

When we, at the *Journal of Radioanalytical and Nuclear Chemistry (JRNC)*, decided to launch a new conference series called *Radioanalytical and Nuclear Chemistry (RANC)* to bring together our scientific community with similar interest, we did not even imagine that it would excite such a broad interest all over the world. We have more than 600 colleagues registered and at the end close to 400 participants could join us to present over 200 lectures and almost 200 posters. That is why we will have a very packed program: the mornings will start with plenary lectures followed by four parallel sessions of oral presentations. We found time for poster sessions on Monday and Tuesday evenings as well as on Thursday afternoon with barely enough time left for the traditional excursion. I honestly hope that you will be able to find some time to enjoy this fantastic city with all its beauty and excitements. At the same time, we will try our best to entertain you at the conference venue and also at the gala dinner on Wednesday evening. Running these many events in parallel and keeping the strict schedule will require novel IT solutions such as up-to-date web pages, smart-phone apps and a central clock service together with a team of enthusiastic organizers.

2016 is a special year for us: 50 years have passed since the death of the great Hungarian Nobel Laureate as well as

radiochemist Prof. György Hevesy. During the first festive session on Sunday afternoon, we will remember his life with the help of his son Dr. Georg de Hevesy and his achievements by biographer Prof. Siegfried Niese. This year's Hevesy Medal Award will be presented to Prof. Tomoko Nakanishi at this ceremony, and the Life-Achievement Award of Akadémiai Kiadó and the Editorial Board of the JRNC will be conferred to Prof. Tibor Braun, the founder of this journal. We will continue to commemorate Prof. György Hevesy's inventions of radioactive tracing, chemical analyses based on X-ray fluorescence and neutron activation analysis in the first plenary session on Monday morning.

On behalf of the organizing committee, I wish you a pleasant stay and exciting scientific discussions with your colleagues during RANC-2016:

Zsolt Révay

Conference Chair
Editor-in-Chief / JRNC
Technische Universität München,
Germany



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Conference Organizers



International Conference on Radioanalytical and Nuclear Chemistry
April 10–15, 2016 / Budapest, Hungary

Scientific Organizing Committee

Zsolt Révay

Conference Chair
Editor-in-Chief / JRNC
Technische Universität München, Germany

Tibor G. Kocsor

Conference Co-Chair
Associate Editor / JRNC
Akadémiai Kiadó, Hungary

Amares Chatt

Conference Co-Chair
Editor / JRNC
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Nóra Vajda, Hungary

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Conference Organization

AKCongress

P.O. Box 245, H-1519 Budapest, Hungary
Phone: +36 1 464 8215 / Fax: +36 1 464 8221
www.akcongress.com
RancConf-HU@akademiai.hu



Publishing Information

© Akadémiai Kiadó, Budapest, 2016
P.O. Box 245, H-1519 Budapest, Hungary
Phone: +36 1 464 8240 / Fax: +36 1 464 8221
www.akademiai.com / www.akademiaikiado.hu
info@akkrt.hu



ISBN 978-963-05-9699-2

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The organizer reserves the right to make changes in the conference program.

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Dr. Westmeier GmbH

General Information

Conference Venue

Hotel Mercure Budapest Buda****

Krisztina körút 41–43, H-1013 Budapest, Hungary

Phone: (+36) 1/488-8100

E-mail: h1688-sb@accor.com

Conference Language

The official language of the Conference is English. No translation facilities will be provided.

Registration and Information

Opening hours

Sunday, 10 April	14:10–18:20
Monday & Tuesday, 11–12 April	8:00–18:20
Wednesday & Thursday, 13–14 April	8:00–16:00
Friday, 15 April	8:00–12:50

The Registration Desk will be open during the above opening hours. During these times, preregistered participants can pick up their name badges and conference materials. Please be prepared to present a proof of your advance payment and, if applicable, a proof of your PhD student status.

On-site registration is also possible and credit card or cash payment will be accepted. The on-site registration fees of the Conference are as follows:

Full	EUR 800
PhD Students	EUR 650
Accompanying Persons	EUR 450

The registration fee includes intermediary services.

The conference registration fee includes:

- Attendance to all scientific sessions
- Official conference documentation
- Conference bag with complete conference materials
- Admission to the Welcome reception
- Gala dinner
- Excursion
- Coffee breaks
- Lunches on April 11–15, 2016
- Average value of catering included in the registration fee is EUR 240 (with service charges)
- VAT

The accompanying person fee includes:

- Accompanying persons are those who do not actually participate at the Conference, i.e., they come with an active participant
- Accompanying persons are not allowed to participate in the scientific sessions
- Admission to the Welcome reception
- Gala dinner
- Excursion
- Coffee breaks
- Lunches on April 11–15, 2016
- Average value of catering included in the registration fee is EUR 240 (with service charges)
- VAT

The General Terms and Conditions can be found on the Conference website:

<http://www.jrnc-ranc.com/index.php/conference>

Name Badges

Participants, accompanying persons and exhibitors are kindly requested to wear their name badge during all Conference events. Admittance to the scientific sessions and social events will be refused if the required badge cannot be presented.

Wifi and Internet

A free network will be available in the whole building.

Certificate of Participation

Participants will be given a Certificate of Participation upon registration.

Currency

The unit of Hungarian currency is known as the **Forint** (HUF). Bills come in 20000, 10000, 5000, 2000, 1000, 500 HUF denominations, coins are 200 (two colored, similar to €1), 100 (two colored, similar to €2), 50, 20, 10, 5 HUF. Euro is accepted at most hotels and some of the restaurants and shops. You can also use credit cards in major shops and larger restaurants.

Social Programs

Excursion

Explore the historical palace complex of the Hungarian kings in Budapest, be a part of our 1000-year-old history. With our tourguides you can visit the most emblematic buildings in the Castle District like the Sándor Palace, the Royal Palace or the Fishermen's Bastion, and you can enjoy the breathtaking panorama to the Danube, the Margaret Island and the Parliament.

Location:

The Castle District of Budapest

Date:

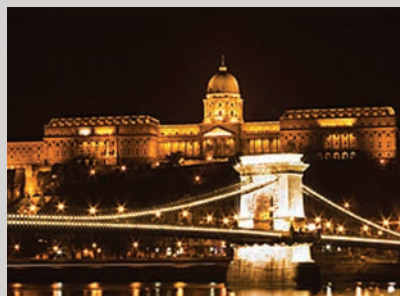
Wednesday,
13 April,
16:30–18:00

Meeting point and time:

hotel lobby, 16:30

Price:

included in the registration fee



Gala Dinner

Conference participants are welcome to the dinner cruise on the largest event boat of Hungary. Enjoy delicious Hungarian meals paired with a great selection of wines while floating on the river Danube. Transportation to the venue will be provided.

Location:

Európa Boat

Date:

Wednesday,
13 April,
19:00–22:00

Meeting point and time:

hotel lobby,
18:30

Price:

included in the registration fee



Hevesy Award

The Hevesy Medal Award (as founded by Prof. Tibor Braun) is the premier international award of excellence honouring outstanding achievements in radioanalytical and nuclear chemistry. It is named after George (György) Hevesy (1885–1966) who received the Nobel Prize for Chemistry in 1943.

The Hevesy Medal Award is given in recognition of excellence through outstanding, sustained career achievements in the fields of pure and applied nuclear and radiochemistry, particularly applications to nuclear analytical chemistry. It comprises an engraved bronze medal (in a presentation case) and an ornamental scroll, which are presented at a major international radiochemical conference occurring in the year of the award. The Hevesy Medal Award has no monetary value.

The Hevesy Medal was awarded almost annually during the period 1968–1986 to nineteen distinguished individuals whose contributions had traced and defined the scope and depth of radioanalysis through the prolific postwar years of the nuclear era. Their achievements included pioneering work on radioactivation analysis methodology and applications, the

development of radiochemical separation procedures and analytical schemes, radiotracer applications, analytical developments such as substoichiometric isotopic dilution analysis, automated systems and computerized systems, and widespread fields of application. After an interval of 14 years, the Award was reactivated in 2000. The International Committee on Activation Analysis of the Modern Trends in Activation Analysis Conferences (ICAA-MTAA) is currently responsible for the administration of the award.

Sunday evening after the opening ceremony a special session will be held dedicated to György Hevesy on the occasion of the 50th anniversary of his death. Prof. Siegfried Niese, the author of the Hevesy biography is going to present a lecture on his life and work. Dr. Georg de Hevesy, the son of the great scientist will grace the conference with his presence, and he is going to present the Hevesy Medal Award 2016.

Please join us at this festive session on Sunday, 10 April, at 16:00.



