. Niu, Y. L. Ye, R. Zhang, Z. J. Guo
School of nuclear science and technology, Lanzhou University, China
- 23-ENP-13** **Uranyl ions adsorption to Na-GMZ and interactions with FA adsorption: experiments and modeling**
Y. Yuanlv, G. Zhijun*, W. Wangsuo
Radiochemistry Laboratory, School of Nuclear Science and Technology, Lanzhou University, China
- 23-ENP-14** **Foliar uptake and translocation of stable cesium and iodine by radish**
H. Hasegawa¹, H. Tsukada¹, H. Kawabata¹, Y. Takaku¹, S. Hisamatsu¹
¹*Institute for Environmental Sciences, Japan*
- 23-ENP-15** **The rapid determination of radiostrontium from large amount of seawater (within 72hrs) for the emergency situation**
H. Kim^{1*}, K.-H. Chung¹, H.-K. Park¹, J.-M. Lim¹, M.-J. Kang¹
¹*Environmental Radioactivity Assessment Team, Korea Atomic Energy Research Institute, Korea*
- 23-ENP-16** **Peak tailing correction in measurement of ²²²Rn/²²⁰Rn activity concentration with a spectrum method**
L. Zhang¹, Q. Guo², R. Ma², L. Guo²
¹*Solid Dosimetric Detector and Method Laboratory, China, ²State Key Laboratory of Nuclear Physics and Technology, School of Physics, Peking University, China*
- 23-ENP-17** **Underwater analysis of sediment chemistry using an autonomous platform**
J. Breen¹, P. de Souza^{1,2,3}, G. Timms³, R. Ollington¹
¹*School of Computing and Information Systems, University of Tasmania, Australia, ²Vale Institute of Technology, Brazil, ³Intelligent Sensing and Systems Laboratory, ICT Centre, CSIRO, Australia*
- 23-RPP-01** **Development of the in-line multiple elution cartridge-based radioisotope concentrator device for increasing ^{99m}Tc and ¹⁸⁸Re concentration of commercial radionuclide generator eluates**
Van S. Le ^{1,2*}, N. Morcos¹, J. McBrayer¹, Z. Bogulski¹, C. Buttigieg¹, G. Phillips¹
¹*CYCLOPHARM Ltd, Australia, ²MEDISOTEC, Australia*
- 23-RPP-02** **Production and preclinical evaluation of diagnostic and therapeutic radionuclides in tumor-bearing mice: recent developments at Paul Scherrer Institute**
A. Türler^{1,2}, M. Behe³, M. Bunka^{1,2}, H. Dorrer^{1,2}, A. Hohn³, K. Johnston⁴, U. Köster⁵, C. Müller³, J. Reber³, R. Schibli³, N.T. van der Walt⁶, K. Zhermosekov^{1,2}
¹*Laboratory of Radiochemistry and Environmental Chemistry, Paul Scherrer Institute, Switzerland, ²Laboratory of Radiochemistry and Environmental Chemistry, University of Bern, Switzerland, ³Center for Radiopharmaceutical Sciences ETH-PSI-USZ, Paul Scherrer Institute, Switzerland, ⁴Physics Department, ISOLDE/CERN, Switzerland, ⁵Institut Laue-Langevin, France, ⁶Faculty of Applied Sciences, Cape Peninsula University of Technology, South Africa*
- 23-RPP-03** **⁹⁹Mo production by ¹⁰⁰Mo(n,2n)⁹⁹Mo using accelerator neutrons**
N. Sato¹, M. Kawabata¹, Y. Nagai¹, K. Hashimoto¹, Y. Hatsukawa¹, H. Saeki¹, S. Motoishi¹, T. Kin², C. Konno³, K. Ochiai³, K. Takakura³, F. Minato⁴, O. Iwamoto⁴, N. Iwamoto⁴, S. Hashimoto⁴
¹*Nuclear Engineering Research Collaboration Center, Japan Atomic Energy Agency, ²Faculty of Engineering Sciences, Kyushu University, ³Fusion Research and Development Directorate, Japan Atomic Energy Agency, ⁴Nuclear Science and Engineering Directorate, Japan Atomic Energy Agency*
- 23-RPP-04** **Production and separation of ⁶⁴Cu and ⁶⁷Cu using 14 MeV neutrons**
M. Kawabata¹, K. Hashimoto¹, H. Saeki¹, N. Sato¹, S. Motoishi¹, K. Takakura², C. Konno² and Y. Nagai¹
¹*Nuclear Engineering Research Collaboration Centre, Japan, ²Fusion Research and Development Directorate, Japan Atomic Energy Agency*
- 23-RPP-05** **Novel radiochemical separation of arsenic from selenium for ⁷²Se/⁷²As generator.**
E. Chajduk¹, H. Polkowska-Motrenko¹, A. Bilewicz¹
¹*Institute of Nuclear Chemistry and Technology, Poland*
- 23-RPP-06** **Training program of synthesizing a radiopharmaceutical in KAERI**
S. Yang¹, Y. H. Chung²
¹*Advanced Radiation Technology Institute, Korea Atomic Research Institute, Korea, ²Department of*

Chemistry, Hallym University, Korea

- 23-RPP-07** **Synthesis of ^{64}Cu -labeled MARSGL peptide as an imaging probe for HER2/neu overexpressing tumors**
Y. Sugo, I. Sasaki, S. Watanabe, Y. Ohshima, N. S. Ishioka
Quantum Beam Science Directorate, Japan Atomic Energy Agency
- 23-RPP-08** **Molybdenum isotope fractionation in ion exchange reaction by using anion exchange chromatography**
M. Inaki¹, Y. Tachibana¹, M. Nomura², T. Suzuki¹
¹*Department of Nuclear System Safety Engineering, Nagaoka University of Technology*, ²*Research Laboratory for Nuclear Reactors, Tokyo Institute of Technology*
- 23-APP-01** **The mechanism of oxidized multi-walled carbon nanotubes across placental barrier and its effects on pregnancy**
Q. Wei¹, B. Juanjuan¹, W. Jing¹, L. Zhan², L. Peng¹, W. Wangsuo^{1*}
¹*Radiochemical Laboratory, Lanzhou University, China*, ²*Institute of Modern Physics, Chinese Academy of Sciences, Lanzhou, China*
- 23-APP-02** **Prompt gamma test of a large volume lanthanum bromide detector**
A. A. Naqvi^{*1}, M. A. Gondal¹, M. Raashid¹, Khateeb-ur-Rehman¹, M. Dastageer¹
¹*Department of Physics, King Fahd University of Petroleum and Minerals, Saudi Arabia*
- 23-APP-03** **Radiation-induced reactions in D, L- α -alanine adsorbed in solid surfaces**
E. Aguilar, A. Negrón-Mendoza, C. Camargo
Instituto de Ciencias Nucleares, Universidad Nacional Autónoma de México, México
- 23-APP-04** **^{36}Cl determination in steel radioactive waste**
F. Goutelard¹, P. Perret¹, C. Hamon¹, R. Brennetot¹, C. Andrieu²
¹*Operator Support Analyses Laboratory, Atomic Energy Commission, CEA Saclay, DEN/DANS/DPC/SEARS/LASE, France*, ²*Electricité de France, EDF – CIDEN / Département Etudes - Division Déconstruction/Groupe Inventaire et Agréments, France*
- 23-APP-05** **Naturally occurring radioactive materials (NORM) in Malaysian oil sludge samples**
B.A. Teiara Mohamed¹, S. B. Sarmani²
¹*Department of Physics, University of Al-Zaituna, Tarhuna, Libya*, ²*School of Chemical Sciences and Food Technology, Faculty of Science and Technology, Universiti Kebangsaan, Malaysia*
- 23-APP-06** **On the use of ^{233}U and ^{237}Np as radiotracers for redox potential measurements**
S. Holgersson
Chalmers University of Technology, Department of Chemical and Biological Engineering, Nuclear Chemistry, Sweden
- 23-APP-07** **Analysis of $^{129}\text{I}/^{127}\text{I}$ ratios from underground fluids collected in Japan**
N. Okabe¹, Y. Muramatsu¹, M. Arai¹, H. Matsuzaki², M. Takahashi³, K. Kazahaya³
¹*Gakushuin University, Japan*, ²*University of Tokyo*, ³*AIST, Japan*
- 23-APP-08** **Radiocarbon dating of ancient Japanese calligraphy sheets: checks with ancient documents of known age and its application to kohitsugire calligraphies**
H. Oda¹, K. Ikeda², H. I. Yasu³, S. Sakamoto⁴
¹*Center for Chronological Research, Nagoya University*, ²*Faculty of Letters, Chuo University*, ³*Taga High School*, ⁴*Digital Archives Research Center, Ryukoku University*
- 23-APP-09** **μ -XRF study on Wiangkalong pottery**
K. Won-in¹, S. Tancharakorn², W. Tanthanuch², P. Dararutana³
¹*Department of Earth Sciences, Faculty of Science, Kasetsart University, Thailand*, ²*Synchrotron Light Research Institute, Thailand*, ³*The Royal Thai Army Chemical School of the Royal Thai Army Chemical Department, Thailand*

