

Poster Session A

(Fundamental Nuclear Chemistry, Actinides, Transactinides and Radioanalytics)

- A1 Excitation function of $^{63}\text{Cu}(n,p)^{63}\text{Ni}$ reaction in the neutron energy range below 15 MeV**
K. Takamiya, Y. Ota, M. Akamine, S. Shibata, N. Nogawa, Y. Ito, T. Shibata, Y. Uwamino, M. Imamura, S. Iwasaki, S. Matsuyama, M. Baba; Osaka, Tokyo, Tsukuba, Saitama, Chiba and Sendai, Japan
- A2 Preparation and half-life measurement of samarium-146**
N. Kinoshita, A. Yokoyama, H. Amakawa, T. Nakanishi; Kanazawa and Tokyo, Japan
- A3 Investigation of the decay property of $^{229\text{m}}\text{Th}$ by photon detection and alpha-spectrometry**
Y. Kasamatsu, H. Kikunaga, K. Takamiya, T. Mitsugashira, T. Nakanishi, T. Ohtsuki, H. Yuki, W. Sato, H. Yamana, Y. Ohkubo, S. Shibata, Y. Kawase, A. Shinohara; Osaka, Kanazawa, Oarai-machi and Sendai, Japan
- A4 Production of Th-229m in nuclear reaction and its identification by alpha-spectrometry**
H. Kikunaga, Y. Kasamatsu, K. Takamiya, T. Mitsugashira, M. Hara, T. Ohtsuki, H. Yuki, A. Shinohara, S. Shibata, N. Kinoshita, A. Yokoyama, T. Nakanishi; Kanazawa, Osaka, Oarai-machi and Sendai, Japan
- A5 Energy shift of electronic X rays emitted from pionic atoms**
K. Ninomiya, H. Sugiura, Y. Kasamatsu, H. Kikunaga, N. Kinoshita, Y. Tani, H. Hasegawa, M. Yatsukawa, K. Takamiya, W. Sato, H. Matsumura, A. Yokoyama, K. Sueki, Y. Hamajima, T. Miura, A. Shinohara; Osaka, Kanazawa, Kyoto, Tsukuba and Nomi, Japan
- A6 Time-differential perturbed angular correlations of ^{140}Ce and ^{19}F implanted in highly oriented pyrolytic graphite**
W. Sato, H. Ueno, H. Watanabe, H. Miyoshi, A. Yoshimi, D. Kameda, J. Kaihara, K. Shimada, T. Ito, S. Suda, Y. Kobayashi, K. Asahi, Y. Kasamatsu, A. Shinohara, A. Taniguchi, Y. Ohkubo; Osaka, Saitama and Tokyo, Japan
- A7 Chemical stabilisation of recoil ^{56}Mn in $\text{MnSO}_4\text{-KClO}_4$ mixed crystals following (n, γ) process**
S.P. Mishra, Vijaya; Varanasi, India

- A8 The influence of a nuclear prehistory on transport rate of impurity "hot" atoms ^{111}In , $^{114\text{m}}\text{In}$ and $^{115\text{m}}\text{In}$ in the irradiated metal cadmium**
I.E. Alekseev, V.V. Lazarev, S.P. Orlov; St. Petersburg and Gatchina, Russia
- A9 Contraction of actinides 3+ ionic radii at the end of the series**
A. Bilewicz; Warsaw, Poland
- A10 Uranium L-lines emission chemical and isotope effects and the state of uranium atom in its compounds**
L.L. Makarov, A.A. Solomennikov; St. Petersburg, Russia
- A11 New orthophosphates matrices of the NZP-like structure for immobilization of actinides**
S.V. Tomilin, A.N. Lukinykh, A.A. Lizin, V.I. Spirykov, A.I. Orlova; Dimitrovgrad and Novgorod, Russia
- A12 Refined data on the PuO_4 volatility**
V.P. Domanov, Yu.V. Lobanov, Dubna, Russia
- A13 Thermochromatographic volatility studies of actinide oxides**
S. Hübener, G. Bernhard, Th. Fanghänel; Dresden and Karlsruhe, Germany
- A14 $\text{UCa}_2\text{Si}_8\text{O}_x$ phases found on anoxically leached UO_2 - evidence for U-ekanite as U(VI) secondary alteration phase**
M. Amme, T. Wiss, H. Lang, H. Thiele; Karlsruhe and Neuherberg, Germany
- A15 Complex formation of curium with adenosine 5'-triphosphate (ATP) studied by TRLFS**
H. Moll, G. Geipel, G. Bernhard; Dresden, Germany
- A16 Gas-phase thermochemical studies of actinide oxides**
M. Santos, J. Marçalo, J.P. Leal, A.P. de Matos, J.K. Gibson, R.G. Haire ; Sacavém, Portugal; Oak Ridge, USA
- A17 Limiting transport properties of actinide ions in pure water**
E. Mauerhofer, K. Zhernosekov, F. Rösch; Aachen, Jülich and Mainz, Germany
- A18 Sorption of uranyl ion onto glutaraldehyde derivates of chitosan**
P.K. Mohaparta, N. Rawat, V.K. Manchanda, E. Guibal; Mumbai, India; Ales, France
- A19 Separation of Am^{3+} and Eu^{3+} by Cyanex-301 using different techniques**
A. Bhattacharyya, P.K. Mohapatra, V.K. Manchanda; Mumbai, India