Meet the Speakers

The schedule of the plenary lectures is as follows:

Time	Speakers	Country	Lecture Titles
Sunday, April 10, 16:50	Siegfried Niese	Germany	George de Hevesy (1885–1966) – Discoverer of hafnium, founder of radio analytical chemistry and X-ray fluorescence analysis and father of nuclear medicine
Sunday, April 10, 17:50	Tomoko M. Nakanishi	Japan	The thing that becomes clear by a radiation and the use of the radioisotopes for plant physiology – With the findings of Fukushima nuclear accident / HEVESY AWARD lecture
Monday, April 11, 8:30	Syed M. Qaim	Germany	New developments in accelerator production of radionuclides for medical applications
Monday, April 11, 9:10	René van Grieken	Belgium	X-ray spectrometry for environment and cultural heritage
Monday, April 11, 9:50	Amares Chatt	Canada	Eighty years of neutron activation analysis: 1936–2016
Tuesday, April 12, 8:30	Hans-Arno Synal	Switzerland	How far can we get? Latest progress in accelerator mass spectrometry
Tuesday, April 12, 9:10	Richard M. Lindstrom	USA	Believable statements of uncertainty
Tuesday, April 12, 9:50	Zhifang Chai	China	New advances of nuclear energy radiochemistry in China
Wednesday, April 13, 8:30	Christian Ekberg	Sweden	Novel nuclear fuels for a sustainable fuel cycle, production and recyclability
Wednesday, April 13, 9:10	Stephen LaMont	USA	Nuclear forensics: A maturing discipline
Wednesday, April 13, 9:50	Enrico Sabbioni	Italy	Nuclear and radioanalytical techniques in metallobiochemistry research: Studies over 50 years
Thursday, April 14, 8:30	Richard B. Firestone	USA	Analysis of the global radiocarbon record for evidence of near-earth supernovae
Thursday, April 14, 9:10	Andreas Türler	Switzerland	Progress in superheavy element research
Thursday, April 14, 9:50	Pavel P. Povinec	Slovakia	Low background gamma-spectrometry: Limits and applications
Friday, April 15, 8:30	Hans-Jürgen Wester	Germany	New trends in radiopharmaceuticals
Friday, April 15, 9:10	Franco Cataldo	Italy	Radiation chemical aspects of the origins of life
Friday, April 15, 9:50	A. V. R. Reddy	India	An overview of our work in nuclear chemistry

Conference Chair

Zsolt Révay

*Technische Universität
München, Germany*

Zsolt Révay graduated and received his Ph.D. in radiochemistry. In 2010, he habilitated as the Doctor of the Hungarian Academy of Sciences. For the past 25 years, he has been working



in the field of prompt gamma neutron activation analysis first in Budapest, since 2011 in Munich (Technical University). With measuring all the stable elements and their compounds, he has established the first complete analytical database for PGAA. He has delivered lectures in radiochemistry at the Budapest Technical University, and recently at TUM. Several IAEA missions and expert visits were conducted by him to various countries (USA, China, Brazil, Portugal, Egypt, India, etc.) to establish or further develop PGAA laboratories. More than

150 research articles, book chapters, and IAEA reports were published with his authorship or co-authorship, and the Handbook of Prompt Gamma Activation Analysis with Neutron Beams (Kluwer, 2004) was completed by him. Among other memberships, he was elected the secretary of the International

Committee of Activation Analysis. Akadémiai Kiadó invited him to take part in editing the *Journal of Radioanalytical and Nuclear Chemistry (JRNC)* and later to organize this conference series in 2012. He took over the Editor-in-Chief position of JRNC in 2014. His hobbies are opera and the Alps.

Plenary Speakers

Franco Cataldo

Università della Tuscia
Dipartimento di Scienze
Ecologiche e Biologiche, Italy



Prof. Franco Cataldo is currently habilitated ordinary professor of general and inorganic chemistry at Università degli Studi della Tuscia, Viterbo, Italy and is also affiliated to the Istituto Nazionale di Astrofisica – Osservatorio Astrofisico di Catania. Prof. Franco Cataldo is also co-founder and scientific director of Actinium Chemical Research Institute located in Rome, Italy and dedicated to academic and applied research in chemistry. Prof. Franco Cataldo has published more than 415 research papers on peer-reviewed journals and is also author of more than 47 patents, 2 textbooks in Italian and 5 scientific books in English. The main research interests of Prof. Cataldo are on radiation chemistry also in relation to the origins of life and

astrochemistry, carbon materials (nanostructures, nanotubes, polyynes, graphene, functionalization), fullerene chemistry (synthesis, functionalization), polymer chemistry (synthesis, chemical structure determination), organic chemistry (synthesis, oxidation reactions, oxidative degradation), inorganic chemistry (acetylides and related compounds).

In the applied chemistry field, Prof. Cataldo works on rubber and plastics composites, rubber and plastics stabilization and degradation, ozone chemistry, environmental chemistry, industrial chemical sensors, air and wastewater treatment and purification, catalysis and adsorbents developments.

Prof. Cataldo is Editor-in-Chief of the international journal *Fullerenes, Nanotubes and Carbon Nanostructures* and of the Springer's Book Series *Carbon Materials Chemistry and Physics*. Furthermore, Prof. Cataldo is member of the editorial board of the *Journal Radioanalytical and Nuclear Chemistry* and of the open access journal *European Chemical Bulletin*.

Prof. Cataldo is member of the Italian Chemical Society and of the International Ozone Association.

Zhifang Chai

Institute of High Energy Physics,
Chinese Academy of Sciences,
Beijing, China



Prof. Zhifang Chai is an academician of the Chinese Academy of Sciences, working at the Institute of High Energy Physics, Chinese Academy of Sciences, and Suzhou University. He graduated from Fudan University, China, in 1964. As a fellowship of the Alexander von Humboldt Foundation, Germany, he worked at Cologne University from 1980 to 1982. He is closely engaged in nuclear energy chemistry and nuclear analytical techniques. Authored or co-authored over 610 papers in peer-review journals and 12 books. He is/was a titular member of IUPAC, fellow of RSC, UK, and member of many other domestic and international scientific communities. He is an editor or advisor of 4 international and 10 national journals. In 2005 he was awarded the George von Hevesy Award. In 2014 he was listed as one of the highly-cited researchers of total 3215 in the world during the period of 2002 to 2012 by Thomson Reuters.

Amares Chatt

Dalhousie University, Halifax,
Canada



Prof. Amares Chatt received his Ph.D. in nuclear analytical and environmental chemistry from the University of Toronto. He was a full professor at the Department of Chemistry, Dalhousie University in Halifax Canada until 2011. He was the Director of the Dalhousie University SLOWPOKE-2 Reactor facility during 1987–2011. He was a Killam Professor of Chemistry (2001–2006), and presently an Adjunct Professor there. Prof. Chatt taught undergraduate and graduate courses in nuclear radiochemistry. He has supervised numerous Ph.D. and M.Sc students, postdoctoral fellows, research associates, and visiting professors and scientists. Many of them came from laboratories (often countries) where no nuclear analytical chemistry was either taught or practiced. Most of them went back to their native countries and started research and training in nuclear analytical, environmental, and radiochemistry. Prof. Chatt has published over 180 scientific papers in peer-reviewed

international scientific journals and 1 book. He has presented over 430 invited seminars and conference papers. He was the North American Regional Editor (1993–1996) and now is the Editor (2007–) of JRNC. He served as a scientific expert in several countries including Argentina, Bangladesh, Chile, China, Ghana, Jamaica, Myanmar, Russia, Slovenia, South Africa, Sri Lanka, Syria, and Thailand. He was the Secretary and is now the President of the International Committee on Activation Analysis. Prof. Chatt is a Fellow of American

Nuclear Society (ANS) and Canadian Society of Chemistry. He has received several awards including the ANS Radiation Science and Technology Award in 1996, and the William D. Ehmann Award in radioanalytical chemistry in 1999. He received the Hevesy Medal Award in 2001 and the Ioannes Marcus Marci Medal by the Ioannes Marcus Marci Spectroscopic Society formerly the Czechoslovak Spectroscopic Society of the Czechoslovak Academy of Sciences, Prague, Czech Republic in 2006.

Christian Ekberg

*Chalmers University and
Technology Foundation,
Gothenburg, Sweden*

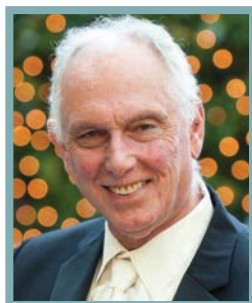


Christian Ekberg has been the holder of Stena's Chair in Industrial Materials Recycling since 2007 and since 2012 Professor of Nuclear Chemistry. In 2015 he became an elected member of the Royal Swedish Academy for Engineering Sciences. Administratively he is the team leader for nuclear chemistry / industrial materials recycling. His career started with modeling chemical systems, foremost groundwater flows. The main issue was how uncertainties in input data to the chemical models affected the output data, so-called uncertainty and sensitivity analysis. With time the focus was shifted to experimental determination of

stability constants and mainly by solvent extraction. After dissertation Ekberg spent a postdoc at the Australian Nuclear and safety organisation, ANSTO. After returning home Ekberg became responsible for the separation and transmutation research at Nuclear Chemistry at Chalmers at the same time as the research of thermodynamic and solvent extraction was expanded. Recently the focus was broadened to include the production and recyclability of novel innovative nuclear fuels. Ekberg is the leader of research projects in both industrial materials recycling and nuclear chemistry. He is a work package or domain leader of several EU project and is the coordinator of the large scale project ASGAR dealing with advanced nuclear fuels as well as the ENVIREE project handling recovery of REE from mining wastes. Currently the paper count is about 140 journal papers and numerous reports. The main achievement is though the supervision of 14 students to Ph.D. level.