Tuesday, 24 September 2013, Poster Session

- 24-FKP-01** **Determination of short-lived ^{241}Pu in environmental samples by inductively coupled plasma mass spectrometry**
Jian Zheng*, Keiko Tagami, Shigeo Uchida
Office of Biospheric Assessment for Waste Disposal, National Institute of Radiological Sciences
- 24-FKP-02** **Numerical evaluation of Cs adsorption in PB column by extended Langmuir formula and one-dimensional adsorption model**
Hiroshi Ogawa, Akiko Kitajima, Hisashi Tanaka, and Tohru Kawamoto
Nanosystem Research Institute, Advanced Industrial Science and Technology (AIST), Tsukuba, 305-8568, Japan
- 24-FKP-03** **Secular distribution of radioactive concentration in the atmosphere at Fukushima, Hitachi and Marumori**
ZiJian Zhang¹, Shunsuke Kakitani¹, Kazuhiko Ninomiya¹, Naruto Takahashi¹, Yoshiaki Yamaguchi², Takashi Yoshimura², Kazuyuki Kita³, Akira Watanabe⁴, Atsushi Shinohara¹
¹*Graduate School of Science, Osaka University*, ²*Radioisotope Research Center, Osaka University*, ³*Faculty of Symbiotic Systems Science, Fukushima University*, ⁴*College of Science, Ibaraki University*
- 24-FKP-04** **Concentration of ^{137}Cs in atmospheric coarse and fine particles collected in Fukushima**
Kyo Kitayama¹, Hirofumi Tsukada¹, Kenji Ohse¹, Chika Suzuki¹, Akira Kanno¹, Kencho Kawatsu¹,
¹*Fukushima University Future Center for Regional Revitalization*
- 24-FKP-05** **Electrochemical cesium sorption under coexisting other ions using nanoparticle film of copper hexacyanoferrate**
Hisashi Tanaka¹, Rongzhi Chen¹, Miyuki Asai¹, Chikako Fukushima¹, Tohru Kawamoto¹, Manabu Ishizaki², Masato Kurihara^{1,2}, Makoto Arisaka³, Takuya Nankawa³ and Masayuki Watanabe³
¹*Nanosystem Research Institute, AIST, Japan*, ²*Department of Material and Biological Chemistry, Yamagata University, Japan*, ³*Japan Atomic Energy Agency, Japan*
- 24-FKP-06** **Determination of ^{129}I in Fukushima soil samples by ICP-MS**
Takeshi Ohno¹, Yasuyuki Muramatsu¹, Hiroyuki Matsuzaki²
¹*Faculty of Science, Gakushuin University*, ²*School of Engineering, The University of Tokyo*
- 24-FKP-07** **Measurement of soil-to-crop transfer factor of tellurium for estimation of potential radiotellurium ingestion from crops**
Guosheng Yang, Keiko Tagami*, Jian Zheng, Shigeo Uchida
Office of Biospheric Assessment for Waste Disposal, National Institute of Radiological Sciences
- 24-FKP-08** **Retention of radiocesium incorporated in tree leaves contaminated by fallout of the radionuclides emitted from the Fukushima Daiichi Nuclear Power Plant**
Kazuya Tanaka¹, Hokuto Iwatani², Aya Sakaguchi², Yoshio Takahashi², Yuichi Onda³
¹*Institute for Sustainable Sciences and Development, Hiroshima University, Japan*, ²*Department of Earth and Planetary Systems Science, Hiroshima University, Japan*, ³*Graduate School of Life and Environmental Sciences, University of Tsukuba, Japan*
- 24-FKP-09** **Decontamination of radioactive cesium in the soil**
Makoto Yanaga, Ayumi Oishi
Department of Chemistry, Graduate School of Science, Shizuoka University, Japan
- 24-FKP-10** **Altitude distribution of radioactive cesium at Mt. Fuji due to Fukushima No.1 nuclear power plant accident**
T. Saito¹, Y. Kurihara², Y. Koike², I. Tanihata³, M. Fujiwara³, H. Sakaguchi³, A. Shinohara⁴, H. Yamamoto⁵
¹*Faculty of Comprehensive Human Sciences, Shokei Gakuin University*, ²*School of Science and Technology, Meiji University*
³*Research Center for Nuclear Physics, Osaka University*, ⁴*Graduate School of Science, Osaka University*,
⁵*Department for the Administration of Safety and Hygiene, Osaka University*
- 24-FKP-11** **Isotope compositions of strontium in environmental samples in Fukushima Prefecture**
Y. Shibahara¹, S. Fukutani¹, T. Fujii¹, T. Kubota¹, M. Yoshikawa², T. Shibata², T. Ohta³, K. Takamiya¹, N. Sato¹, M. Tanigaki¹, Y. Kobayashi¹, R. Okumura¹, H. Yoshinaga¹, H. Yoshino¹, A. Uehara¹, S. Mizuno⁴, T.

Takahashi¹, and H. Yamana¹

¹Research Reactor Institute, Kyoto University, ²Institute for Geothermal Sciences, Kyoto University, ³Faculty of Engineering, Hokkaido University, ⁴Nuclear Power Safety Division, Fukushima Prefectural Government

24-FKP-12 Distribution of radioactive caesium in the North Pacific one year and a half after the Fukushima Dai-ichi Nuclear Power Plant accident

K. Tsujita¹, A. Hasegawa¹, N. Harada², T. Yamagata², H. Nagai², M. Aoyama³

¹Graduate School of integrated Basic Sciences, Nihon University, ²College of Humanities and Sciences, Nihon University, ³Geochemical Research Department, Meteorological Research Institute, Japan

24-FKP-13 Image analysis for the study of radiocesium distribution in coniferous trees: two years after the Fukushima Daiichi Nuclear Power Plant accident

Haruka Minowa

Radioisotope Research Facility, The Tokyo Jikei University School of Medicine, Japan

24-FKP-14 Distribution of Iodine-129 in off Fukushima and the North Pacific one year and a half after the Fukushima Dai-ichi Nuclear Power Plant accident

A. Hasegawa¹, T. Yamagata², H. Nagai², M. Aoyama³, H. Matsuzaki⁴

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24-FKP-15 Agricultural implications for Fukushima nuclear accident

Tomoko M. Nakanishi

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24-FKP-16 Concentration of radiocesium in rice, vegetables, and fruits cultivated in evacuation area at Okuma town, Fukushima

Kenji Ohse¹, Kyo Kitayama¹, Seiich Suenaga², Kiyoyuki Matsumoto², Akira Kanno¹, Chika Suzuki¹, Kencho Kawatsu¹, Hirofumi Tsukada¹

¹Fukushima Future Center for Regional Revitalization, Fukushima University, ²Okuma Government Office, Japan

24-FKP-17 Isotopic U, Pu, Am and Cm signatures in environmental samples from the Fukushima Dai-ichi Nuclear Power Plant accident

Masayoshi Yamamoto¹, Aya Sakaguchi², Shinya Ochiai¹, Takahiro Takada¹, Seiya Nagao¹, Peter Steier³