- A20 Formation and stability of Pu(IV) colloids in aquatic solution**
H.R. Cho, C. Walther, C. Bitea, A. Seibert, J.I. Yun, C. Marquardt, V. Neck, J.I. Kim, Th. Fanghänel; Karlsruhe, Germany
- A21 Sorption of plutonium and neptunium onto colloidal Fe- and Mn-oxides**
A.B. Khasanova, S.N. Kalmykov, N.S. Shcherbina, A.P. Novikov, S.B. Clark; Moscow, Russia; Pullman, USA
- A22 Chemical shift and widening of the U $L_{\gamma 6}$ -line as parameters for identifying the chemical state of the uranium atom**
A.G. Krivitsky, R.V. Bogdanov, Y.F. Batrakov, St. Petersburg, Russia
- A23 Valence state of uranium atom in UO_{2+x} oxides according to data of X-ray emission spectroscopy**
Y.F. Batrakov, A.G. Krivitsky, E.V. Puchkova; St. Petersburg, Russia
- A24 Time-resolved laser-induced fluorescence spectrometry (TRLFS) applied to uranyl complexation studies**
I. Bonhoure, G. D. Donne, V. Marti, J. de Pablo, J.-L. Cortina; Manresa and Barcelona, Spain
- A25 Potentiometric and spectrophotometric study of the temperature effects on complexation. The Uranyl-sulphate (UO_2^{2+}/SO_4^{2-}) system in the range 5°C-85°C at 1 and 3 M ionic strength**
G.L. D. Donne, J.L. Cortina, R. Tauler, V. Marti, I. Bonhoure, J. de Pablo, T. Caruso, E. Vasca; Salerno, Italy; Barcelona and Manresa, Spain
- A26 Electrochemical oxidation of Am(III) and Am(V) ions in nitric acid solutions containing potassium phosphotungstate $K_{10}P_2W_{17}O_{61}$**
E.A. Yerin, A.A. Baranov, A.Yu. Volkov, V.M. Chistyakov; Dimitrovgrad, Russia
- A27 Thermochemistry of selected sodium neptunyl carbonates**
F. Rorif, J. Fuger, J.F. Desreux; Liège and Mol, Belgium
- A28 Prediction of ionic radius and binding energy of hydration for the No^{2+} -ion by relativistic density functional calculations**
M. Hirata, K. Tanaka, Y. Nagame, T. Baştuğ, J. Anton, B. Fricke; Tokai, Japan; Canberra, Australia; Kassel, Germany
- A29 Development of a gas-loop set-up for the investigation of the chemical properties of elements 112 and 114**
F. Haenssler, R. Dressler, R. Eichler, H.W. Gäggeler, D. Piquet, S. Soverna; Bern and Villigen, Switzerland

- A30 Electrochemical deposition - a tool for the investigation of superheavy element chemistry?**
H. Hummrich, J.V. Kratz; Mainz, Germany
- A31 Microsisak - a new device for fast and continuous liquid-liquid-extractions on a microliter scale**
K. Eberhardt, S. Andersson, C. Ekberg, B. Horn, J.V. Kratz, A. Müller, M. Nilsson, G. Skarnemark, N. Trautmann; Mainz, Germany; Göteborg, Sweden
- A32 Relativistic electronic structure calculations for the heaviest elements**
V. Pershina; Darmstadt, Germany
- A33 Final result of the CALLISTO-Experiment: Formation of sodium hassate(VIII)**
A. von Zweidorf, R. Angert, W. Bröchle, S. Bürger, K. Eberhardt, R. Eichler, H. Hummrich, E. Jäger, R. Jera, H.-O. Kling, J.V. Kratz, U. Krille, B. Kuczewski, G. Langrock, G. Lehr, M. Mendel, A. Nähler, A. Peil, V. Pershina, U. Rieth, M. Schädel, B. Schausten, E. Schimpf, H.-J. Schött, E. Stiel, P. Thörle, N. Trautmann, K. Tsukada, N. Wiehl, G. Wirth; Darmstadt and Mainz, Germany; Villigen, Switzerland; Tokai-mura, Japan
- A34 Zirconium and hafnium extraction using crown ethers - a model system for the study of rutherfordium**
R. Sudowe, C.E. Düllmann, L.M. Farina, C.M. Folden III, K.E. Gregorich, S.E.H. Gallaher, D.C. Hoffman, D.C. Phillips, J.M. Schwantes, R.E. Wilson, P.M. Zielinski, H. Nitsche; Berkeley, USA
- A35 Toward volatile metal complexes of rutherfordium - Results of test experiments with Zr and Hf**
C.E. Düllmann, G.K. Pang, C.M. Folden III, K.E. Gregorich, D.C. Hoffman, H. Nitsche, R. Sudowe, P.M. Zielinski; Berkeley, USA
- A36 Chloride complexation of rutherfordium - X-ray absorption fine structure spectroscopy of Zr and Hf in HCl**
H. Haba, K. Akiyama, K. Tsukada, M. Asai, A. Toyoshima, T. Yaita, M. Hirata, K. Sueki, Y. Nagame; Saitama, Tokai, Osaka and Tsukuba, Japan
- A37 Elution behavior of rutherfordium (Rf) in anion-exchange chromatography in a hydrofluoric acid system**
A. Toyoshima, K. Tsukada, M. Asai, H. Haba, K. Akiyama, I. Nishinaka, D. Saika, K. Matsuo, W. Sato, H. Ishizu, M. Ito, J. Saito, S. Goto, H. Kudo, H. Kikunaga, N. Kinoshita, C. Kato, A. Yokoyama, K. Sueki, Y. Nagame, A. Shinohara; Osaka, Ibaraki, Saitama, Niigata, Kanazawa and Tsukuba, Japan

- A38 Sorption on anion-exchange resin of dubnium and its homologues in HF solution**
K. Tsukada, H. Haba, M. Asai, A. Toyoshima, K. Akiyama, I. Nishinaka, M. Hirata, K. Hashimoto, S. Ichikawa, Y. Nagame, K. Yasuda, Y. Miyamoto, Y. Tani, H. Hasegawa, W. Sato, A. Shinohara, G. Goto, M. Ito, J. Saito, H. Ishizu, H. Kudo, Y. Oura, H. Nakahara, K. Sueki, N. Kinoshita, H. Kikunaga, A. Yokoyama; Tokai, Saitama, Osaka, Niigata, Tokyo, Tsukuba and Kanazawa, Japan
- A39 Comparing performance of k-zero neutron activation: Fresh and freeze-dried animal tissue analysis**
A.A. Canella, M.A.B.C. Menezes; Belo Horizonte, Brazil
- A40 Peak treatment of alpha liquid scintillation spectra for the determination of actinides in water samples**
J. Aupiais; Bruyères-le-Châtel, France
- A41 Robust methods for the determination of radium and uranium in water samples**
J. Aupiais; Bruyères-le-Châtel, France
- A42 Avalanche photodiodes for alpha liquid scintillation detection**
A. Reboli, J. Aupiais, J.C. Mialocq; Bruyères-le-Châtel and Gif-sur-Yvette, France
- A43 Effect of crown ethers on the Sr²⁺, Ba²⁺ and Ra²⁺ uptake on tunnel structure ion exchangers**
B. Bartoś, A. Bilewicz; Warsaw, Poland
- A44 Extraction and substoichiometric separation of Co(II) with organic reagent employing tracer technique**
V. Lobo, Z.R. Turel; Hodeidah, Republic of Yemen; Bombay, India
- A45 Analytical method for pure beta radionuclides in reactor graphite, concrete and other materials for reactor decommissioning**
X. Hou; Roskilde, Denmark
- A46 Measurement of hyperfine field in mavicyanin by perturbed angular correlation of gamma-rays**
A. Yokoyama, T. Hashimoto, K. Kataoka, M. Takata, Y. Ohkubo; Ishikawa and Osaka, Japan
- A47 Sequential separation of Zn(II), Hg(II) and Cd(II) by substoichiometric solvent extraction technique**
S.S Pandey, H. Bagla; Mumbai, India