Richard B. Firestone

*Nuclear Science Division,
Lawrence Berkeley National
Laboratory, USA*



Professional preparation

1963–1967 The University of Michigan, Chemistry, B.S.
1967–1974 Michigan State University, Nuclear Chemistry,
Ph.D.
1974–1978 Michigan State University, Nuclear Chemistry,
Postdoc

Appointments

2013– present Consultant, University of California, Dept of
Nuclear Engineering, Berkeley, CA
2010–2013 US Nuclear Data Program Nuclear Structure Data
Coordinator
1984–1991, Group Leader of the Isotopes Project
2008–2013

1979–2013 Staff Scientist, Nuclear Science Division, Lawrence
Berkeley Laboratory
1978–1979 Assistant Professor, Department of Chemistry,
Michigan State University

Selected publications

- [1] R.B. Firestone, V.S. Shirley, C.M. Baglin, S.Y.F. Chu, and J. Zipkin, *8th Edition of the Table of Isotopes*, (John Wiley & Sons, 1996, 1998, 1999). <http://ie.lbl.gov/toi.html>
- [2] E. Browne, R.B. Firestone, and V.S. Shirley, *Table of Radioactive Isotopes*, (John Wiley & Sons, 1986).
- [3] G.L. Molnar, Zs. Revay, T. Belgya, R.M. Lindstrom, Ch. Yonezawa, Zs. Kasztovszky, and R.B. Firestone, *Handbook of Prompt Gamma Activation Analysis*, Kluwer Academic Publishers, London (2004).
- [4] R.B. Firestone, H.D. Choi, R.M. Lindstrom, G.L. Molnar, S.F. Mughabghab, R. Paviotti-Corcuera, Zs. Revay, V. Zerkin, and C.M. Zhou, *Database of Prompt Gamma Rays from Slow Neutron Capture for Elemental Analysis*, IAEA STI/PUB/1263, 251 pp. (2007).
- [5] M. Krticka, R.B. Firestone, D.P. McNabb, B. Sleaford, U. Agvaanlvsan, T. Belgya, and Zs. Revay, *Thermal neutron capture cross sections of the Palladium isotopes*, Phys. Rev. C 77, 054615 (2008).

- [6] R.B. Firestone, *Observation of 23 supernovae that exploded <300 pc from Earth during the past 300 kyr*, *Ap. J.* 789, 1 (2014).
- [7] R.B. Firestone et al., *Evidence for an extraterrestrial impact event 12,900 years ago that led to megafaunal extinctions and the onset of Younger Dryas cooling*, *Proceedings of the National Academy of Science* 104, 16016–16021 (2007).
- [8] S.M. Mauer, R.B. Firestone, and C.R. Sriver, *Databases: Science's Neglected Legacy*, *Nature* 405, 116 (2000).
- [9] M.K. Firestone, R.B. Firestone, and J.M. Tiedje, *Nitrous Oxide from Soil Denitrification: Factors Controlling its Biological Production*, *Science* 208, 749 (1980).
- [10] D.L. Perry, R.B. Firestone, G. Molnar, Zs. Revay, Zs. Kasztovszky, R.C. Gatti, and P. Wilde, J., *Neutron-Induced Prompt Gamma-ray Activation Analysis (PGAA) of Metals and Non-metals in Ocean Floor Geothermal Vent-Generated Samples*, *Anal. At. Spectrom.* 16, 1 (2001).

Research activities

- Neutron Cross Sections: Measurement of neutron capture γ -ray cross sections σ_γ at the Budapest/Munich Reactors.
- Statistical Model Calculations: Determination of semi-empirical total radiative neutron cross sections σ_0 , nuclear J^π values, and continuum γ -ray spectra using statistical model codes.
- Nuclear Data Evaluation: IAEA/LBNL Evaluated Gamma-ray Activation File (EGAF) editor, evaluator of nuclear structure, radioactive decay, capture γ -ray data for the ENSDF database.
- Nuclear Chemistry: Development and application of prompt and delayed neutron activation techniques.
- Paleoastronomy: Investigation of prehistoric supernovae and meteorite impact events.
- Environment: Studies of denitrification and global warming processes.
- Consultation: Nuclear data evaluation, measurement, and provision of databases.

Stephen LaMont

Los Alamos National Laboratory, Nuclear and Radiochemistry, USA



Stephen LaMont has been with Los Alamos National Laboratory since 2004 where he currently leads nuclear forensics and treaty monitoring projects in the Nuclear and Radiochemistry Group. He recently completed a five-year assignment with the Department of Energy Headquarters, where he was the Chief Scientist for the Nuclear Materials Information Program and helped establish the US National Nuclear Forensics Library, led a multi-laboratory nuclear forensic material analysis project, served as an advisor to DOE and US Government Interagency leadership, and contributed to international nuclear forensics technical guidance and policy efforts. He currently holds positions as the

US Co-Chair for the National Nuclear Forensics Libraries Task Group for the Nuclear Forensics International Technical Working Group, and the General Chair for the Methods and Applications of Radioanalytical Chemistry Conference.

Dr. LaMont earned his Ph.D. in Chemistry from Washington State University, and has contributed to and led Dept. of Energy sponsored projects since 1994 at the Hanford Site, Savannah River National Laboratory, Los Alamos National Laboratory, and DOE Headquarters. Most of this work has focused on the radiochemistry and mass spectrometry of the actinides as it applies to a variety of disciplines, including nonproliferation, environmental safeguards, nuclear forensics, and internal dosimetry projects. He has over 45 peer-reviewed publications in these areas. Dr. LaMont has served as an advisor to the U.S. Department of State on nuclear forensics issues and as a subject matter expert at numerous International Atomic Energy Agency consultancies and technical meetings.

Richard M. Lindstrom

National Institute for Standards and Technology, Gaithersburg, USA



- B.S. (Honors), University of Wisconsin, Madison, 1963
- Ph.D., University of California, San Diego, 1970
- Dissertation: *Radionuclides in Meteorites and in the Lunar Surface*
- Summer Graduate Student 1963–1964, Los Alamos Scientific Laboratory

- Visiting Fellow 1970–1971, Tata Institute of Fundamental Research, Bombay, India
- Postdoctoral Fellow 1971–1972, Brookhaven National Laboratory
- Research Chemist, National Institute of Standards and Technology (formerly National Bureau of Standards), Gaithersburg, Maryland, 1972–2007
- Fields of research: high-sensitivity and high-accuracy radionuclide measurement, conventional and prompt-gamma neutron activation analysis, gamma-ray spectrometry, analytical chemistry, radiochemistry, computer applications, nuclear data
- Scientist Emeritus, NIST, 2007–

- Visiting expert for the IAEA, Bangkok, Thailand, 1988 and 1992; Puspati, Malaysia, 1989; and La Reina, Chile 1995.
- Member, USDoE National Steering Committee for the Advanced Neutron Source, 1991–1995.
- Foreign Researcher, Japan Atomic Energy Research Institute, Tokai, 1992.
- Research Fellow, Interfaculty Reactor Institute, Delft University of Technology, the Netherlands, 1994.
- Organizer and co-chairman, Tenth International Conference on Modern Trends in Activation Analysis, 1999.
- Adjunct Professor, Department of Nuclear Engineering, North Carolina State University, 2000–2015.
- Member, International Committee on Activation Analysis, 2002–2007; elected Life Member, 2011.
- Guest researcher, Reactor Institute Delft, the Netherlands, 2007.

- Associate Editor, *Journal of Radioanalytical and Nuclear Chemistry*, 2007–.
- Member, Hevesy Medal Laureates Board, 2012–.
- Member, American Association for the Advancement of Science (AAAS) since 1961; life member 2011.
- Member, American Nuclear Society 1994–2013, Vice Chair and Chair of the Isotopes and Radiation Division 2006–2007.
- NIST Judson C. French Award, 2003.
- U.S. Department of Commerce Silver Medal Award, 2003.
- George Hevesy Medal Award, 2009.
- NIST Portrait Gallery of Distinguished Scientists, Engineers and Administrators, 2012.

More than 190 scientific papers published and in press.
More than 120 scientific talks.

Tomoko Nakanishi

*The University of Tokyo
Graduate School of
Agricultural and Life Sciences,
Japan*



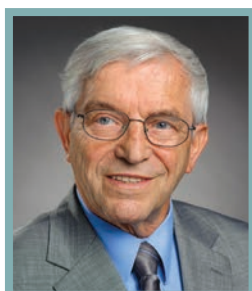
Tomoko Nakanishi got Ph.D. from the University of Tokyo in radiochemistry. But she started plant physiological study when she began to work as a visiting researcher at Chemical Biodynamics at Mervin Calvin's Lab. (Laurence Berkeley Lab., California, USA). Then she was able to get a permanent position in the Faculty of Agriculture, the University of Tokyo in 1987 as an assistant. After 14 years, she had become a professor in Graduate School of Agricultural and Life Sciences, the University of Tokyo.

She was incorporated to the university revision project and was appointed as an Adviser to the President or a Director General of the Environment, Health and Safety Division created under the Office of the President of the University of Tokyo as concurrent posts.

Outside of the university, she was appointed as a member of Science Council of Japan. And now she is a Vice President of Engineering Academy of Japan, President of The Japan Society of Nuclear and Radiochemical Sciences and a Foreign member of the Royal Swedish Academy of Engineering Sciences (IVA). She got Saruhashi award (2000), Contribution Award from Atomic Energy Soc. of Japan (2001) Society Award from The Japan Society of Nuclear and Radiochemical Sciences (2011), L'ordre national du Mérite from the French President (2014).