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24-FKP-18 Influence of the Fukushima Daiichi nuclear disaster on the tritium concentration in the precipitation of Kanazawa city

Yoshimune Yamada¹, Kaeko Yasuie¹, Toshiyuki Kawabata², Akihiro Fujii², Hitoshi Kakimoto²

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24-FKP-19 Sediment transport processes in reservoir-catchment system inferred from sediment trap observation and fallout radionuclides

Shinya Ochiai¹, Seiya Nagao¹, Masayoshi Yamamoto¹, Taeko Itono², Kenji Kashiwaya³

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24-FKP-20 Transfer of radiocesium to crops cultivated in Fukushima

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24-FKP-21 Dynamics of radiocesium in bamboo forests after the accident of Fukushima Daiichi nuclear power plant

Tsutomu Kanasashi, Mitsutoshi Umemura, Yuki Sugiura, Chisato Takenaka

Graduate School of Bioagricultural Sciences, Nagoya University, Japan

- 24-FKP-22** **Reaction behavior of uranium and zirconium oxides in oxidative and reductive conditions**
Nobuaki Sato, Kohei Fukuda and Akira Kirishima
Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Japan
- 24-FKP-23** **Radiocesium in zooplankton in seawaters off Miyagi, Fukushima, and Ibaraki Prefectures**
H. Takata¹, M. Kusakabe², S. Oikawa¹
¹Central Laboratory, Marine Ecology Research Institute, ²Head Office, Marine Ecology Research Institute
- 24-FKP-24** **Plutonium isotopes and ²⁴¹Am in surface sediments off the coast of the Japanese islands after the Fukushima accident**
S. Oikawa¹, T. Watabe², H. Takata¹, J. Misonoo², M. Kusakabe²
¹Central Laboratory, Marine Ecology Research Institute, ²Head Office, Marine Ecology Research Institute
- 24-NEP-01** **A theoretical study of actinide and lanthanide extraction with carbamoylmethylphosphine oxide ligands**
Cong-Zhi Wang, Jian-Hui Lan, Yu-Liang Zhao, Zhi-Fang Chai, Wei-Qun Shi*
Nuclear Energy Nano-Chemistry Group, Key Laboratory of Nuclear Analytical Techniques and Key Laboratory For Biomedical Effects of Nanomaterials and Nanosafety, Institute of High Energy Physics, Chinese Academy of Sciences, China
- 24-NEP-02** **The role of microorganisms during the wet nuclear fuel storage in Slovak Republic**
Martin Pipiška¹, Lenka Tišáková², Miroslav Horník¹, Jozef Augustín¹
¹Department of Ecochemistry and Radioecology, University of SS Cyril and Methodius, Slovak Republic, ²Institute of Molecular Biology, Slovak Academy of Sciences, Slovak Republic
- 24-NEP-03** **Single centrifugal contactor test of a proposed group actinide extraction process for partitioning and transmutation purposes**
Emma Aneheim^{1,2}, Christian Ekberg¹, Giuseppe Modolo³, Andreas Wilden³
¹Nuclear Chemistry, Department of Chemical- and Biological Engineering, Chalmers University of Technology, Sweden, ²Targeted Alpha Therapy group, Department of Radiation Physics, Sahlgrenska Academy at Gothenburg University, Sweden, ³Forschungszentrum Jülich GmbH (FZJ), Institut für Energie- und Klimaforschung, Nukleare Entsorgung und Reaktorsicherheit (IEK-6), Germany
- 24-NEP-04** **Application of flow analytical methods for determination of radionuclides in cooling water and wastes from nuclear plants**
Anna Bojanowska-Czajka¹, Kamila Kołacińska¹, Marek Trojanowicz¹
¹Institut of Nuclear Chemistry and Technology, Poland
- 24-NEP-05** **Determination of low level ⁹⁹Tc in the primary coolant water by ICP-MS. Analysis of potential interferences**
Ewelina Chajduk¹, Sylwia Witman-Zajac¹, Halina Polkowska-Motrenko¹
¹Institute of Nuclear Chemistry and Technology, Poland
- 24-NCP-01** **Extraction of homologous elements of dubnium and seaborgium from HCl solution**
T. Yokokita¹, K. Nakamura¹, A. Kino¹, Y. Komori¹, K. Toyomura¹, Y. Kasamatsu¹, N. Takahashi¹, T. Yoshimura², K. Ooe³, Y. Kudou⁴, K. Takamiya⁵, A. Shinohara¹
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- 24-NCP-02** **Evaluation of stopping powers of superheavy ions in Al and U**
Y. H. Chung
Department of Chemistry, Hallym University, Korea
- 24-NCP-03** **Separation of tungsten from LEU fission-produced ⁹⁹Mo solution to improve technological performance in both the processes of ⁹⁹Mo and ^{99m}Tc generator production**
Van So Le¹, Cong Duc Nguyen²
¹Medisotec, NSW, Australia, ²ChoRay Hospital, HCM, Vietnam
- 24-NCP-04** **Effecting separation of fission products from the actinides by direct reaction with diketones**
Daniel B. Rego, Paul M. Forster, Kenneth R. Czerwinski
University of Nevada, Las Vegas, USA

- 24-NCP-05 Muonic atom formation by muon transfer process in C₆H₆ / C₆H₁₂ + CCl₄ mixtures**
M. Inagaki¹, K. Fujihara¹, G. Yoshida¹, K. Ninomiya¹, Y. Kasamatsu¹, A. Shinohara¹, M. K. Kubo², W. Higemoto³, Y. Miyake⁴, T. Miura⁵
¹Graduate School of Science, Osaka University, ²College of Liberal Arts, International Christian University, ³Advanced Science Research Center, Japan Atomic Energy Agency, ⁴Institute of Materials Structure Science, High Energy Accelerator Research Organization (KEK), ⁵Radiation Science Center, High Energy Accelerator Research Organization (KEK)
- 24-NCP-06 Research for fusion reaction mechanisms with deformed nuclei**
S. Ueno¹, K. Toda¹, A. Asano¹, N. Takahashi², Y. Kasamatsu², T. Yokokita², A. Yokoyama³,
¹Graduate School of Natural Science and Technology, Kanazawa Univ., ²Graduate School of Science, Osaka Univ.
³Institute of Science and Engineering, Kanazawa Univ.
- 24-NCP-07 Extraction behavior of Nb and Ta in HF solutions with tributyl phosphate**
M. Murakami^{1,2}, S. Tsuto¹, K. Ooe¹, H. Haba², J. Kanaya², S. Goto¹, and H. Kudo¹
¹Department of Chemistry, Faculty of Science, Niigata University, Japan, ²Nishina Center for Accelerator-Based Science, RIKEN, Japan
- 24-NCP-08 A modified method for synthesis of [γ -³²P] labeled adenosine triphosphate**
Wira Y Rahman^{1*}, Endang Sarmini¹, Herlina¹, Triyanto¹, Rien Ritawidya¹, Abdul Mutalib¹ and Santi Nurbaiti²
¹Center for Radioisotope and Radiopharmaceuticals (PRR) - BATAN, ²Biochemistry Research Division, faculty of Mathematics and Natural Sciences, Institut Teknologi Bandung, Indonesia
- 24-NCP-09 Production of ⁸⁸Nb and ¹⁷⁰Ta for chemical studies of element 105 Db using the GARIS gas-jet system**
M. Huang,¹ M. Asai,² H. Haba,¹ D. Kaji,¹ J. Kanaya,¹ Y. Kasamatsu,³ H. Kikunaga,⁴ Y. Kikutani,³ Y. Komori,³ H. Kudo,⁵ Y. Kudou,¹ K. Morimoto,¹ K. Morita,¹ M. Murakami,⁵ K. Nakamura,³ K. Ozeki,¹ R. Sakai,¹ A. Shinohara,³ T. Sumita,¹ K. Tanaka,¹ A. Toyoshima,² K. Tsukada,² Y. Wakabayashi¹ and A. Yoneda²
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- 24-NCP-10 Half-life measurement of ⁷Be in several materials**
T. Ohtsuki
Research Center for Electron Photon Science, Tohoku University, Japan
- 24-ENP-01 Verification of anticlockwise gyre in the semi-closed water area of Lake Nakaumi, southwest Japan, by using ²²⁴Ra/²²⁸Ra activity ratios**
Ritsuo Nomura^{1,*}, Mutsuo Inoue², Hisaki Kofuji³ and Shota Ikeda¹
¹Foraminiferal Laboratory, Faculty of Education, Shimane University, Japan, ²Institute of Nature and Environmental Technology, Kanazawa University, Japan, ³Mutsu Marine Laboratory, Japan Marine Science Foundation
- 24-ENP-02 Effect of hydroxylated fullerene on U(VI) adsorption onto oxidized multi-walled carbon nanotubes**
Jing Wang¹, Zhan Li², Peng Liu¹, Wei Qi¹, Juanjuan Bi¹, Wangsuo Wu^{1*}
¹Radiochemistry Laboratory, School of Nuclear Science and Technology, Lanzhou University, China, ²Institute of Modern Physics, Chinese Academy of Sciences, China
- 24-ENP-03 Corrosion of copper in water and colloid formation under intense radiation field**
Kotaro Bessho¹, Yuichi Oki², Naoya Akimune³, Hiroshi Matsumura¹, Kazuyoshi Masumoto¹, Shun Sekimoto², Naoyuki Osada⁴, Norikazu Kinoshita⁵, Hideaki Monjushiro¹, Seiichi Shibata²
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- 24-ENP-04 Study on unattached fraction of radon progeny and its environmental influence factors**
Lu Guo¹, Lei Zhang², Qiuju Guo¹
¹State Key Laboratory of Nuclear Physics and Technology, Peking University, China, ²Solid Dosimetric Detector and Method Laboratory, China