- A48 A novel method for selective separation of ^{111}In from impurities by ion exchange chromatography**
R. Yavari, A.R. Khanchi, M. G. Maragheh, G. Bagheri; Tehran, Iran
- A49 Determination of Cu, Ag, and Au in alloy samples by sequential instrumental thermal neutron activation analysis**
U.N. Chaube, Z.R. Turel; Mumbai, India
- A50 Evaluation of uncertainties in routine determinations of thermal to epithermal flux ratios for k_0 based neutron activation analysis**
I.M. Cohen, M.C. Fornaciari Iljadica; Buenos Aires, Argentina
- A51 Fission track analysis of uranium-doped silica particles**
K.Y. Jee, H.Y. Pyo, S.C. Sohn, Y.J. Park, W.H. Kim; Daejeon, Korea
- A52 Study of the zinc effect on the beta-glucuronidase levels of some tissue samples using a nuclear technique**
T. Ünak, Y. Yildirim, U. Avcibaşı; Izmir, Turkey
- A53 Sr-90 determination in urine samples by ICP-MS and radiochemical techniques**
P. Ostapczuk, A.P. Vonderrheide, M.V. Zoriy, J.S. Becker, R. Hille; Jülich Germany; Ohio, USA
- A54 Determination of uranium, thorium and $^{235}\text{U}/^{238}\text{U}$ isotopic ratio at trace and ultratrace level in urine by LA-ICP-MS**
M. Burow, M. Zoriy, C. Pickhardt, P. Ostapczuk, R. Hille, J.S. Becker; Jülich, Germany
- A55 Ion chromatographic analysis of aqueous iodine species by conductivity and radioactivity measurement**
D. Schumann, R. Grasser, R. Dressler, H. Bruchertseifer; Villigen, Switzerland
- A56 The development of a depleted uranium solid matrix reference material**
A. Harms, D. Tyler, C. Gilligan; Middlesex, UK
- A57 The development and application of a standard for organically bound tritium measurements**
A. Harms, C. Gilligan, S. Jerome; Middlesex, UK
- A58 Standardisation of radioactivity at the National Physical Laboratory**
S. Jerome, S. Judge; Middlesex, UK

- A59 Prompt gamma-ray activation analysis: Multielemental non-destructive analytical method for geochemistry and cosmochemistry**
P. Kudějová, Z. Kasztovszky, Z. Révay, T. Belgya, T. Materna, J. Jolie; Köln, Germany; Budapest, Hungary
- A60 Determination of actinides and ^{90}Sr in spent ion exchange resins**
P. Tavčar, L. Benedik; Ljubljana, Slovenia
- A61 A TRLFS study of aqueous carbonate complexes: Comparison of Eu(III) and Cm(III) at 25 °C, and temperature influence on CmCO_3^+ stability**
T. Vercouter, C. Moulin, P. Vitorge ; Gif-sur-Yvette, France
- A62 Electrochemical behaviour of U(IV) and U(VI) in phosphoric acid**
A. Rahier, S. Picaud, A. Darchen; Mol, Belgium; Rennes, France
- A63 Separation of thorium(IV) from cerium (IV) and lanthanum (III) in aqueous solutions by extraction chromatography technique**
Ü. Hiçsönmez, M. Eral, C. Kütahyali; Manisa and Izmir, Turkey
- A64 ^{239}Np as a tracer of ^{237}Np in effluent samples and low level nuclear waste**
J.M. Diodati, F.M. Sartori; Buenos Aires, Argentina
- A65 Setting up laser ablation - inductively coupled plasma - mass spectrometry (LA-ICP-MS) in a hot-cell environment for the analysis of irradiated nuclear materials**
S. Van Winckel, S. Hollas, R. Malmbeck, J.-P. Glatz, I. Horn, D. Günther; Karlsruhe and Hannover, Germany; Zürich, Switzerland
- A66 NAA of long-time irradiated hafnium for an improved half-life value of ^{182}Hf**
C. Vockenhuber, M. Bichler, W. Kutschera, P. Steier; Wien, Austria
- A67 Application of X-ray fluorescence methods for analytical control of pyrochemical reprocessing of nuclear fuel**
M.I. Melnik, I.V. Tselishchev, R.I. Makeeva, I.A. Pshenichnaya, V.M. Chistyakov; Dimitrovgrad, Russia
- A68 Ultratrace analysis of ^{129}I in sediments by ICP-MS with collision cell**
A. V. Izmer, S.F. Boulyga, M.V. Zoriy, J.S. Becker; Jülich and Mainz, Germany
- A69 On the use of CE-ICP-MS (Capillary Electrophoresis - Inductively Coupled Plasma - Mass Spectrometry) to determine thermodynamic constant. Application to the $\text{UO}^{2+}/\text{H}_2\text{SO}_4$ system**
C. Ambard, N. Baglan, A. Delorme, J. Aupiais; Bruyères le Chatel, France