Siegfried Niese

*Author of the Biography of G.
Hevesy, Germany*



Siegfried Niese (*23.10.1932 in Riesa, Germany) studied chemistry from 1951 to 1956 at the university in Leipzig and was working 1956–1991 at the Research Center and 1991–1999 at the Nuclear Engineering and Analytics Inc. in Rossendorf near Dresden. In 1959 he became Ph.D., in 1972 Dr. Sc., and in 1980 professor.

His research was started with extraction of thorium and uranium and then focused on the n. a. a. of semiconductors, geological and biological materials, and media of power reactors. To improve the detection limit in high purity silicon he developed the multi-beta-gamma coincidence method and used it for the determination of impurities in semiconductor silicon and cross sections of rare neutron reactions. (e.g., $^{28}\text{Si}(n,\alpha,p)^{24}\text{Na}$). For further improvement of detection

limits he constructed an underground laboratory, the first which was used for activation analysis, with two cells, one for low background of gamma rays and the other for low background of neutrons. After shut down of the reactor in Rossendorf he had measured the radioactivity in materials of decommissioned uranium mines, of the research reactor and from the environment. Then he was dealing with the history of chemistry and radioactivity.

He has published books about reprocessing nuclear fuels, neutron activation analysis, underground laboratories, regional geology and the founder of his working field, George de Hevesy. He was author or coauthor of about 150 scientific papers, had organized seven international conferences and was a member of the advisory boards of three journals. Beside his work as head of the group of radioanalytical chemistry in Rossendorf he headed the group of radiochemical analytics in the analytical division of the Chemical Society of the GRD.

He is married to Dr. Sc. Ursula Niese, who was dealing with radiochemistry especially with the analysis of trans uranium elements. They have three children.

Pavel P. Povinec

Comenius University,
Bratislava, Slovakia

Prof. Pavel Povinec is expert in radioanalytical techniques (including radiometrics, underground physics and mass spectrometry), and environmental radioactivity. Presently he works as professor at the Faculty of Mathematics, Physics and Informatics of the Comenius University in Bratislava,



where he is also director of the Centre for Nuclear and Accelerator Technologies (CENTA). He has been leading in the past several international projects devoted to terrestrial and marine radioactivity, development of the GLOMARD/MARIS marine radioactivity database, as well as projects on nuclear physics. He published over 500 papers in peer-review journals and 8 books, with over 6000 citations. Recently he co-authored a book on the environmental radioactivity impact of the Fukushima accident. He was adviser of 25 Ph.D. students. He is editor and associate editor of several international journals. He got several awards from national and international institutions.

Syed M. Qaim

Forschungszentrum Jülich
GmbH, Institut für
Neurowissenschaften und
Medizin, INM-5:
Nuklearchemie, Germany

Syed Muhammad Qaim was born on 5 January 1941; brought up in Pakistan and educated up to M.Sc. at the Government College and Punjab University, Lahore; Ph.D. from Liverpool University and D.Sc. from Birmingham University, England; Habilitation at Cologne University, Germany. Dr. Qaim migrated from Pakistan to Germany in 1968 and worked at first as an Alexander von Humboldt Fellow at Mainz University. In 1970 he moved over to Research Centre Jülich and worked there from 1970 to 2006 in various capacities (scientist, group leader, Vice Director). From 2006 onwards to date he is an Advisor. He also worked for the last 20 years at Cologne University as Professor of Nuclear Chemistry.

Prof. Qaim has made outstanding contributions to fundamental nuclear chemistry, nuclear data for energy- as



well as non-energy related applications, and accelerator radionuclides for medical applications, all involving intensive radiochemical work. He has published 386 research papers and edited 4 books. He has given more than 100 invited talks at international conferences, seminar lectures at about 150 institutes of the world, and (besides teaching at Cologne) special courses at the universities of Aachen (Germany), Assiut (Egypt), Debrecen (Hungary), Rajshahi (Bangladesh), Punjab and GCU Lahore (Pakistan). He guided 28 Ph.D. theses and imparted research education to about 70 visiting scientists who came to Jülich. He represented Germany in OECD-NEA (Paris) and IAEA (Vienna) for more than 20 years, with Chairmanship of the IAEA-Nuclear Data Committee for 6 years. He has been working as the Editor-in-Chief of the international journal *Radiochimica Acta* for the last 20 years.

Prof. Qaim has received 18 honours and awards, among them the JARI Medal of Pergamon Press, the Hevesy Medal of Nuclear Chemistry, the Becquerel Medal of the Royal Society of Chemistry, Medals of Honour of several organisations, two honorary doctorates, and fellowships of three science academies.

A. V. R. Reddy

Analytical Chemistry Division,
Homi Bhabha National Institute
(Deemed University),
Department of Atomic Energy,
Mumbai, India

A. V. R. Reddy joined Nuclear Chemistry Section, Radiochemistry Division, BARC in 1977 after completing one year Orientation course in Chemistry from BARC Training School (TS). He obtained his M.Sc from S. V. University, Tirupati, was awarded CSIR fellowship and was working for his Ph.D. until he joined TS in 1976. From September 1998 to September 2008, he was Head, Nuclear Chemistry Section and at present, is Head, Analytical Chemistry Division (ACD), BARC. In recognition of his outstanding contributions, he is rewarded with two-year extension twice, till May 31, 2015.



His research areas are: nuclear fission, nuclear reactions, nuclear analytical techniques, non-destructive assay methods, electroanalytical chemistry and environmental science. He has worked on the extension of Periodic Table during 1992–1993 in the Institute of Nuclear Chemistry, Mainz, Germany and worked in the International Atomic Energy Agency (IAEA) during 1999–2000 as a technical officer. He has more than 580 publications (230 in international journals, 16 in national journals, 124 papers in international conferences, 204 in national symposia, 21 articles / chapters in books, coauthored 4 books and edited / coordinated 21 compilations and 14 papers won awards in various symposia).

He visited many countries in Asia, Europe and South America (29 short visits as an expert/consultant and two long stints to Germany (PDF) and IAEA (Technical Officer), delivered more than 200 invited lectures/talks in India and abroad). He provided advice to many international labs on QA/QC of nuclear analytical techniques. He was a visiting professor

in Mumbai University for 15 years and is a professor of Homi Bhabha National Institute, DAE.

Dr. Reddy is a fellow of International Union of Pure and Applied Chemistry (IUPAC). He is an active member of many scientific associations and currently is vice president of Indian Association of Nuclear Chemists and Allied Scientists

(IANCAS) and Association of Environmental Analytical Chemists of India (AEACI). He worked as a commission member of IUPAC for three terms. Dr. Reddy is Member Secretary of Basic Science Committee, BRNS and a member of DST SERB PAC (Chemical Sciences). Dr. Reddy is on the Editorial Board of two international journals.

Enrico Sabbioni

CeSI – G. d'Annunzio University Foundation, Italy



Education

High School Industrial Chemistry Diplome, 1961, Technical Institute "E. Molinari", Milan. Biological Sciences Degree, 1970, University of Pavia.

Professional career

- 1961–2007: scientific official, Joint Research Centre of the European Commission.
- 2007–present: senior researcher, Aging Research Center – CeSI, G. d'Annunzio University Foundation, Chieti, and LASA, INFN and University of Milan.
- 2010–2014: scientific responsible, European Centre of Sustainable Impact of Nanotechnology-ECSIN, VenetoNanotech, Rovigo.

Professional skills

Metal toxicology research by nuclear/radiochemical techniques (neutron activation analysis/production of radiotracers) in combination with spectrochemical, bioanalytical and molecular biology techniques for: *in vivo* metabolic experiments on

laboratory animals; *in vitro* studies by cell cultures/isolated biochemical systems; studies on human tissues of general population, professionally exposed workers, clinical/pathological cases).

Current activity: nanotoxicology research (founder, 2010, and president of the Italian Society of Nanotoxicology). Member of many professional societies, of 3 editorial boards of international journals, reviewer on behalf of many scientific journals. Author/co-author of 630 scientific contributions (over 280 articles in peer-review journals, 13 books and Symposia). Adjunct Professor at domestic universities, lecturer at international master schools. Training of more than 90 graduate students, Ph.D., visiting scientists. Seminars in radiochemistry/nuclear chemistry, toxicology, analytical chemistry, biology, pharmacology, medicine at domestic, European and Europe outside graduate schools.

Awards

- Commemorative Medal of Charles University of Prague, 1993, in recognition of the contribution/ achievements in the development and use of nuclear analytical techniques in various fields of life sciences research and related training activities.
- 2002: Hevesy Medal, in recognition of the contributions to radioanalytical chemistry, particularly in biological and biomedical applications, over a 40-year period.
- 2011: IMID Award (National association of Immune-Mediated Inflammatory Disease) for nanosciences and nanotechnologies.