- 24-ENP-05 Preliminary study on measuring radon progeny concentration using alpha/beta spectroscopic method**
Abdumomin Kadir¹, Lei Zhang², Qiuju Guo¹, and Juncheng Liang³
¹State Key Laboratory of Nuclear Physics and Technology, School of Physics, Peking University, China, ²Solid Dosimetric Detector and Method Laboratory, China, ³Ionizing Radiation and Medical Science, National Institute of Metrology, China
- 24-ENP-06 The measurement comparability of ¹³⁴Cs and ¹³⁷Cs in foodstuff samples in Japan - result of inter-laboratory experiment for certification of certified reference material**
Tsutomu Miura¹, Yoshitaka Minai², Shoji Hirai³, Hiroshi Iwamoto⁴, Chushiro Yonezawa⁵, Yoshinobu Uematsu⁶, Akira Okada⁷, Masami Shibukawa⁸, Koichi Chiba¹, Kiyoshi Kitamura⁹, Takahiro Yamada¹⁰, Kazutoshi Kakita¹¹, Isao Kojima¹¹, ¹National Metrology Institute of Japan, AIST, ²Musashi University, ³Tokyo City University, ⁴Environmental Technology Service Co, Ltd., ⁵Japan Institute of International Affairs, ⁶Japan Accreditation Board, ⁷TERM, ⁸Saitama University, ⁹Japan Chemical Analysis Center, ¹⁰Japan Radioisotope Association, ¹¹The Japan Society for Analytical Chemistry
- 24-ENP-07 Synthesis and Characterization of Volatile Technetium Compound**
Bradley C. Childs¹, Frederic Poineau², Ken R. Czerwinski²
¹University of Nevada Las Vegas, Las Vegas, Nevada 89154, USA
- 24-ENP-08 Time variation of concentrations of radioactive cesium-134, 137 and iodine-129 in the Ohori River, Chiba Prefecture, Japan**
Nao Shibayama¹, Keisuke Sueki², Kimikazu Sasa^{2,3}, Yukihiko Satou¹, Tsutomu Takahashi³, Masumi Matsumura³, Hiroyuki Matsuzaki⁴, Michio Murakami⁵, Rey Yamashita⁶, Mahua Saha⁶, Hideshige Takada⁶, Yukio Koibuchi⁷, Soulichan Lamxay⁷, Taikan Oki⁸
¹Graduate School of Pure and Applied Sciences, Univ. of Tsukuba, ²Faculty of Pure and Applied Sciences, Univ. of Tsukuba, ³Research Facility Center for Science and Technology, Univ. of Tsukuba, ⁴MALT, The Univ. of Tokyo, ⁵"Wisdom of Water"(Suntory), The Univ. of Tokyo, ⁶Tokyo Univ. of Agri. & Tech., ⁷Graduate School of Frontier Sciences, The Univ. of Tokyo, ⁸Institute of Industrial Science, The Univ. of Tokyo
- 24-ENP-09 Ra isotopes in Na-Cl type groundwater in Japan**
Junpei Tomita^{1,a}, Takahiro Takada¹, Seiya Nagao¹, Masayoshi Yamamoto¹
¹Low Level Radioactivity Laboratory, Institute of Nature and Environmental Technology, Kanazawa University, Japan, ^aDepartment of Radiation Protection, Nuclear Science Research Institute, Japan Atomic Energy Agency, Japan
- 24-ENP-10 A new method to estimate ²¹⁰Po/²¹⁰Pb activity ratio in atmospheric aerosol by alpha spectrometry**
N. Momoshima¹, S. Nishio², K. Hibino², S. Sugihara¹
¹Radioisotope Center, Kyushu University, Japan, ²Graduate School of Science and Technology, Kumamoto University, Japan
- 24-ENP-11 Sedimentary environment inferred from sedimentation rates by ²¹⁰Pb and ¹³⁷Cs and their inventories in Mutsu Bay, Japan**
Kazuhiro Hamataka¹, Seiya Nagao¹, Michio Kato², Isao Kudo³, Masayoshi Yamamoto¹
¹Low Level Radioactivity Laboratory, KINET, Kanazawa University, Japan, ²Graduate School of Science, Kanazawa University, Japan, ³Graduate School of Fisheries Sciences, Hokkaido University, Japan
- 24-ENP-12 Distribution of radiocarbon in Japanese agricultural soils**
Nobuyoshi Ishii, Keiko Tagami, Shigeo Uchida
Office of Biospheric Assessment for Waste Disposal, National Institute of Radiological Sciences
- 24-ENP-13 Lateral distributions of ²²⁸Th/²²⁸Ra and ²²⁸Ra/²²⁶Ra ratios in surface waters of the Sea of Japan and their physical implications**
Y. Furusawa¹, M. Inoue¹, S. Nagao¹, M. Yamamoto¹, Y. Hamajima¹, H. Kofuji¹, K. Yoshida¹, Y. Nakano¹, K. Fujimoto², A. Morimoto³, T. Takikawa⁴, Y. Isoda⁵
¹Low Level Radioactivity Laboratory, Kanazawa University, ²Fisheries Research Agency, National Research Institute of Fisheries Science, ³Hydrospheric Atmospheric Research Center, Nagoya University, ⁴National Fisheries University, ⁵Graduate School of Fisheries Sciences, Hokkaido University
- 24-ENP-14 Vertical profiles of ²²⁸Ra and ²²⁶Ra activities in the Sea of Japan and their implications for water circulation**
M. Inoue¹, M. Minakawa^{2,*}, K. Yoshida¹, Y. Nakano¹, H. Kofuji¹, S. Nagao¹, M. Yamamoto¹, Y. Hamajima¹
¹Low Level Radioactivity Laboratory, Kanazawa University, ²Fisheries Research Agency, National Research