- A70 The use of moss as biomonitors of atmospherical deposition in Romania: An Example from the Eastern Carpathian mountains**
A. Lucaciu; Bucharest, Romania
- A71 Phoshoric acid purification: Removal of thorium and other chemical species**
H.T. Fukuma, E.A. De Nadai Fernandes, A.L. Quinelato, C.L. Gonzaga; Poço de Caldas and Piracicaba, Brazil
- A72 Digital signal processing gamma-ray spectrometers in high count rate applications**
G. Caspary, Jülich, Germany
- A73 Application of k_0 -based neutron activation analysis for studies on serpentines, dolerite and dolomites**
R. Acharya, A.G.C. Nair, N. Suresh Kumar, P.V.N. Kumar, N.B.Y. Reddy, L.K. Reddy, A.V.R. Reddy ; Mumbai and Cuddapah, India
- A74 Development of a software package for improving accuracy and precision in non-destructive declaration of radioactive waste**
T. Büchlerl, G. Caspary, A. Elhardt; Garching and Jülich, Germany

Poster Session B

(Nuclear Technology, Radiotracers in Life Sciences, Radionuclides in Geo- and Cosmochemistry, Radioactive Indicators in Research and Industry)

- B1 Production possibility of copper radioisotopes from cobalt target for PET studies**
F. Szelecsényi, Z. Kovács, K. Suzuki, T. Fukumura, K. Okada, K. Mukai;
Debrecen, Hungary; Chiba and Yokohama, Japan
- B2 Highly-pure radioisotopes for life science researches produced at the FLNR JINR accelerator**
S.N. Dmitriev, N.G. Zaiseva; Dubna, Russia
- B3 Cyclotron production of radionuclides in aqueous target matrices as alternative to solid state targetry: Production of Y-86 as example**
A.T.J. Vogg, R. Lang, P. Meier-Böke, W. Scheel, S.N. Reske, B. Neumaier;
Ulm, Germany
- B4 Isolation of lanthanide and hafnium radioisotopes from a massive Ta-target**
N.A. Korolev, A.F. Novgorodov, D.V. Filosofov, K. Zhernosekov, A. Korobeinikov, N.A. Lebedev, G.-J. Beyer, F. Roesch, and ISOLDE collaboration; Dubna, Russia, Mainz; Germany; Geneva, Switzerland
- B5 A new internal target system for production of ^{211}At on the cyclotron U-120M**
O. Lebeda, R. Jiran, J. Ráliš, J. Štursa; Řež, Czech Republic
- B6 Investigation of the production of the therapeutic radioisotope $^{114\text{m}}\text{In}$ through proton and deuteron induced nuclear reactions on cadmium**
F. Tárkányi, S. Takács, A. Hermanne, P. Van den Winkel, R. Van der Zwart;
Debrecen, Hungary; Brussels, Belgium
- B7 The production of ^{111}In from an $\text{In}/\text{In}_2\text{O}_3$ target**
T.N. van der Walt, N.P. van der Meulen, S.G. Dolley; Somerset West, South Africa
- B8 A vertical thermochromatographic device for various radiochemical separations including radionuclide generators**
A.F. Novgorodov, N.A. Korolev, F. Rösch; Dubna, Russia; Mainz, Germany
- B9 Development of a gas-jet-coupled multitarget system for multitracer production**
H. Haba, K. Igarashi, D. Kaji, R. Hirunuma, S. Enomoto; Saitama, Japan

- B10** **^{99m}Tc production on the basis of central generator and wasteless reactor Zr-Mo gel-technology**
I.A. Savushkin, O.B. Gourko; Minsk, Belarus
- B11** **Technetium generator with hydrotalcite as support of ^{99}Mo**
J. Serrano G., H. López G., N. Aranda O., F. Granados C., S. Bulbulian G.; México D.F., México
- B12** **Estimate of impurity purification coefficients for irradiated silver target processing and palladium-103 extraction**
L.A. Smakhtin, A.A. Sokolov, A.S. Kupriyanov, T.V. Prokopchik, E.V. Lapshina, V.M. Kokhanyuk, B.L. Zhuikov; Obninsk and Moscow, Russia
- B13** **Preparation and quality control of clinic scale ^{188}W - ^{188}Re generator**
Y. Duanzhi, Z. Wei, H. Weiqing, H. Weiyu, Z. Lei, M. Xiaofeng, S. Xichang, C. Benhong, W. yongxian; Shanghai, China
- B14** **Production of no-carrier added ^{31}Si for silicon-uptake studies in yeast cells**
G.C. Krijger, K.J. Volkers, H.J. Brassler, Z.I. Kolar; Delft, The Netherlands
- B15** **^{89}Sr separation from irradiated yttrium using vinylpyridine chelating resin VPC**
O.I. Andreev, R.A. Kuznetsov, A.N. Pakhomov, N.V. Tetyukova; Dimitrovgrad, Russia
- B16** **Extraction and high purification of actinium-225 isotope for medical application**
D.O. Dubinkin, N.A. Nerozin, V.B. Pavlovich, E.Ya. Smetanin; Obninsk, Russia
- B17** **Production and separation of ^{236}Pu and ^{237}Pu for laboratory use**
O.O. Odintsov, V.A. Ageyev, A.A. Klyuchnikov, A.D. Sajeniouk; Chernobyl and Kiev, Ukraine
- B18** **Production of highly pure einsteinium and fermium preparations**
O.I. Andreev, V.A. Tarasov, E.A. Zotov, A.Yu. Baranov; Dimitrovgrad, Russia
- B19** **A comparison of the adsorption behaviour of radioisotopes from their organic solutions on solid sorbents**
M.W. Abdel Raouf, M. Nofal, A. Alian; Cairo, Egypt
- B20** **Radiochemical reprocessing of activated V-Cr-Ti alloy as structural material for fusion reactor**
S.A. Bartenev, I.B. Kvasnitskij, B.N. Kolbasov, P.V. Romanov, V.N. Romanovskij; St. Petersburg and Moscow, Russia