Hans-Arno Syral

ETH Zurich Laboratory of Ion Beam Physics, Switzerland



Employment history

- 2008–present Head of the ETH Laboratory of Ion Beam Physics
- 2001–2008 Senior Scientist/Research Group Leader, Head of the Accelerator Group and deputy Director of the PSI/ETH Laboratory of Ion Beam Physics

- 1990–2001 Research Scientist, Paul Scherrer Institut
- 1989–1990 Post Doctoral Associate, Institute of Intermediate Energy, ETH Zurich
- 1986–1989 Research Assistant, Institute of Intermediate Energy, ETH Zurich
- 1984–1985 Research Assistant, Physikalisches Institut, Universität Bonn

Appointments

- 2011 Appointed as Honorary Professor at ETH Zurich
- 2008 Head of the Laboratory of Ion Beam Physics, ETH Zürich

2000 Appointed as Associate Professor of Physics with tenure,
Purdue University, West Lafayette, USA; not accepted

Degrees received

Doctor sc. nat.	ETH Zürich	1989
Diploma	University of Bonn	1985
Pre-diploma	University of Bonn	1981

Major committees

2013–present	President of the board of directors of the “Ionplus AG”
2012–present	Member of the Editorial Board of Nuclear Instruments and Methods in Physics Research B
2011–present	President of the “Schweizerischen Vakuumgesellschaft”
2006–2009	Deutsche Physikalische Gesellschaft, Vorsitzender des Fachverbandes Massenspektrometrie und Mitglied des DPG-Vorstandsrats

Andreas Türlér

Laboratory of Radiochemistry and Environmental Chemistry, Paul Scherrer Institute and University of Bern, Villigen PSI and Bern, Switzerland



Andreas Türlér was born in Winterthur, Switzerland. He received his Diploma and Ph.D. in chemistry from University of Bern, Switzerland, having carried out research on nucleon transfer reactions under the supervision of Prof. Hans-Rudolph von Gunten. He then joined the group of Prof. Darleane C.

Hoffman at Lawrence Berkeley National Laboratory, Berkeley, USA, as postdoctoral fellow. In 1992, he moved back to Switzerland and in the following years worked as staff scientist at the Paul Scherrer Institute, Villigen, with Prof. Heinz Gaggeler. In 1994 he was awarded the “Fritz-Strassmann-Preis” of the Gesellschaft Deutscher Chemiker. The habilitation in 2000 at University of Bern was followed with an appointment as full professor and director of the Institute of Radiochemistry at Technical University of Munich, Germany. In 2009 he returned to Switzerland as head of the Laboratory of Radiochemistry at Paul Scherrer Institute and University of Bern. His scientific interests are nuclear and radiochemistry in general, with one focus on the physics and chemistry of transactinide elements.

René van Grieken

Department of Chemistry, University of Antwerp, Belgium



René van Grieken, Full Professor, Department of Chemistry, University of Antwerp, Belgium, teaching instrumental analysis, environmental chemistry and radioprotection. Now officially emeritus, since 2010.

Earlier: 1967–1972: Researcher (working on NAA) at the Institute of Nuclear Sciences, University of Ghent; 1972–1973: Visiting professor at the Department of Oceanography, Florida State University, Tallahassee, FL, USA (working on PIXE); 1976–2002: Part-time professor, Faculties of Science, Engineering and Medicine, Free University of Brussels, Belgium.

Lecturer or visiting professor or researcher, mostly on behalf of the International Atomic Energy Agency, in South Africa, Brazil, Singapore, Yugoslavia, Austria, Paraguay, Albania, Uruguay, Costa Rica, Mexico, Greece, Italy, Poland, United Arab Emirates, Tanzania, Argentina, Bolivia, France.

Awards include: Award Dr. Delcroix (= Triennial International Award for the Environment and Health), 2003, Belgium; Birks Award (= Biannual Denver X-ray Conference Award for Long-Term Excellence in X-Ray Spectrometry),

2008, USA; CSI Award (= Biannual Life Achievement Award in Spectrometric Analysis), 2009, Hungary; Award for an Outstanding Career in X-ray Spectrometry (= Biannual Award of the European X-ray Spectrometry Association), 2010, Portugal; Jenkins Award (= Biannual Award for Lifetime Achievement in the Advancement X-Ray Analysis of Materials), 2013, USA; Jerzy Fijalkowski Award (= Biannual Spectrometry Award of the Polish Academy of Science), 2013, Poland.

Presently Editor-in-chief (worldwide) of the journal *X-Ray Spectrometry*, Web Editor (worldwide) of the X-ray analysis section of *SpectroscopyNOW.com*. Member of the Editorial Board of 8 other journals.

Co-founder in 1980 and co-chairman of the Micro- and Trace Analysis Centre (MiTAC), University of Antwerp, involving some 70–100 full-time researchers, and director of the Environmental Analysis Group (involving some 25 researchers) within MiTAC, applying many analysis techniques for many applications (material science, environmental, cultural heritage) until 2010.

Invited lecturer or member of the organising committee for 285 international scientific conferences. Over 650 publications in international scientific journals with peer review, author/editor of 16 books, 230 chapters in books and contributions to proceedings of international conferences.

Nearly 15,000 citations; Hirsch factor: 54.

Hans-Jürgen Wester

Technische Universität
München, Garching, Germany



Scientific career history

- 1992 Diploma (Chemistry/
Radiochemistry),
University of Cologne
and Research Center Juelich
- 1996 Ph.D., Radiopharmaceutical Chem., Research
Center Juelich
- 1995–2004 Scientific Assistant and Research Associate,
Department of Nuclear Medicine, Technische
Universität München

Academic appointments

- 2004–2010 Professor (C3) of Radiopharmaceutical Chemistry,
TUM, Faculty of Medicine, Nuclear Medicine;
Co-appointment at the Faculty of Chemistry
- 2010– Full Professor (W3), Pharmaceutical
Radiochemistry, TUM, 1st full appointment at the
Faculty of Chemistry, 2nd full appointment at the
Faculty of Medicine

Board Member of the Collaborative Research Center (SFB 824),
German Research Foundation, Member of the Board of the
German Society for Nuclear Medicine (2009–2012); Board of
the Bavarian Society for Nuclear Medicine (since 2003), Founder
(2006) and CEO (since 2006) SCINTOMICS (Germany).

Scientific focus/prominent developments

Development of Probes for Molecular Imaging and Targeted
Therapy, Transfer of new Agents into Clinical Studies. Selected
examples: [¹⁸F]Fluoroethyltyrosine ([¹⁸F]FET, 1998); the
“Multimeric Peptide” Approach (1998); [¹⁸F]Diprenorphine
([¹⁸F]FDPN, 1999); RGD-peptides (with Roland Haubner;
[¹⁸F]Galacto-RGD, 2001); The “Carbohydrated Peptide”
Concept (2000); CXCR4 Chemokine Receptor Ligands
(2007–); In-Capillary Production of Radiopharmaceuticals
(2008); Phosphinates for Ga-68-complexation (with Johannes
Notni, 2010); F-18-fluorination without azeotropic drying
(2010, patent), Ga-68-TRAP(RGD)₃ (patent), Ga-68-CPCR4.2
(Pentixafor, 2012, patent), F-18-FIBT (2012, Alzheimer
Imaging Agent (with B. Yousefi patent application), new direct
fluorination of unprotected acids (with B. Yousefi, 2013, patent
application), New phosphinate based DOTA analogues for Lu
and Cu labelling (with Johannes Notni, 2013); Pentixather
(2014, with M. Schottelius, patent application).

Publication list, PSMA

1. Eiber M, Weirich G, Holzapfel K, Souvatzoglou M, Haller B, Rauscher I, Beer AJ, Wester HJ, Gschwend J, Schwaiger M, Maurer T. Simultaneous (68)Ga-PSMA HBED-CC PET/MRI Improves the Localization of Primary Prostate Cancer. *Eur Urol.* 2016 Jan 18. pii: S0302-2838(16)00011-7. PMID: 26795686.
2. Baum RP, Kulkarni HR, Schuchardt C, Singh A, Wirtz M, Wiessalla S, Schottelius M, Mueller D, Klette I, Wester HJ.

Lutetium-177 PSMA Radioligand Therapy of Metastatic
Castration-Resistant Prostate Cancer: Safety and Efficacy. *J Nucl Med.* 2016 Jan 21. pii: jnumed.115.168443. PMID: 26795286.