Institute of Fisheries Science

- 24-ENP-15 Induced radioactivity in air and water at medical accelerators**
K. Masumoto¹, K. Takahashi¹, H. Nakamura¹, A. Toyoda¹, K. Iijima¹, K. Kosako², K. Oishi², F. Nobuhara³
¹High Energy Accelerator Research Organization (KEK), ²Shimizu Co., Japan, ³Tokyo Nuclear Service Co., Japan
- 24-ENP-16 Radioactivity determination of ¹⁴C and ³H in solid waste samples by liquid scintillation counter**
Jong-Myoung Lim^{1*}, Mun-Ja Kang¹, Kun-Ho Chung¹, Chang-Jong Kim¹, Geun-Sik Choi¹
¹Environmental Radioactivity Assessment Team, Korea Atomic Energy Research Institute, Korea
- 24-ENP-17 Preparation of pure TiO₂ sorption material**
Irena Špendlíková, Jakub Raindl, Mojmír Němec
Czech Technical University in Prague, Department of Nuclear Chemistry, Czech Republic
- 24-NPP-01 Mössbauer study of iron carbide nanoparticles produced by sonochemical synthesis**
R. Miyatani¹, Y. Yamada¹, Y. Kobayashi^{2,3}
¹Department of Chemistry, Tokyo University of Science, ²Department of Engineering Science, The University of Electro-Communications, ³RIKEN
- 24-NPP-02 Mössbauer study of iron fluoride films produced by pulsed laser deposition**
K. Shiga¹, Y. Yamada¹, Y. Kobayashi^{2,3}
¹Department of Chemistry, Tokyo University of Science, ²Department of Engineering Science, The University of Electro-Communications, ³RIKEN
- 24-NPP-03 Iron sulfide particles synthesized in liquid phase**
R. Shimizu¹, Y. Yamada¹, Y. Kobayashi^{2,3}
¹Department of Chemistry, Tokyo University of Science, ²Department of Engineering Science, The University of Electro-Communications, ³RIKEN, Japan
- 24-NPP-04 Mössbauer and XRD studies of NiCuZn ferrites by Sol-Gel auto-combustion**
Chenglong Lei¹, Qing Lin^{1,2*}, Haifu Huang³, Hui Zhang¹, Yun He¹
¹College of Physics and Technology, Guangxi Normal University, China, ²Department of Information Technology, Hainan Medical College, China, ³Nanjing National Laboratory of Microstructures and Jiangsu Provincial Laboratory for NanoTechnology, Department of Physics, Nanjing University, China
- 24-NPP-05 Thermal stability of locally-associated Al and In impurities in zinc oxide**
S. Komatsuda¹, W. Sato^{1,2}, and Y. Ohkubo³
¹Graduate School of Natural Science and Technology, Kanazawa University, ²Institute of Science and Engineering, Kanazawa University, ³Research Reactor Institute, Kyoto University
- 24-NPP-06 Structure and antimony-121 Mössbauer spectra of hypervalent antimony compounds with an antimony-gold bond in equatorial position**
Masashi Takahashi, Asumi Sato, Shiro Matsukawa
Department of Chemistry, Toho University, Japan
- 24-NPP-07 Local structure of ⁵⁷Mn/⁵⁷Fe implanted into lithium hydride**
Jun Miyazaki¹, Takashi Nagatomo², Yoshio Kobayashi^{3,4}, Michael K. Kubo⁵, Yasuhiro Yamada⁶, Mototsugu Mihara⁷, Wataru Sato⁸, Kazuya Mae⁵, Shinji Sato⁹, Atsushi Kitagawa⁹
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- 24-NPP-08 Evaluation of vacancy-type defects in ZnO by the positron annihilation lifetime spectroscopy**
R. Ono¹, T. Togimitsu¹, and W. Sato^{1,2}
¹Graduate School of Natural Science and Technology, Kanazawa University, ²Institute of Science and Engineering, Kanazawa University

- 24-AAP-01** **Determination of ultratrace-levels of ^{99}Tc using ICP-QMS in the low level radioactive waste samples**
Te-Yen Su, Tsuey-Lin Tsai, Hsin-Chieh Wu, Lee-Chung Men
Chemistry Division, Institute of Nuclear Energy Research, Taiwan, R.O.C.
- 24-AAP-02** **Development of an automatic prompt gamma-ray activation analysis system**
Takahito Osawa¹
¹*Neutron Imaging and Quantum Beam Analysis Group, Quantum Beam Science Directorate, Japan Atomic Energy Agency*
- 24-AAP-03** **Concentration of heavy metal elements in Chinese medicine by INAA**
S. Ishihara¹, E. Furuta², N. Iwasaki¹, Y. Yoshihara³, R. Okumura⁴, Y. Iinuma⁴
¹*Ochanomizu University, Faculty of Sciences*, ²*Ochanomizu University, Graduate School of Humanities and Sciences*, ³*Ochanomizu University, Faculty of Human Life and Environmental Sciences*, ⁴*Kyoto University, Research Reactor Institute*
- 24-AAP-04** **Application of instrumental neutron activation analysis to assess dietary intake of selenium in Korean adults from meat and eggs**
Jong-Hwa Moon¹, Sun-Ha Kim¹, Yong-Sam Chung¹, Ok-Hee Lee²
¹*Korea Atomic Energy Research Institute, Korea*, ²*Dept of Food Science and Nutrition, Yongin University, Korea*
- 24-AAP-05** **Evaluation of hypoxia at dredged trenches in Tokyo Bay by determination of redox sensitive elements in the sediments**
T. Yamagata¹, K. Shozugawa¹, R. Okumura², K. Takamiya², M. Matsuo¹
¹*Graduate School of Arts and Sciences, The Univ. of Tokyo*, ²*Research Reactor Institute, Kyoto Univ.*
- 24-AAP-06** **Determination of ultra trace amounts of Mn in iron meteorites by preconcentration neutron activation analysis**
Y. Tanaka¹, Y. Arai¹, T. Imamura¹, Y. Oura¹
¹*Department of Chemistry, Tokyo Metropolitan University*
- 24-AAP-07** **Instrumental photon activation analysis of geological and cosmochemical samples**
Naoki Shirai¹, Shun Sekimoto², Mitsuru Ebihara¹
¹*Tokyo Metropolitan University*, ²*Kyoto University Research Reactor Institute*
- 24-AAP-08** **Monte carlo calculation of chloride diffusion in concrete**
A. A. Naqvi¹, Khateeb-ur-Rehman¹, M. Maslehuddin², O.S.B. Al-Amoudi³ and M. Raashid¹
¹*Department of Physics*, ²*Center for Engineering Research*, and ³*Department of Civil and Environmental Engineering King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia*
- 24-APP-01** **Catalysis induced by radiation in fatty acids adsorbed on clay minerals**
A. Negron-Mendoza^{1*}, S. Ramos-Bernal¹, M. Colin-Garcia² and F.G. Mosqueira³
¹*Instituto de Ciencias Nucleares, Universidad Nacional Autonoma de Mexico, México*, ²*Instituto de Geología, Universidad Nacional Autonoma de Mexico, México*, ³*Dirección General de Divulgación de la Ciencia, Universidad Nacional Autonoma de Mexico, México*
- 24-APP-02** **Preliminary study for highly sensitive airborne radioiodine monitor**
Yoshimune Ogata¹, Tadashi Yamasaki², Ryuji Hanafusa³
¹*Nagoya University*, ²*CEPCO, Japan*, ³*Fuji Electric, Japan*
- 24-APP-03** **Radiation synthesis and cesium removal of cellulose microsphere based hybrid adsorbent**
Long Zhao^{1*}, Yanliang Chen¹, Yuezhou Wei¹
¹*School of Nuclear Science and Engineering, Shanghai Jiao Tong University, China*
- 24-APP-04** **Study about separation mechanism of endohedral metallofullerenes with Lewis acid**
K. Chiba¹, T. Hamano¹, E. Takeuchi¹, K. Akiyama¹, S. Kubuki¹, and H. Shinohara²
¹*Department of Chemistry, Tokyo Metropolitan University, Japan*, ²*Graduate School of Science, Nagoya University, Japan*
- 24-APP-05** **Crystal structure and spin state of mixed-crystals of $\text{Fe}(\text{NCS})_x(\text{NCBH}_3)_{2-x}(\text{bpp})_2$ (bpp = 1,3-bis(4-Pyridyl)Propane)**

Haruka Dote¹, Hiroki Yasuhara¹, Satoru Nakashima²

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24-APP-06 Analysis of fragments of a roman mask using Mössbauer spectroscopy