- B21 Investigation on the chemical behaviour of a crown ether irradiated in high gamma radiation fields**
M.C. Fornaciari Iljadica, J.C. Furnari, I.M. Cohen; Buenos Aires, Argentina
- B22 Effect of metal nitrates on strontium extraction with 4',4''-di-tert-butyl-dicyclohexano-18-crown-6**
R.A. Kuznetsov, A.N. Pakhomov; Dimitrovgrad, Russia
- B23 Safety relevant nuclides in advanced spallation neutron sources**
R. Moormann, S. Becker, K. Bongardt, H. Brücher, W. Kühnlein, B. Lensing, H. Schaal; Jülich, Germany
- B24 Evaluation of cross section data for applications in accelerator driven energy systems and in production of medical radioisotopes**
E.V. Gai, A.V. Ignatyuk, V.P. Lunev, Yu.N. Shubin, N.N. Titarenko; Obninsk, Russia
- B25 Oscillatory extraction of Eu-152**
M.A. Afonin, A.A. Kopyrin, E.V. Komarov, M.H. Ekzekov; St. Petersburg, Russia
- B26 Progress in the method for preparing standard low energy X-ray point source set**
D. Hongshan, F. Qin, L. Guiha, Y. Sujuan; Beijing, China
- B27 Irradiation facilities at the new research reactor FRM-II Munich**
X. Li, H. Gerstenberg, K. Fiederer; Garching and Markdorf, Germany
- B28 Biodistribution and tumor uptake of iodine-125-labelled fullerols in mice**
Z. Ji, H. Sun, H. Wang, Y. Liu; Beijing, China
- B29 Syntheses of ¹⁸F-labeled acyclic purine and pyrimidine nucleosides intended for monitoring gene expression**
M. Grote, B. Noll, St. Noll; Dresden, Germany
- B30 Carbon sources which decreases the specific activity of [¹¹C]CH₃I synthesized by the single-pass I₂ methode**
M.-R. Zhang, K. Suzuki; Chiba and Tokyo, Japan
- B31 Stability of ¹¹C-radiopharmaceutical against radiolysis and their synthesis at high radiochemical purity**
T. Fukumura, R. Nakao, K. Suzuki; Chiba, Japan
- B32 Quality control of [¹⁸F]FDG injection: Bacterial endotoxin test, aluminium ions test and HPLC analysis for FDG and CIDG**
R. Nakao, T. Kida, K. Suzuki; Chiba and Tokyo, Japan

- B33 Synthesis of 2'-deoxy-2'-[¹⁸F]-fluoro-5-ethyl-1β-D-arabinofuranosyluracil ([¹⁸F]-FEAU) and micro PET imaging of HSV-tk gene expression in tumor-bearing nude mice**
M.M. Alauddin, A. Shabinian, R. Park, M. Tohme, J.D. Fissekis, P.S. Conti; Los Angeles, USA
- B34 ^{99m}Tc(i)tricarbonyl complexes with N-methylamides of picolinic and thiopicolinic acids**
M. Zasepa, J. Mieczkowski, J. Narbutt; Warsaw, Poland
- B35 Synthesis and radioiodination of di-iodo-Evan's blue via isotopic exchange reaction in the molten state and evaluation of the kinetics**
K.M. El-Azony, D. Bier, H.H. Coenen; Jülich, Germany
- B36 Synthesis and evaluation of ¹⁸F-labelled amino acids promising for clinical PET imaging**
K. Hamacher, K.J. Langen, H. Mühlensiepen, D. Bauer, H.H. Coenen, Jülich Germany
- B37 New fluorinated ligands for the dopamine transporter: Synthesis and first biological evaluation in pig and rat brain**
B. Krebs, W. Sihver, H.H. Coenen; Jülich, Germany
- B38 Aromatic halogen exchange reactions**
J. Kozempel, O. Lebeda, M. Hrubý, J. Kučka, J. Ráliš, J. Kadeřávek, L. Lešetický; Prague and Řež, Czech Republic
- B39 Binding of metal –²¹¹At complexes as a new method for preparation of astatine radiopharmaceuticals**
M. Pruszyński, A. Bilewicz, B. Waś, B. Petelenz; Kraków, Poland
- B40 Synthesis of the possible receptor ligand [¹³¹I]-3-iodo-cytisine for in vivo imaging of the nAChReceptor**
A. Özbołat, L. Munoz, S. Guhlke, U. Wüllner, D. Gündisch, J. Schmaljohann; Bonn, Germany
- B41 Preparation of ¹⁸⁸Re-HEDP and its pre-clinical study**
Y. Duanzhi, Z. Wei, G. Zili, Z. Jiong, M. Xiaofeng, X. Jianying, Z. Hao, C. Minfeng, C. Haiyan, H. Weiyu, Z. Lei, H. Weiqing, S. Qixun, H. Zongzhi, W. Yongxia; Shanghai, China
- B42 Labeling of creatinine with technetium-99m**
F.Y. Lambrecht, K. Durkan, A. Soylu; Izmir, Turkey
- B43 Study of the radiopharmaceutical potential of radioiodinated phenolphthalein**
T. Ünak, Y. Duman, U. Avcibaşı, Y. Yildirim; Izmir, Turkey

- B44 The clear PET™: A high performance dual-layer phoswich small animal PET scanner**
 U. Heinrichs, E. Auffray, G. Brandenburg, P. Bruyndonckx, Y. Choi, D. Christ, N. Costes, Y. Declais, O. Devroede, G. Dietzel, O. Dietzel, C. Dujardin, A. Fedorov, M. Korjik, M. Krieguer, C. Kuntner, G. Largeron, C. Lartizien, H. Larue, P. Lecoq, J.B. Loude, J. Marteau, Ch. Morel, J.B. Mosset, C. Parl, C. Pedrini, A.G. Petrosyan, U. Pietrzyk, M. Rey, S. Saldino, D. Sappey-Marnier, L. Simon, M. Streun, S. Tavernier, J.M. Vietra, K. Ziemons, Straubenhardt and Jülich, Germany, Villerbanne, France, Brussels, Belgium, Seoul, Korea, Minsk, Belarus, Laussane, Switzerland, Ashtarak, Armenia
- B45 Measurement of dynamic transport processes in plants using short-lived isotopes**
 G.W. Roeb, PEH. Minchin, S. Jahnke, U. Schurr; Jülich, Germany
- B46 Production of ⁶²Zn, ⁶⁵Zn and ²⁰³Pb radioisotopes for studying the transport of zinc and lead in plants**
 A. Fenyvesi, F. Szelecsényi, Z. Szücs, A. Tóth; Debrecen, Hungary
- B47 The behaviour of cesium iodide radioaerosols during Csl sublimation from metal surface**
 S.A. Kulyukhin, A.N. Kamenskaya, N.B. Mikheev, I.A. Rumer, E.N. Bogachev; Moscow, Russia
- B48 Kinetics of hydrolysis and partition constants of neutral metal chelates as radiotracers. Solvent extraction of tris(thenoyltrifluoroacetate)thallium(III)**
 J. Narbutt, J. Krejzler; Warsaw, Poland
- B49 A radiokinetic study of the ⁶⁰CoC₂O₄, ⁶⁰CoI₂ and ⁶⁰Co(SCN)₂ crystals growth in hydrogels**
 A. Cecal, K. Popa, S. Patachia, C. Corbos; Iasi and Brasov, Romania
- B50 Application of tritium label in investigation of anion exchange in layered double hydroxides**
 E.V. Lukashina, A. V. Lukashin, G. A. Badun, Y. D. Tretyakov; Moscow, Russia
- B51 Diffusion of radioactive tracers (²⁰⁴Tl, ^{110m}Ag) and ionic conductivity in membrane materials for the chemical sensors**
 Yu. E. Ermolenko, Yu.G. Vlasov, V.V. Kolodnikov, D.A. Shabalkin, J. Kloock, M.J. Schoening; St. Petersburg, Russia; Jülich, Germany
- B52 The study of CsClO₄ solubility in mixed solvents by radioactive indicators method**
 O. Yu. Sytnik, A.P. Krasnopyorova; Kharkiv, Ukraine