3. Maurer T, Gschwend JE, Rauscher I, Souvatzoglou M, Haller B, Weirich G, Wester HJ, Heck M, Kübler H, Beer AJ, Schwaiger M, Eiber M. Diagnostic Efficacy of (68)Gallium-PSMA Positron Emission Tomography Compared to Conventional Imaging in Lymph Node Staging of 130 Consecutive Patients with Intermediate to High Risk Prostate Cancer. *J Urol.* 2015 Dec 9. pii: S0022-5347(15)05397-5. PMID: 26682756.
4. Schottelius M, Wirtz M, Eiber M, Maurer T, Wester HJ. [(111)In]PSMA-I&T: expanding the spectrum of PSMA-I&T applications towards SPECT and radioguided surgery. *EJNMMI Res.* 2015 Dec;5(1):68. PMID: PMC4659791.
5. Weineisen M, Simecek J, Schottelius M, Schwaiger M, Wester HJ. Synthesis and preclinical evaluation of DOTAGA-conjugated PSMA ligands for functional imaging and endoradiotherapy of prostate cancer. *EJNMMI Res.* 2014 Dec;4(1):63. PMID: PMC4452638.
6. Weineisen M, Schottelius M, Simecek J, Baum RP, Yildiz A, Beykan S, Kulkarni HR, Lassmann M, Klette I, Eiber M, Schwaiger M, Wester HJ. 68Ga- and 177Lu-Labeled PSMA I&T: Optimization of a PSMA-Targeted Theranostic Concept and First Proof-of-Concept Human Studies. *J Nucl Med.* 2015 Aug;56(8):1169–76. PMID: 26089548.
7. Baranyai Z, Reich D, Vágner A, Weineisen M, Tóth I, Wester HJ, Notni J. A shortcut to high-affinity Ga-68 and Cu-64 radiopharmaceuticals: one-pot click chemistry trimerisation on the TRAP platform. *Dalton Trans.* 2015 Jun;28;44(24):11137–46. PMID: 25999035.
8. Maurer T, Weirich G, Schottelius M, Weineisen M, Frisch B, Okur A, Kübler H, Thalgott M, Navab N, Schwaiger M, Wester HJ, Gschwend JE, Eiber M. Prostate-specific membrane antigen-radioguided surgery for metastatic lymph nodes in prostate cancer. *Eur Urol.* 2015 Sep;68(3):530–4. PMID: 25957851.
9. Herrmann K, Bluemel C, Weineisen M, Schottelius M, Wester HJ, Czernin J, Eberlein U, Beykan S, Lapa C, Riedmiller H, Krebs M, Kropf S, Schirbel A, Buck AK, Lassmann M. Biodistribution and radiation dosimetry for a probe targeting prostate-specific membrane antigen for imaging and therapy. *J Nucl Med.* 2015 Jun;56(6):855–61. PMID: 25883128.
10. Eiber M, Maurer T, Souvatzoglou M, Beer AJ, Ruffani A, Haller B, Graner FP, Kübler H, Haberhorn U, Eisenhut M, Wester HJ, Gschwend JE, Schwaiger M. Evaluation of Hybrid ⁶⁸Ga-PSMA Ligand PET/CT in 248 Patients with Biochemical Recurrence After Radical Prostatectomy. *J Nucl Med.* 2015 May;56(5):668–74. PMID: 25791990.
11. Eiber M, Nekolla SG, Maurer T, Weirich G, Wester HJ, Schwaiger M. (68)Ga-PSMA PET/MR with multimodality image analysis for primary prostate cancer. *Abdom Imaging.* 2015 Aug;40(6):1769–71. PMID:25412869.
12. Notni J, Šimeček J, Wester HJ. Phosphinic acid functionalized polyazacycloalkane chelators for radiodiagnostics and radiotherapeutics: unique characteristics and applications. *ChemMedChem.* 2014 Jun;9(6):1107–15. PMID: 24700633.

Floor Plan



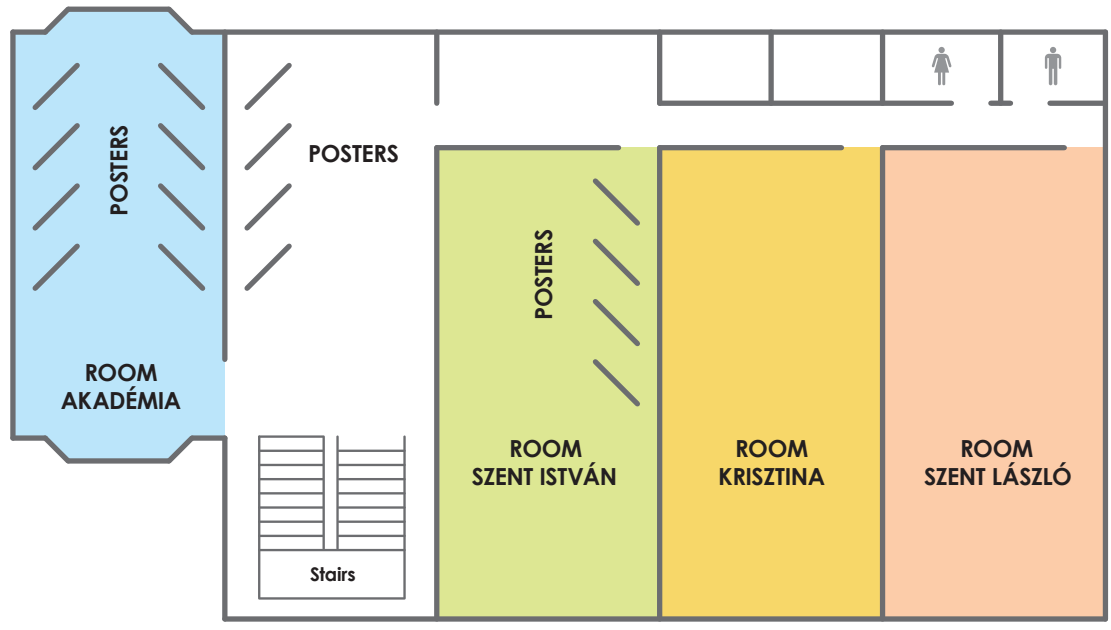
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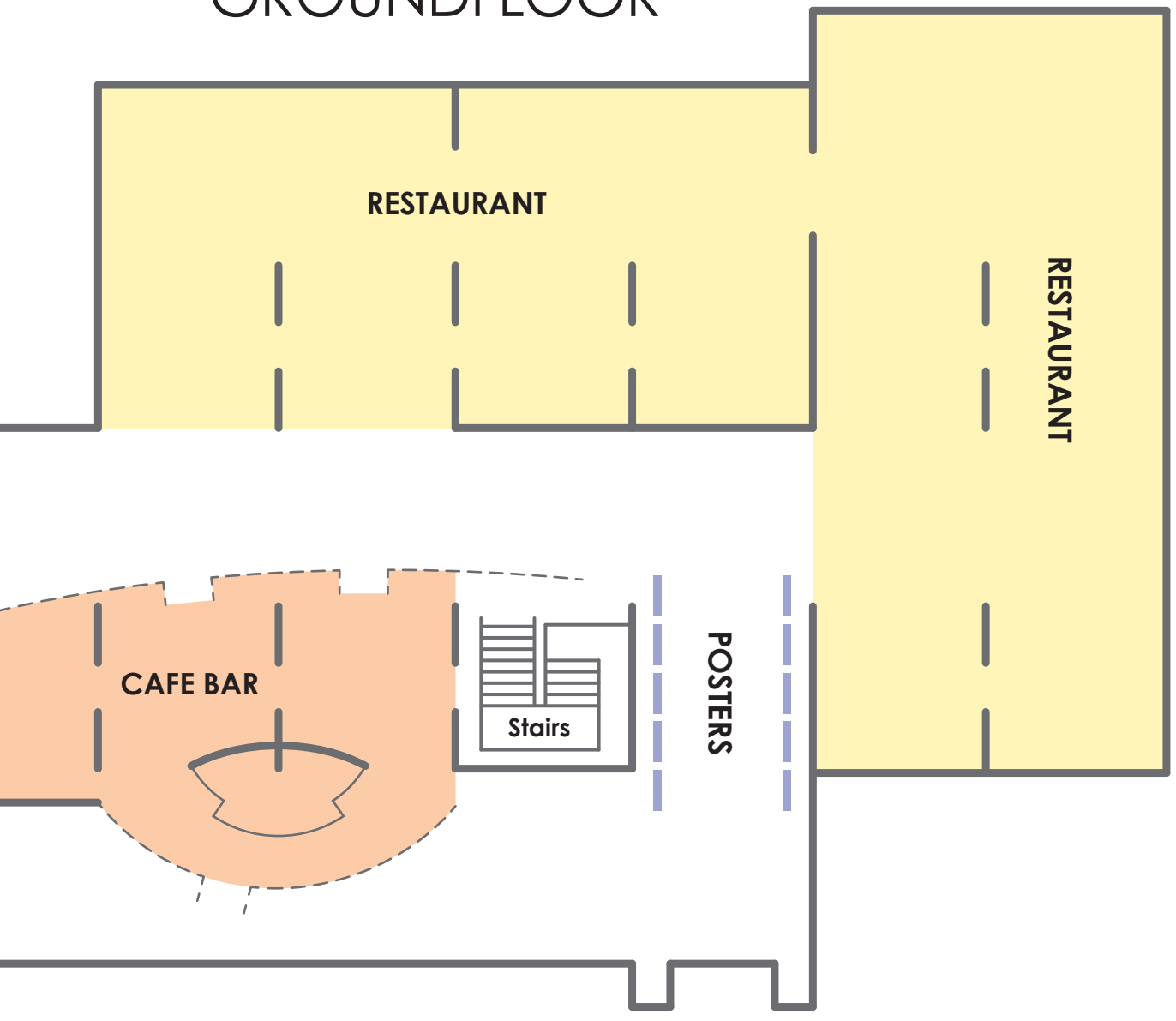
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1st FLOOR