Paulo de Souza^{1,2}, G. Klingelhöfer³, P. Gütlich³, M. Egg⁴

¹*University of Tasmania, Australia*, ²*Commonwealth Scientific and Industrial Research Organisation, Australia*, ³*Johannes Gutenberg-Universität Mainz, Germany*, ⁴*Römisch-Germanisches Zentralmuseum, Germany*

24-APP-07 Synthesis of ¹⁴C labeled C₆₀ with higher specific activity

T. Tadai¹, K. Akiyama¹, H. Aoshima², R. Ibuki², S. Kubuki¹

¹*Department of Chemistry, Tokyo Metropolitan University, Japan*, ²*Vitamin C₆₀ BioResearch Corporation, Japan*

24-APP-08 Adsorption behavior of Zr and Hf to TTA-resin in microcolumn for determining the forming ability of Rf monofluoride complex

Y. Kitayama¹, Y. Shigeyoshi¹, A. Yokoyama², A. Toyoshima³, K. Tsukada³, K. Ooe⁴, E. Maeda¹, H. Kimura¹, H. Kikunaga⁵, Y. Kudou⁶, J. Kanaya⁶, M. Huang⁶, and H. Haba⁶

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Wednesday, 25 September 2013, Poster Session

- 25-FKP-01** $^{235}\text{U}/^{238}\text{U}$ isotopic ratio in environmental samples at the Fukushima area
Y. Shibahara¹, T. Fujii¹, S. Fukutani¹, T. Kubota¹, R. Okumura¹, T. Ohta², K. Takamiya¹, N. Sato¹, M. Tanigaki¹, Y. Kobayashi¹, H. Yoshinaga¹, H. Yoshino¹, A. Uehara¹, S. Mizuno³, T. Takahashi¹, and H. Yamana¹
¹Research Reactor Institute, Kyoto University, ²Faculty of Engineering, Hokkaido University, ³Nuclear Power Safety Division, Fukushima Prefectural Government
- 25-FKP-02** Particulates of Ag and Pu radioisotopes released from Fukushima Daiichi nuclear power plants
H. Kimura¹, M. Uesugi², A. Muneda², R. Watanabe¹, A. Yokoyama³, T. Nakanishi⁴
¹Grad. School Nat. Sci. Tech., Kanazawa Univ., ²Col. Sci. Eng., Kanazawa Univ., ³Inst. Sci. Eng., Kanazawa Univ., ⁴Adv. Sci. Res. Cent., Kanazawa Univ.
- 25-FKP-03** The measurement of $^{14}\text{C}/^{12}\text{C}$ ratios in Japanese plant samples affected by anthropogenic sources
R. Hashimoto¹, A. Inoue¹, Y. Muramatsu¹, H. Matsuzaki²
¹Department of Chemistry, Gakushuin University, ²School of Engineering, The University of Tokyo
- 25-FKP-04** Radiocesium and stable cesium in edible wild plants (Sansai) collected from forests in Fukushima Prefecture
M. Sugiyama¹, Y. Muramatsu¹, T. Ohno¹, M. Sato²
¹Gakushuin University, Japan, ²Fukushima Agricultural Technology Center
- 25-FKP-05** Annual variation of radioactivity in marine biota in the Pacific off Fukushima after TEPCO's Fukushima Daiichi Nuclear Power Station accident
T. Aono¹, S. Yoshida¹, T. Saotome², T. Mizuno², Y. Ito³, J. Kanda³, T. Ishimaru³
¹National Institute of Radiological Sciences, ²Fukushima prefecture fisheries experimental station, ³Tokyo University of Marine Science and Technology
- 25-FKP-06** Migration behavior of ^{134}Cs and ^{137}Cs in the Niida River water in Fukushima Prefecture, Japan during 2011-2012
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- 25-FKP-07** Migration behavior of radiocesium released from Fukushima Daiichi Nuclear Power Plant accident
T. Ohnuki¹, N. Kozai¹, F. Sakamoto¹
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- 25-FKP-08** Research on atmospheric radionuclides from the Fukushima Nuclear Accident at the MRI, Japan
Y. Igarashi¹, K. Adachi¹, T. Tanaka¹, M. Kajino¹, T. Sekiyama¹, T. Maki¹, Y. Zaizen¹, M. Mikami¹
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- 25-FKP-09** Presuming techniques of radioactive cesium concentration in muscle for beef cattle
T. Ohtsuki¹, F. Koga², M. Uchida², Y. Ishikawa², T. Takase³, K. Kawatsu³, M. Mogi⁴, S. Murayama⁴, Y. Izumi⁴, H. Kikunaga¹, T. Tachiya⁵, Y. Shiraishi², K. Endo²
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- 25-FKP-10** Spatio-temporal distribution of atmospheric radiocesium at monitoring stations for suspended particulate matter in Fukushima area released from the TEPCO Fukushima Daiichi Nuclear Power Plant accident
H. Tsuruta¹, Y. Oura², M. Ebihara², M. Ishimoto³, Y. Katsumura³, T. Ohara⁴, T. Nakajima¹
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- 25-EDP-01** Education of nuclear and radiochemistry in Hallym University, Korea
Y. H. Chung
Department of Chemistry, Hallym University, Korea
- 25-EDP-02** Use of small $^{68}\text{Ge}/^{68}\text{Ga}$ generators in experiments for the education of radioisotope-related fields as well as of

natural and social sciences in general

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- 25-NFP-01 Application of alpha spectrometry to the measurement of a single plutonium particle for nuclear safeguards**
K. Yasuda, D. Suzuki, F. Esaka and M. Magara
Research group for analytical chemistry, Japan Atomic Energy Agency
- 25-NEP-01 High LET radiolytic degradation studies of separation processes for spent nuclear fuel**
J. Pearson and M. Nilsson
University of California – Irvine, USA, Department of Chemical Engineering and Materials Science
- 25-NEP-02 Effects of helium retention and lithium depletion on tritium behaviors in Li₂TiO₃**
M. Kobayashi¹, H. Uchimura¹, K. Toda¹, M. Sato¹, K. Tatunuma², Y. Oya¹ and K. Okuno¹
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- 25-NEP-03 Adsorptivity of various metal ions onto benzo-18-crown-6 and dibenzo-18-crown-6 resins**
M. Nogami¹, T. Haratani¹, Y. Tachibana², T. Kaneshiki³, M. Nomura³, T. Suzuki²
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- 25-NEP-04 Cesium adsorption ability and stability of metal hexacyanoferrate irradiated with gamma-rays**
M. Arisaka¹, M. Watanabe¹, M. Ishizaki², M. Kurihara², R. Chen³, H. Tanaka³
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- 25-NEP-05 Residual actinides separation from the DIAMEX/SANEX secondary waste and decontamination of the spent DIAMEX solvent from the “difficult-to-strip” elements**
J. John, F. Šebesta, K. V. Mareš, F. Klimek, M. Vlk
Czech Technical University in Prague, Department of Nuclear Chemistry, Czech Republic
- 25-NEP-06 Thorium based molten salt fuel cycle**
Q.-N. Li*, L. Zhang, W.-X. Li, G.-Z. Wu
Shanghai Institute of applied physics, Chinese Academy of Sciences, China
- 25-NEP-07 Study on electrochemical behaviors of rare earth elements in FLINAK eutectic salt**
L.-F. Tian, W. Huang, F. Jiang, C.-F. She, H.-Y. Zheng, D.-W. Long*, Q.-N. Li
Shanghai Institute of applied physics, Chinese Academy of Sciences, China
- 25-NCP-01 Measurement of cosmogenic nuclides in meteorites by well-type Ge detector in Ogoya Underground Laboratory - correction of coincidence sum effect for Al-26, Co-56, Na-22 and Co-60 -**
Y. Hamajima
LLRL, Kanazawa Univ., Japan
- 25-NCP-02 Development of multipurpose neutron irradiation apparatus at KUR**
K. Takamiya¹, Y. Yoshida², H. Tanaka¹, T. Fujii¹, S. Fukutani¹, T. Sano¹, H. Yoshino¹, Y. Iinuma¹, R. Okumura¹, S. Shibata¹
¹*Research Reactor Institute, Kyoto University,* ²*Graduate School of Engineering, Kyoto University*
- 25-NCP-03 Development of a new continuous dissolution apparatus with a hydrophobic membrane for superheavy element chemistry**
K. Ooe^{1,2}, K. Tsukada², M. Asai², T. K. Sato², A. Toyoshima², S. Miyashita², Y. Nagame², M. Schädel², Y. Kaneya³, H. V. Lerum⁴, J. P. Omtvedt⁴, J. V. Kratz⁵, H. Haba⁶, A. Wada⁷, Y. Kitayama⁸
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- 25-NCP-04 Cross-section measurements of high energy neutron-induced reactions for Cu and Nb**