- B53 Radiolabelling of humic substances with ^{131}I and ^{14}C and their use for adsorption studies on geomatrics under conditions near to nature**
A. Mansel, J.T. Patt, H. Kupsch; Leipzig, Germany
- B54 Effect of humic colloids on the pH-dependent adsorption of terbium (III) onto geogenic solids-changeover from mobilization to demobilization**
H. Lippold, H. Kupsch; Leipzig, Germany
- B55 Cosmogenic nuclides in the Martian meteorites ALHA 77005, LAFAYETTE AND ZAGAMI**
T. Bastian, U. Herpers, P.W. Kubik, K.Knie, U. Ott, R. Michel; Köln, Garching, Mainz and Hannover, Germany; Zürich, Switzerland

Poster Session C

(Nuclear Fuel Cycle, Radioecology and Environmental Sciences)

- C1 Technological development for liquid radioactive waste management in order to cease discharge into open storage**
V. Shidlovski, V.M. Kondakov, A.S. Ryabov, V.G. Balakhonov, V.A. Matyukha, I.V. Yurko, I.M. Kosareva, M.C. Savushkina; Seversk and Moscow, Russia
- C2 Liquidation of the surface storages for liquid mid-level radioactive wastes at the Siberian group of chemical enterprises**
V. Shidlovski, A.S. Kozyrev, A.S. Ryabov, A.A. Zubkov, V.A. Matyukha, N.A. Mikhailova, E.N. Semenov, M.D. Noskov, A.D. Istomin, E.V. Zakharova; Seversk and Moscow, Russia
- C3 Self-propagating high-temperature synthesis of pyrochlore-type matrices for immobilization of actinides**
S.E. Vinokurov, S.A. Perevalov, Y.M. Kulyako, B.F. Myasoedov, A.V. Kouprin, E.M. Glagovsky; Moscow, Russia
- C4 Dissolution of uranium, neptunium, plutonium and americium oxides in tri-n-butylphosphate saturated with nitric acid**
M.D. Samsonov, Y.M. Kulyako, T.I. Trofimo, B.F. Myasoedov; Moscow, Russia
- C5 Radiation and chemical stability of titanate ceramics intended for plutonium immobilization**
S.V. Tomilin, A.N. Lukinykh, A.V. Bychkov, V.I. Konovalov, V.M. Chistyakov, L. Jardine; Dimitrovgrad, Russia, Livermore, USA
- C6 Dynamic leaching of spent UO₂ fuel under oxidising conditions**
D. Serrano-Purroy, J.-P. Glatz, S. Hollas, D.H. Wegen, J. de Pablo, I. Casas, J. Giménez; Karlsruhe, Germany; Barcelona, Spain
- C7 Development of a simple reprocessing process using n-cyclohexyl-2-pyrrolidone as selective precipitant for uranyl ions**
Y. Ikeda, N. Koshino, M. Nogami, K. Suzuki, H. Mineo, Y. Morita, K. Yamasaki, T. Chikazawa, Y. Tamaki, T. Kikuchi; Tokyo, Chiba and Ibaraki, Japan
- C8 Study of kinetics of gas generation from moistened plutonium dioxide powder**
V.K. Orlov, E.M. Glagovsky, A.A. Karnozov; Moscow, Russia
- C9 Radioactive waste and nuclear fuel cycle back-end**
O. Kireeva; Moscow, Russia

- C10** ^{132}Te , ^{95}Zr , ^{99}Mo and ^{103}Ru trace level fission products speciation and adsorption on inorganic materials as a function of pH value
F. Granados C., J. Serrano G., V. Bertin M., S. Bulbulian G.; México D.F., México
- C11** Influence of β radiation on the UO_2 dissolution at different pH
F. Clarens, J. Giménez, J. de Pablo, I. Casas, J. Dies, J. Quiñones ; Barcelona and Madrid, Spain
- C12** Electrochemistry and spectroelectrochemistry of neptunium ions in aqueous solution
S.-Y. Kim, T. Asakura, Y. Morita; Tokai-mura, Japan
- C13** Effect of alkyl substituents on extraction properties and solubility of phoshyolated calix[4]arenes
I.V. Smirnov, M.D. Karavan, V.A. Babain, E.S. Stoyanov; St. Petersburg and Novosibirsk, Russia
- C14** Separation of actinides from lanthanides by electrolysis - a comparison between molten Bi and solid Al cathodes
J. Serp, R. Malmbeck, J.-P. Glatz; Karlsruhe, Germany
- C15** Development of a regenerable strip reagent for treatment of acidic, radioactive waste with the universal solvent extraction process
J.D. Law, R. S. Herbst, D. R. Peterman, T.A. Todd, V.N. Romanovskiy, V.A. Babain, I.V. Smirnov, V. M. Esimantovskiy; Idaho Falls, USA; St. Petersburg, Russia
- C16** Sorption of americium from complexone solutions in dense CO_2
V. Babain, D. Shafikov, V. Kamachef, A. Murzin, A. Shadrin; St. Petersburg, Russia
- C17** Graphite and pyrocarbon corrosion in water and salt brines
T.E. Podrzhina, J. Fachinger, Jülich, Germany
- C18** Extraction of americium and europium by carbamoyl-substituted adamantylcalixarenes
V.A. Babain, M.Yu. Alyapyshev, M.D. Karavan, V. Bohmer, L. Wang, V.V. Kovalev, E.A. Shokova, A.E. Motornaya; St. Petersburg and Moscow, Russia; Mainz, Germany
- C19** Complex radiochemical and activation analysis of minor actinides transmutation in fast reactors and in the beam of high energy accelerators
L.Y. Isakova, V.B. Pavlovich, E.Y. Smetanin, S.G. Stetsenko, Y.S. Khomyakov, Y.N. Shubin; Obninsk and Dubna, Russia