GROUND FLOOR



Program Overview

		Sunday, 10 April		Monday, 11 April		Tuesday, 12 April	
		Abbreviations		Plenary lectures (Rooms Mátyás I & II) Chair: Zs. Révay		Plenary lectures (Rooms Mátyás I & II) Chair: A. Chaff	
8:30		* Research fronts of radioanalytical and nuclear chemistry		118 S. M. Qaim*		563 H.-A. Synal	
9:10		ACT Actinide analytical chemistry		303 R. van Grieken		358 R. M. Lindstrom*	
9:50		ANA Radio- and nuclear analytical methods		320 A. Chaff		201 Z. Chai	
10:30		APL Special applications of radioanalytical and nuclear chemistry (poster only)		Coffee		Coffee	
	Room	Mátyás I	Mátyás II	Mátyás I	Mátyás II	Mátyás I	Mátyás II
	Session	LON	FOR	LON	FOR	LON	FOR
	Chair	X. Hou	É. Kovács-Széles	S. M. Qaim	S. P. LaMont	N. Vajda	S. P. LaMont
11:00		228 S. Maxwell	344 K. Mayer	A. Hermanne	362 J. D. Borgardt	381 X. Dai	139 B. Smodiš
11:30		23 J. Qiao	392 S. P. LaMont	236 S. Takács	121 J. M. Schwantes	229 S. Maxwell	121 J. M. Schwantes
11:50		4 M. Cook	323 J. Park	179 F. Tárkányi	68 A. Nelwamondo	354 Á. Bihari	351 A. Contini
12:10		205 A. Luca	135 T. G. Ditcham	500 N. Aksenov	120 A. T. Johnson	84 Sz. Osvath	331 M. Anvia
12:30		337 Zs. Macsik	31 A. Okubo	353 S. Manenti	14 É. Kovács-Széles	188 D. Zhang	299 J. Mizera
12:50		Lunch		Lunch		Lunch	
	Session	ECO	FUE	SEP	FUE	ECO	FUE
	Chair	J. W. Mietelski	D. DiPrete	B. T. Wolterbeek	D. DiPrete	G. Steinhäuser	D. DiPrete
14:10		57	219 D. DiPrete	216 S. Lahiri	97 B. C. Childs	160 F. J. Guillén Gerada	384 A. J. T. Jull
14:40		G. Steinhäuser	279 I. Mailand	280 Y. Martínez	E. H. K. Aneheim	61 F. I. Khalili	382 M. Christl
15:00		58 C. Wilke	349 A. Aerts	264 N. Guo	501 G. Zhang	314 H. Shams	Y. Kumamoto
15:20		25 S.-S. Kim	365 S. K. Johal	254 S. W. Kwon	504 M. Hedberg	253 F. Pichierri	258
15:40		338 M. Dugosz-Lisiecka	251 E. C. Jung	345 S. Erenturk	140 Gy. Szabó	140 Gy. Szabó	G. Lujtaniéné
16:00		153 M. Omeje	Coffee		Coffee		289 S.-H. Lee
	Session	ECO	ACT	LAB	ACT	ANA	NIM
	Chair	Š. Palágyi	P. L. Thompson	M. Rossbach	J. Zhang	Z. Homonnay	L. Szentmiklósi
16:30		312 M. Eriksson	21 L. Tandon	282 L. Szentmiklósi	196 H. Jia	17 S. Kubuki*	142 O. Delaune
17:00		288 T. Zalewska	85 C.-T. Yang	342 P. Völgyesi	463 J. Jeon	324	287
17:20		305 K. M. Szufa	60 E. Alekseev	119 L. Gačnik	401 S. Sekimoto	Z. Homonnay	A. B. E. Hedman
17:40		208 W. Bu	136 P. Natarajan	113 Y.-Y. Ji	356 F. Groppi	439 B. Ni	81 A. Cagniant
18:00		173	445 L. Benedik	132	411	70 B.	311 T. Basaco Bernabeu
		E. M. Lindner	R. M. S. De Zanger	K. M. S. Salem	Constantinescu	F. Z. Biber-Muffler	344
18:20		Poster Session 1/1 (Rooms Akadémia & Szent István) (LON, FUE, MAS, SAF, ACT, SEP, FOR, ANA, PRO, LAB, APL)		Poster Session 1/2 (Rooms Akadémia & Szent István) (LON, FUE, MAS, SAF, ACT, SEP, FOR, ANA, PRO, LAB, APL)		Poster Session 1/3 (Rooms Akadémia & Szent István) (LON, FUE, MAS, SAF, ACT, SEP, FOR, ANA, PRO, LAB, APL)	
19:00		Welcome Reception		Snack		Snack	

	Wednesday, 13 April				Thursday, 14 April				Friday, 15 April			
	Plenary lectures (Rooms Mátyás I & II) Chair: R. B. Firestone				Plenary lectures (Rooms Mátyás I & II) Chair: R. M. Lindstrom				Plenary lectures (Rooms Mátyás I & II) Chair: Zs. Révay			
8:30	406 C. Ekberg*				197 R. B. Firestone*				564 H.-J. Wester			
9:10	397 S. LaMont				171 A. Türler				55 F. Cataldo*			
9:50	184 E. Sabbioni				553 P. P. Povinec				400 A. V. R. Reddy			
10:30	Coffee				Coffee				Coffee			
Room	Mátyás I	Mátyás II	Krisztina	Szent László	Mátyás I	Mátyás II	Krisztina	Szent László	Mátyás I	Mátyás II	Krisztina	Szent László
Session	LON	FOR	NAA	PRO	COM	FOR	NAA	SHO	RAC	FOR	NIM	LAB
Chair	X. Hou	K. Mayer	A. J. Stopic, E. Mauerhofer	O. Lebeda	T. Kocsor	A. M. Hubert	J. Mizera, A. Chaff		E. Takács	S. LaMont	R. M. Lindstrom	Y. Liu
11:00	109 N. Vajda	551 P. L. Thompson	306 J. Kučera	178 F. Ditrói	410 S. Hoppel (Triskem)	35 A. M. Hubert	241 M. V. Frontasyeva		377 L. Wojnárovits	24 M. Wilkerson	372 J. W. Mielieński*	343 Z. Varga
11:30	238 G. Jia	129 K. Changkrueng	145 R. Zeisler	218 A. Mitu	558 W. Westmeier	214 V. Venchiarutti	267 G. Baccalo		388 L. Szabó	533 J. L. Canaday	257 A. Kocsonya	250 W. Yang
11:50	221 D. Párkányi	190 V. N. Gluchshenko	206 M. Fukushima	357 N. P. van der Meulen	562 W. Hennig (XIA)	186 A. Fankhauser	265 A. J. Stopic	See below	215 Z. I. Ali	233 R. Kips	543 G. Gambarini	230 M. Cui
12:10	276 M. Luo	202 D. Zheltov	367 O. A. Culicov	22 M. C. Sahagia	560 J. Peitányi (Gamma)	172 M. Mathufu	352 M. Clemenza		110 Q. Zhu	536 R. E. Steiner	478 S. Jednorog	389 K. M. S. Saleem
12:30	394 A. Tarancón	417 A. Hodgson	371 I. Zinicovscaia	409 S. A. Hoppel	567 G. Di Maio (CAEN)	105 A. Apostol	346 S. Hacıyakupoglu		386 T. Fekete	561 J. Jiang	341 M. Dlugosz-Lisiecka	
12:50	Lunch				Lunch				Lunch			
Session	ECO	SAF	MAS	SEP	ECO	ACT	MAS	PGA	Closing Ceremony (Rooms Mátyás I & II) Best Poster & Best Young Lecturer Awards			
Chair	M. Eriksson	A. Berlizov	K. Hirose	S. Lahiri, B. T. Wolterbeek	F. J. Guillén Gerada	L. Tandon	A. J. T. Jull	R. M. Lindstrom				
14:10	223 Š. Palágyi*	552 A. Berlizov	66 J. Zheng	348 I. Spahn	88 E. Steinnes	29 J. L. R. King	309 M. Molnár	182 R. B. Firestone				
14:40	213 Y. Lin	163 M. C. Twearady	177 S. D. Gates	33 B. Li	98 J. C. S. P. Dembo	127 F. Quinto	86 K. Hirose	148 D. J. Turkoglu				
15:00	290 M. A. Zoran	117 D. Chernikova	73 M. R. Savina	20 M. Fourie	47 E. Kabai	50 I. Izosimov	281 S. Nisi	94 M. Rossbach				
15:20	176 A. V. Konoplev	42 L. R. Cao	300 C. Maden	395 T. S. Grimes	170 D. Xarchoulakos	62 M. Krachler	537 C. K. Black	72 R. L. Paul				
15:40	189 A. Martin Sanchez	41 J. Zsigrai		402 L. Yuan	275 Y. Yang	30 N. Xu	75 P. P. Povinec	18 Zs. Révay				
16:00	Coffee				Coffee				Short presentations (Chair: Z. Homonnay)			
16:30									11:00	408 C.-P. Lee	11:40	79 M. K. Khan
17:00	Excursion				Poster Session 2 (Rooms Akadémia & Szent István) (NAA, NIM, RAC, ECO, PGA)				11:10	261 D. Štrumińska-Parulska	11:50	450 E. Borai
17:20					Committee Meetings (Rooms Krisztina & Szent László)				11:20	528 E. H. K. Aneheim	12:00	199 T. Tran
17:40									11:30	429 J. Wen	12:10	156 T. Tran
18:00												
18:20												
19:00	Gala Dinner											

Information for Presenters

All presentations should be based on the submitted abstract as accepted by the Organizing Committee.

Oral Presentations

All lecture rooms are equipped with microphone, projector, screen, remote control and laptop with PowerPoint. Only single projection will be available in the lecture rooms. There will be a technician in each lecture room for assistance if needed.

Please bring your USB memory stick with your presentation on it, and upload your presentation to the computer in the slide-check room (in Room Margit) preferably either in the morning if your talk is in the afternoon or the day before in case of a morning presentation, but **the latest during the break before your session**. You are kindly asked to control your slides back and forth.