K. Ninomiya¹, T. Omoto¹, R. Nakagaki¹, N. Takahashi¹, Y. Kasamatsu¹, A. Shinohara¹, S. Sekimoto², H. Yashima², S. Shibata², T. Shima³, H. Matsumura⁴, M. Hagiwara⁴, Y. Iwamoto⁵, D. Satoh⁵, M. W. Caffee⁶, K. Nishiizumi⁷

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25-NCP-05 Development of a rapid solvent extraction technique with flow injection analysis for superheavy element chemistry

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25-NCP-06 Solid-liquid extraction of Mo and W by Aliquat 336 from HF and HCl solutions towards extraction chromatography experiments of Sg

Y. Komori¹, T. Yokokita¹, K. Toyomura¹, K. Nakamura¹, Y. Kasamatsu¹, H. Haba², J. Kanaya², M. Huang², Y. Kudou², A. Toyoshima³, N. Takahashi¹, A. Shinohara¹

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25-NCP-07 Off-line isothermal gas chromatography of Zr and Hf compounds

Y. Oshimi, S. Goto, T. Taguchi, T. Tomitsuka, K. Ooe, H. Kudo

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25-NCP-08 Chemical studies of Rf and Db in liquid-phases using automated rapid chemical separation apparatuses at JAEA

K. Tsukada¹, A. Toyoshima¹, M. Asai¹, Y. Kasamatsu², Z. J. Li³, Y. Ishii¹, H. Haba⁴, T. K. Sato¹, Y. Nagame¹, M. Schädel¹

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25-NCP-09 Solvent extraction of hexavalent Mo and W using 4-isopropyltropolone (Hinokitiol) for Seaborgium (Sg) reduction experiment

S. Miyashita¹, A. Toyoshima¹, K. Ooe², M. Asai¹, T. K. Sato¹, K. Tsukada¹, Y. Nagame¹, M. Schädel¹, Y. Kaneya³, H. Haba⁴, J. Kanaya⁴, M. Huang⁴, Y. Kitayama⁵, A. Yokoyama⁵, A. Wada⁶, Y. Oura⁶, J. V. Kratz⁷, H. V. Lerum⁸ and J. P. Omtvedt⁸

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25-NCP-10 Development of surface ionization ion-source for determination of the first ionization potentials of heavy actinides

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25-NCP-11 Comparison of the decay constants of ⁵¹Cr with various valence states

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25-NCP-12 Selective separation of strontium (II) from nitric acid solution by a macroporous silica-based DtBuCH₁₈C₆ adsorbent modified with surfactants

Y. Wu, Z. Chen, Y. Wei*

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- 25-NCP-13 Exploring the synthesis and characterization of binary technetium chlorides and bromides**
E. Johnstone¹, F. Poineau¹, P. M. Forster¹, P. Weck,² C. D. Malliakas³, E. Kim⁴, M. G. Kanatzidis³, B. L. Scott⁵, A. P. Sattelberger⁶, and K. R. Czerwinski¹
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- 25-ACP-01 Solvent extraction of americium(III) and europium(III) using hydroxyoctanoic acid and n-heteroaromatic compound**
M. Seike¹, M. Eguchi¹, A. Shinohara¹, T. Yoshimura²
¹*Graduate School of Science, Osaka University*, ²*Radioisotope Research Center, Osaka University*
- 25-ACP-02 Stability of uranyl peroxy-carbonato complex ions in the presence of metal oxide in carbonate media**
D.-Y. Chung¹, M.-S. Park¹, K.-Y. Lee¹, H.-B. Yang¹, E.-H. Lee¹, K.-W. Kim¹, J.-K. Moon¹
¹*Korea Atomic Energy Research Institute, Korea*
- 25-ACP-04 Raman spectroscopic study on uranyl and neptunyl complexes in highly concentrated calcium chloride**
T. Fujii¹, A. Uehara¹, Y. Kitatsuji², and H. Yamana¹
¹*Division of Nuclear Engineering Science, Research Reactor Institute, Kyoto University*, ²*Nuclear Science and Engineering Directorate, Japan Atomic Energy Agency*
- 25-ACP-05 Electrode reaction of actinide ions in a weak acidic solution**
Y. Kitatsuji¹, H. Otobe¹, T. Kimura¹
¹*Nuclear Science and Engineering Directorate, Japan Atomic Energy Agency*
- 25-ACP-06 Biomineralization of uraninite and uranyl phosphate controlled by organic acids**
Y. Suzuki¹, N. Kozai², T. Ohnuki²
¹*Graduate School of Bionics, Tokyo University of Technology, Japan*, ²*Advanced Science Research Center, Japan Atomic Energy Agency, Japan*
- 25-ACP-07 Comparison of the spectroscopic characteristics of uranium species when U(III) in a LiCl-KCl molten salt is leached out with water and ionic liquid**
H.-J. Im, K. Song
Nuclear Chemistry Research Division, Korea Atomic Energy Research Institute, Korea
- 25-ACP-08 Distribution of Neptunium in PUREX streams**
N. Rawat, A. Kar, M.A. Mahajan, N.B. Khedekar, R.M. Sawant, B. S. Tomar and K. L. Ramakumar
Radioanalytical Chemistry Division, Bhabha Atomic Research Centre, India
- 25-ACP-09 α -radiation effect on solvent extraction of minor actinide**
Y. Sugo¹, Y. Sasaki², M. Taguchi¹, N. S. Ishioka¹
¹*Quantum Beam Science Directorate, Japan Atomic Energy Agency*, ²*Nuclear Science and Engineering Directorate, Japan Atomic Energy Agency*
- 25-ENP-01 Retardation and release study of U(VI) on phlogopite at conditions relevant to uranium contamination in environment**
D. Pan^{1,2}, Z. Wang², W. S. Wu¹
¹*Radiochemistry Laboratory, Lanzhou University, China*, ²*Pacific Northwest National Laboratory, USA*
- 25-ENP-02 Application of simplified desorption method to sorption study: (2) sorption of neptunium (V) on montmorillonite-based mixtures**
N. Kozai¹, T. Ohnuki¹
¹*Japan Atomic Energy Agency, Japan*
- 25-ENP-03 Continuous measurement of radon exhalation rate of soil in Beijing**
L. Zhang^{1,2}, K. S.², Q. Guo²
¹*Solid Dosimetric Detector and Method Laboratory, China*, ²*State Key Laboratory of Nuclear Physics and Technology, School of Physics, Peking University, China*