- C20 Penetration and leaching studies of radionuclides in concrete and hardened cement paste**
K. Fleischer, G. Herold, K. Raptis, A. Neumann, H.S. Müller, R. Knappik;
Karlsruhe and Dresden, Germany, Vienna, Austria
- C21 Sorption of technetate on Mg-Al-layered double hydroxide**
H. Curtius, D. Wellens, R. Odoj; Jülich, Germany
- C22 Methods of processing of Am - inclusive waste formed at the conversion of metallic plutonium**
D.G. Kuznetsov, A.A. Minaev, I.B. Popov, V.V. Ivanov, S.M. Baranov;
Moscow, Russia
- C23 Investigation of matrices for immobilization of some fractionated radioactive waste**
A.A. Minaev, D.G. Kuznetsov, I.B. Popov, V.V. Ivanov, I.K. Prilutskaya;
Moscow, Russia
- C24 Fabrication and characterization of inert matrix and thoria fuel for actinides transmutation**
D. Barrier, A.A. Bukaemskiy, G. Modolo, R. Odoj; Jülich, Germany
- C25 Retention of anionic radionuclides by organophilic clays in aqueous solutions**
B. Riebe, C. Bunnenberg; Hannover, Germany
- C26 Porous zirconium carbide-based inert matrix fuel developed for fast reactors to dispose of plutonium and minor actinides**
V.K. Orlov, E.M. Glagovsky, H.M. Bluekher, A.P. Ivanov, I.A. Shlepov;
Moscow, Russia
- C27 Inhibiting the radiolysis of BTP-molecules by addition of nitrobenzene**
M. Nilsson, S. Andersson, C. Ekberg, M.R.S. Foreman, G. Skarnemark;
Göteborg, Sweden; Reading, UK
- C28 Extraction of actinides, fission products and corrosion products from synthetic high level liquid waste with dimethyl-dioctyl-hexaethoxy-malonamide (DMDOHEMA)**
G. Skarnemark, S. Andersson, C. Ekberg, M. Nilsson, A. Ødegaard-Jensen;
Göteborg, Sweden
- C29 Separation of trivalent actinides and lanthanides using synergistic extraction with pyridine based ligands**
C. Ekberg, S. Andersson, M. Nilsson, G. Skarnemark; Göteborg, Sweden

- C30 Determination of stability constants of lanthanide nitrate complex formation using a solvent extraction technique**
S. Andersson, K. Eberhardt, C. Ekberg, J.O. Liljenzin, M. Nilsson, G. Skarnemark; Göteborg, Sweden; Mainz, Germany
- C31 Extraction separation of americium(III) from lanthanides(III) with N,N,N',N'-tetrakis(2-methylpyridyl)ethylenediamine (TPEN) and derivatives**
T. Matsumura, K. Takeshita; Tokai-mura and Yokohama, Japan
- C32 Preliminary studies on the reprocessing of advanced heavy water reactor (AHWR) spent fuel**
P.N. Pathak, D.R. Prabhu, A.S. Kanekar, R.K. Jha, K.K. Gupta, V.K. Manchanda; Mumbai, India
- C33 Extraction-electrochemical separation of rare earths**
A.A. Kopyrin, A.A. Baulin, M.A. Afonin; St. Petersburg, Russia
- C34 Chromatographic separation of actinides and lanthanides from fission products on CMPO/SiO₂-P extraction resin**
P. Goethals, A. Bruggeman, Y. Wei, H. Hoshi, M. Kumagai; Mol, Belgium; Takada, Japan
- C35 Role of irradiation in the leaching of alkali elements from glasses**
M.I. Ojovan, Sheffield, UK
- C36 Process development for the treatment of radioactive waste using zirconium salt of dibutyl phosphoric acid dissolved in 30% tributyl phosphate**
B.Ya. Zilberman, Yu.S. Federov, O.V. Schmidt, E.N. Mishin, D.N. Kukharev. A.S. Aloy, A.A. Akhmatov, I.V. Blazheva, A.V. Trofimenko, A.V. Strelnikov, G.R. Choppin; St. Petersburg, Russia; Tallahassee, USA
- C37 Evaluation of primordial radionuclides in building materials used in the Rawalpindi/Islamabad and Karachi areas by γ -ray spectrometry and INAA**
J.H. Zaidi, M. Arif, I. Fatima; Islamabad, Pakistan
- C38 Preconcentration of ¹⁹⁸Au by mimusops elengi seed proteins**
D. Nayak, K.M. Hazra, S. Laskar, S. Lahiri; Kolkata and Burdwan, India
- C39 Po-210 dating of Yenisei sediments**
E. Klemt, H. Paliachenka, G. Zibold; Weingarten, Germany