- 25-ENP-04 Dosimetric evaluation of thoron exposure in three typical rural indoor environments in China**
L. Zhang¹, Q. Guo², S. Wang¹
¹*Solid Dosimetric Detector and Method Laboratory, China, ²State Key Laboratory of Nuclear Physics and Technology, School of Physics, Peking University, China*
- 25-ENP-05 Binary technetium phosphide synthesis at low temperature conditions**
B. C. Childs¹, W. M. Kerlin¹, K. R. Czerwinski¹
¹*University of Nevada Las Vegas, USA*
- 25-ENP-06 Dissolution behavior of ¹³⁷Cs absorbed on the green tea leaves**
Y. Oya¹, H. Uchimura¹, K. Toda¹, T. Ikka², A. Morita², K. Okuno¹
¹*Graduate School of Science, Shizuoka University, ²Graduate School of Agriculture, Shizuoka University*
- 25-ENP-07 Characterization on the radioactive aerosols dispersed during plasma arc cutting of radioactive metal piping**
T. Shimada¹, T. Tanaka¹
¹*Nuclear Safety Research Center, Japan Atomic Energy Agency, Japan*
- 25-ENP-08 A passive collection method for whole size fractions of suspended river materials**
T. Matsunaga¹, T. Nakanishi¹, M. Atarashi-Andoh¹, E. Takeuchi¹, K. Tsuduki¹, S. Nishimura¹, J. Koarashi¹, S. Otsuka¹, T. Sato², S. Nagao³
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- 25-ENP-09 Study of factors controlling organic pollution in Lake Kiba**
Y. Kawano¹, S. Nagao¹, S. Ochiai¹, M. Yamamoto¹
¹*Low Level Radioactivity Laboratory, Kanazawa Univ., Japan*
- 25-ENP-10 Rapid monitoring particulate radiocesium with nonwoven fabric cartridge filter and application to field monitoring**
H. Tsuji¹, Y. Kondo², S. Kawashima², T. Yasutaka¹
¹*National Institute of Advanced Industrial Science and Technology, ²Japan Vilene Company. Ltd.*
- 25-ENP-11 In-situ measurement of ¹³⁴Cs and ¹³⁷Cs in seabed by underwater γ -spectrometry systems and application for the survey to the Fukushima Dai-ichi NPP accident**
H. Kofuji
Japan Marine Science Foundation, Japan
- 25-ENP-12 Radiocarbon dating of molluscan shells and its application**
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- 25-ENP-13 Concentration of uranium on TiO-PAN and NaTiO-PAN composite absorbers**
A. Motl, F. Šebesta, J. John, I. Špendlíková, M. Němec
Czech Technical University in Prague, Department of Nuclear Chemistry, Czech Republic
- 25-ENP-14 Use of radon to characterise surface water recharge to groundwater**
N Hermanspahn,¹ M Close,¹ M Matthews,¹ L Burbery,¹ P Abraham,¹
¹*Institute of Environmental Science and Research (ESR), Christchurch, New Zealand*
- 25-RPP-01 Production and utilization of radioactive astatine isotopes in the ⁷Li + ^{nat}Pb reaction**
I. Nishinaka¹, A. Yokoyama², K. Washiyama², R. Amano², E. Maeda², N. Yamada², H. Makii¹, A. Toyoshima¹, S. Watanabe¹, N. S. Ishioka¹, K. Hashimoto¹
¹*Japan Atomic Energy Agency (JAEA), ²Kanazawa University*
- 25-RPP-02 Production of actinium-225 from natural thorium irradiated with protons**
A. N. Vasiliev¹, V. S. Ostapenko¹, R. A. Aliev¹, S. N. Kalmykov¹, E. V. Lapshina², S. V. Ermolaev² and B. L.

Zhuikov²

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25-RPP-03 Development of ⁹⁹Mo-^{99m}Tc domestic production with high-density MoO₃ pellets by (n, γ) reaction

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25-RPP-04 Preparation of ⁹⁹Mo-^{99m}Tc by using spallation neutron

Y. Hayashi^{*1}, N. Takahashi¹, K. Nakai¹, H. Ikeda², G. Horitsugi², T. Watabe², Y. Kanai², H. Watabe², E. Shimosegawa², Y. Miyake², J. Hatazawa², M. Fukuda³, K. Hatanaka³, K. Takamiya⁴, S. Yamamoto⁵, Y. Kasamatsu¹, A. Shinohara¹

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25-RPP-05 Development of automated measurement system for radioactive intensities of sealed small radiation sources (Iodine-125 seed source) for brachytherapy

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25-RPP-06 Extraction of astatine isotopes for development of radiopharmaceuticals

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25-RPP-07 Lutetium-177 complexation of DOTA and DTPA in the presence of competing metals

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25-NPP-01 Hyperfine fields at ¹⁴⁰Ce in He-doped Fe

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25-NPP-02 Mössbauer studies of lanthanum doped Ni_{0.4}Cu_{0.2}Zn_{0.4}Fe₂O₄ ferrites by sol-gel autocombustion

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25-NPP-03 Analysis of corrosion products formed on anti-weather steel

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25-NPP-04 Study of the spin-crossover phenomena in 1D coordination polymers, [FeII(NH₂-triazole)₃](CnH_{2n+1}SO₃)₂, by Fe-K edge XAFS and ⁵⁷Fe Mössbauer spectroscopy

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25-NPP-05 Mössbauer spectroscopic and powder X-ray diffraction studies on incorporation of gaseous organic molecules into intermolecular nano-voids of mixed-valence trinuclear iron pentafluorobenzoate complex

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- 25-NPP-06 Dynamic perturbation to ¹¹¹Cd(←¹¹¹Ag) doped in AgI nanoparticles**
W. Sato^{1,2}, R. Mizuuchi², N. Irioka³, S. Komatsuda², S. Kawata⁴, A. Taoka^{1,2}, and Y. Ohkubo⁵
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- 25-AAP-01 A prototype of a simple collection system for the determination of ¹⁴C**
T.-H. Chuang, T. -L. Tsai, H. -J. Wei, L. -C. Men
Chemistry Division, Institute of Nuclear Energy Research, Taiwan, ROC
- 25-AAP-02 Elemental analysis of Korean adult toenail using of instrumental neutron activation analysis**
S. -H. Kim¹, J. -H. Moon¹, Y. -S. Chung¹, O.-H. Lee²
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- 25-AAP-03 Determination of vanadium at ppb levels in relatively high-salt biological materials without chemical separation and using neutron activation coupled to compton suppression gamma-ray spectrometry**
W. Zhang and A. Chatt
Trace Analysis Research Centre, Department of Chemistry, Dalhousie University, Canada
- 25-AAP-04 Radiochemical neutron activation analysis of halogens (Cl, Br and I) in geological and cosmochemical samples**
M. Ebihara¹ and S. Sekimoto²
¹Tokyo Metropolitan University, ²Kyoto University Research Reactor Institute
- 25-AAP-05 Multielement analysis of KIGAM reference samples by INAA, ICP-AES and ICP-MS**
N. Shirai¹, M. Toktaganov², H. Takahashi¹, Y. Yokozuka¹, S. Sekimoto³, M. Ebihara¹
¹Tokyo Metropolitan University, ²National Nuclear Center Republic of Kazakhstan Institute of Atomic Energy
³Kyoto University Research Reactor Institute
- 25-AAP-06 Comparison of calculated results with NTD measured data for establishment of burned core model for monte carlo simulation of HANARO reactor**
D.-K. Cho and M.-S. Kim
Korea Atomic Energy Research Institute, Korea
- 25-AAP-07 Neutron activation analysis of JCFA-1, JCu-1 and JZn-1**
S. Sekimoto¹, Y. Homura¹, R. Okumura¹, N. Shirai²
¹Kyoto University Research Reactor Institute, ²Tokyo Metropolitan University
- 25-AAP-08 Prompt gamma-ray analysis of chloride concentration in blended cement concretes**
A. A. Naqvi^{1*}, M. Maslehuddin², O.S.B. Al-Amoudi³, Khateeb-ur-Rehman¹, M. Raashid¹
¹Department of Physics, ²Center for Engineering Research, and ³Department of Civil and Environmental Engineering, King Fahd University of Petroleum and Minerals, Saudi Arabia
- 25-AAP-09 Cold neutron and thermal neutron PGAA facilities at The HANARO research reactor**
G.M. Sun¹, E.J. Lee¹, B.G. Park¹, J.H. Moon¹
¹Neutron Utilization Technology Division, Korea Atomic Energy Research Institute, Korea
- 25-AAP-10 Exposing dogs to uranium contained in commercial diets**
Camila Elias,¹ Elisabete A. De Nadai Fernandes,¹ Márcio A. Bacchi,¹ Peter Bode²
¹ University of São Paulo, Nuclear Energy Center for Agriculture, Brazil
² Reactor Institute Delft, Delft University of Technology, The Netherlands