- C40 Formation of hydroxy-aluminosilicate colloids: The process of actinide incorporation**
M.A. Kim, P.J. Panak, J.J. Yun, D. Breban, A. Priemyshev, J.I. Kim, Th. Fanghänel; Garching and Karlsruhe, Germany
- C41 ^{137}Cs low-level determination in drinking water using a silica gel impregnated with molybdophosphate (ASG adsorbent)**
A. Camacho, I. Vallés, X. Ortega, Barcelona, Spain
- C42 Radiotracer study of dialysis, electrophoresis, ion exchange and ultrafiltration as methods for analysis metal-humate complexation**
P. Benes, K. Stamberg, J. Mizera, S. Prochazkova; Praha, Czech Republic
- C43 Release and sorption of uranium in the system waste rock from uranium mining - natural water**
D. Vopalka, P. Benes, S. Prochazkova; Praha, Czech Republic
- C44 Radiocaesium in water and sediments of Lago Maggiore: Measurements and modelling**
V. Putyrskaya, E. Klemt, H. Paliachenka, G. Zibold; Weingarten, Germany; Minsk, Belarus
- C45 Determination of heavy metals in aerosol fractions of different particle sizes from the healing gallery of Badgastein (Austria)**
G. Wallner, A. Berner; Vienna, Austria
- C46 Adsorption behaviour of strontium on kaolinite and montmorillonite and their mixtures**
G. Atun, E. Bascetin; Istanbul, Turkey
- C47 Detection of environmental radioactive micro-particles bearing fissile material**
G. Tamborini, O. Dequincey, M. Betti, Karlsruhe, Germany
- C48 Positron emission tomography for modelling of geochemical transport processes in clay**
M. Richter, M. Gründig, K. Zieger, A. Seese; Leipzig, Germany
- C49 Tritium enrichment in the hydration sphere of inorganic salts**
B. Wierczinski, F. Baumgärtner, G. Müllen, A. Türler; Garching, Germany
- C50 Geochemical caesium fractionation in bottom sediments**
G. Lujanienė, B. Šilobritienė, K. Jokšas; Vilnius, Lithuania
- C51 Peculiarities of ^{137}Cs behaviour in marine environment**
G. Lujanienė, K. Jokšas, B. Šilobritienė; Vilnius, Lithuania

- C52 Express determination of ^{90}Sr in different objects with dicyclohexyl-18-crown-6 (DCH18C6)**
A. Burak, H. Fischer, O. Bilan, E. Rudak, O. Yachnik; Minsk, Belarus; Bremen, Germany
- C53 Europium sorption from aqueous solutions by Al^{3+} - and Fe^{3+} -doped amorphous zirconium and titanium phosphates**
O. Misaelides, S. Sarri, D. Zamboulis, G. Gallios, I. Zhuravlev, V.V. Strelko ; Thessaloniki, Greece; Kiev, Ukraine
- C54 Humate complexation of neptunium(V)**
A. Seibert, C.M. Marquardt, J.V. Kratz, N. Trautmann, Th. Fanghänel; Karlsruhe and Mainz, Germany
- C55 Determination of stability constant of plutonium complexes with humic acid**
L. Genot, H. Michel, G. Barci-Funel; Nice, France
- C56 Development of methodology for calculation of control levels (CL) for discharges and blowouts in RAW handling**
V.I. Panteleev, T.N. Laschenova, I.P. Korenkov; Moscow, Russia
- C57 Environmental isotopes for determining the residence time and a qualitative study of recharge of shallow aquifer of Guelmime, South Morocco**
A. Aiachi, S. Bouhlassa; Rabat, Morocco
- C58 AMS analysis of ^{36}Cl induced in shielding concrete of various accelerator facilities**
K. Bessho, H. Matsumura, T. Miura, Q. Wang, K. Masumoto, T. Matsuhira, Y. Nagashima, R. Seki, T. Takahashi, K. Sasa, K. Sueki; Tsukuba, Japan
- C59 Changes in the filterable fractions of ^{60}Co , ^{125}Sb , ^{137}Cs and ^{241}Am from a contaminated aquifer: A laboratory study**
F. Caron, S. Laurin, G. Mankarios; Sudbury, Canada
- C60 Uptake of thorium by wheat at different stages of plant growth**
I. Shtangeeva, S. Ayrault, J. Jain; St. Petersburg, Russia; Gif-sur-Yvette, France; Notre Dame, USA
- C61 Distribution of ^{238}Pu , $^{239+240}\text{Pu}$, ^{241}Am and ^{244}Cm radionuclides in Chernobyl fallout by soil organic material fractions**
O.O. Odintsov; Chernobyl, Ukraine
- C62 White sea radioactivity assessment**
R.A. Aliev, S.N. Kalmykov, A.P. Lisitzin; Moscow, Russia

- C63 Modelling colloid generation with plutonium: The effect of pH and redox potential**
C. Degueldre, M. Bolek; Villigen, Switzerland
- C64 Behaviour of radioactive cesium, plutonium and americium in boreal forest ecosystems**
J. Lehto, T. Jaakkola, K. Vaaramaa, A. Leskinen, I. Outola, M. Tillander, R. Pehrman; Helsinki, Finland
- C65 Development of nuclear analytical techniques in analysis of some pollutants in plant leaves**
M. Kadirova, U.S. Kadirov, N.M. Mukhamedshina, A.A. Mirsagatova, M.I. Salimov; Tashkent, Uzbekistan
- C66 The environmental actinide and radiochemistry program at Clemson university**
J.D. Navratil; Anderson, USA
- C67 Radionuclide x-ray fluorescence method of determination of toxic metal content in environment objects**
A.P. Krasnopyorova, L.T. Lebedeva, G.D. Yukhno, O.Yu. Sytnik; Kharkiv, Ukraine
- C68 Application of simple environmental model for naturally occurring trace elements transformation in surface water**
A.A. El Sayed, E.H. Borai; Cairo, Egypt
- C69 Study of polonium-210 radioactivity in Indian and German tobacco**
U.W. Scherer, J. Schütz, A. Schamberger, S. Cooper, A. Srivastava; Aachen, Germany; Chandigarh, India
- C70 Study of airborne radioactivity around open cast coal mines in Juelich region**
U.W. Scherer, J. Schütz, S. Cooper, A. Srivastava; Jülich, Germany; Chandigarh, India
- C71 Optimization of electrochemical soil decontamination**
M. Nemeč, J. John; Prague, Czech Republic
- C72 A systematic study on cesium sorption on a sedimentary rock towards reliable safety assessment methodology for HLW disposal**
X. Xia, M. Shibata, A. Kitamura, G. Kamei; Tokai-mura, Japan