Only PowerPoint presentations are accepted with 4:3 ratio. If you wish to show web pages, instead of live links to the Internet, please, use screen shots within your PowerPoint presentation.

Plenary speakers have been allocated **40 minutes** for the presentations including discussion.

Invited speakers have been allocated **30 minutes** for the presentations including discussion.

Oral speakers have been allocated **20 minutes** for the presentations including discussion.

Short oral talk presenters have been allocated **10 minutes** for the presentations including discussion.

A slide-check laptop with technical assistance is provided in Room Margit.

Opening hours of the slide-check room:

Sunday, 10 April	14:10–18:20
Monday, 11 April	8:00–18:20
Tuesday, 12 April	8:00–18:20
Wednesday, 13 April	8:00–16:00
Thursday, 14 April	8:00–16:00
Friday, 15 April	8:00–12:50

It is very important to ensure that the presentations are within the allotted time and that time is left for questions from the audience.

Poster Presentations

Your poster should be **printed in size A0 (841 mm × 1189 mm)** and be in **portrait orientation**. You will be given sticky tack/blue tack to affix your poster to the board. You must be next to your poster during the Poster Session in order to answer any questions. Posters will be viewed during the Poster Sessions indicated in the conference program.

Posters will be displayed in Room Akadémia, Room Szent István and the indicated foyers. Poster boards will be organized by sessions and reference numbers.

*Poster Sessions 1/1 and 1/2
(Monday and Tuesday, 11–12 April, 18:20–19:00)*

You can mount your poster from 14:10 on Sunday, 10 April and posters are expected to remain up until the end of the Poster Session. Posters must be taken down no later than 20:00 on Tuesday, 12 April.

Sessions:

Actinide analytical chemistry • Advances in radiochemistry supporting the nuclear fuel cycle • Mass spectrometry • Nuclear forensics • Nuclear safeguards • Production of radionuclides • Radioanalytical methods of long-lived radio-

nuclides • Radio- and nuclear analytical methods • Radio-labeled compounds and radiopharmaceuticals • Radionuclide separation • Special applications on radioanalytical and nuclear chemistry

Poster Session 2 (Thursday, 14 April, 16:30–18.20)

You can mount your poster from 10:30 on Wednesday, 13 April and posters are expected to remain up until the end of the Poster Session. Posters must be taken down no later than 14:10 on Friday, 15 April.

Sessions:

Neutron activation analysis • Nuclear instrumentation and methodology • Prompt gamma activation analysis • Radiation chemistry • Radioecology and environmental radioactivity

If you have any difficulties, please contact a member of the RANC2016 team for help.

Please take your poster tube with you and do not leave it next to your poster board since we cannot guarantee security and it also presents a potential health and safety issue.

For any queries regarding a submitted abstract, please contact the Conference Secretariat at RancConf-HU@akademiai.hu.

Daily Schedule

Sunday, 10 April	
14:10	Registration (Foyer)
16:00	Opening Ceremony (Rooms Mátyás I & II) Zs. Révay (Technische Universität München, Germany) and B. Réffy (Akadémiai Kiadó, Hungary)
16:20	Festive session dedicated to György Hevesy G. de Hevesy (Sweden): Memories of my father
16:50	S. Niese (Germany): George de Hevesy (1885–1966) – Discoverer of hafnium, founder of radio analytical chemistry and X-ray fluorescence analysis and father of nuclear medicine
17:20	A. Chatt (Dalhousie University, Canada): Introduction and laudation
17:50	T. M. Nakanishi (The University of Tokyo, Japan): The thing that becomes clear by a radiation and the use of the radioisotopes for plant physiology – With the findings of Fukushima nuclear accident
18:30	Welcome Reception The Welcome Reception will provide an informal setting for the guests to get acquainted with the venue and meet the participants of the Conference. Snacks and refreshments will be served.

Monday, 11 April				
Plenary lectures (Rooms Mátyás I & II) Chair: Zs. Révay				
8:30	118 S. M. Qaim, Forschungszentrum Jülich GmbH, Germany: New developments in accelerator production of radionuclides for medical applications			
9:10	303 R. van Grieken, University of Antwerp, Belgium: X-ray spectrometry for environment and cultural heritage			
9:50	320 A. Chatt, Dalhousie University, Canada: Eighty years of neutron activation analysis: 1936–2016			
10:30	Coffee			
	Room Mátyás I	Room Mátyás II	Room Krisztina	Room Szent László
	LON / Radioanalytical methods of long-lived radionuclides	FOR / Nuclear forensics	NAA / Neutron activation analysis	PRO / Production of radionuclides
	Chair: X. Hou	Chair: É. Kovács-Széles	Chairs: O. A. Culicov, A. M. G. Figueiredo	Chair: S. M. Qaim
11:00	228 S. Maxwell / INVITED Savannah River Nuclear Solutions, USA <i>Rapid determination of actinides in seawater samples</i>	364 K. Mayer / INVITED European Commission – Joint Research Centre, Germany <i>Challenges and uncertainties in age dating of uranium and plutonium</i>	115 F. De Corte / INVITED ex FWO-Flanders and UGent, Belgium <i>Four decades of k0-NAA: An appraisal</i>	557 A. Hermanne / INVITED Vrije Universiteit Brussel, Belgium <i>Nuclear data for the production of medical radionuclides</i>
11:30	23 J. Qiao Technical University of Denmark, Denmark <i>Challenges and strategies in plutonium determination for large size environmental samples</i>	392 S. P. LaMont Los Alamos National Laboratory, USA <i>Alpha spectrometry for basic characterization of nuclear forensics samples</i>	53 F. Mildenerberger Forschungszentrum Jülich GmbH, Germany <i>Cyclic neutron activation analysis of large samples with a pulsed 14 MeV neutron source</i>	236 S. Takács Institute for Nuclear Research, Hungary <i>Investigation of cross sections of deuterium induced nuclear reactions on natural lutetium</i>

11:50	4 M. Cook University of Queensland, Australia <i>Trace level determination of Pu isotopes in Australian sediments</i>	323 J. Park Korea Atomic Energy Research Institute, South Korea <i>Combinatory use of TOF- SIMS and sector-field SIMS in the preliminary estimation of elemental and isotopic composition of nuclear forensic sample</i>	28 E. Mauerhofer Forschungszentrum Jülich GmbH, Germany <i>Determination of ²³⁵U and ²³⁹Pu in radioactive waste using cyclic neutron activation</i>	179 F. Tárkányi Institute for Nuclear Research, Hungarian Academy, Hungary <i>Production of medical radioisotopes out of standard proton beam and energy ranges</i>
12:10	205 A. Luca Horia Hulubei National Institute of Physics and Nuclear Engineering, Romania <i>Radon gas activity measurements in the frame of an international comparison</i>	135 T. G. Ditcham Flinders University, Australia <i>Pyrolysis-gas chromatography mass spectrometry analysis of organics within Australian uranium ore concentrates for source attribution</i>	437 Y. Yao China Institute of Atomic Energy, China <i>A multi-detectors integrated automation system of routine INAA</i>	500 N. Aksenov Joint Institute for Nuclear Research, Russia <i>Cross section data for the production of theuranostic ^{195m}Pt via the double neutron capture in ¹⁹³Ir</i>
12:30	337 Zs. Mocsik International Atomic Energy Agency, Austria <i>Radioanalytical method for the separation of U and Pu applied in the analysis of safeguards swipe samples in IAEA Environmental Sample Laboratory</i>	31 A. Okubo Japan Atomic Energy Agency, Japan <i>Uranium age-dating using in-situ isotope ratios for nuclear forensics</i>	556 G. Kennedy Ecole Polytechnique Montreal, Canada <i>The history of neutron self- shielding corrections in neutron activation analysis</i>	353 S. Manenti LASA – the University of Milano, Italy <i>Excitation function measurements for ¹⁰³Pd production by deuterons beams irradiation</i>
12:50	Lunch			
	ECO / Radioecology and environmental radioactivity	FUE / Advances in radiochemistry supporting the nuclear fuel cycle	MAS / Mass spectrometry	SEP / Radionuclide separation
	Chair: J. W. Mietelski	Chair: D. DiPrete	Chair: P. P. Povinec	Chair: B. T. Wolterbeek
14:10	57 G. Steinhauser / INVITED Leibniz Universität Hannover, Germany <i>Food safety after Fukushima: The beef issue</i>	219 D. DiPrete / INVITED Savannah River National Laboratory, USA <i>Challenges in developing radiochemical methodology for Savannah River Site waste tank closure campaigns</i>	350 S. Merchel / INVITED Helmholtz-Zentrum Dresden-Rossendorf, Germany <i>Determination of long-lived cosmogenic radionuclides by accelerator mass spectrometry</i>	216 S. Lahiri / INVITED Saha Institute of Nuclear Physics, India <i>Converter target chemistry – A new challenge to the radioanalytical chemistry</i>
14:40	58 C. Wilke Helmholtz-Zentrum Dresden-Rossendorf, Germany <i>Spectroscopic screening for the speciation of europium and curium in the gastrointestinal tract</i>	279 I. Mailand AXPO POWER AG, Switzerland <i>Alpha source term trend in terms of dose rate reduction in Nuclear Power Plant Beznau</i>	317 G. Lujanienė SRI Center for Physical Sciences and Technology, Lithuania <i>Sorption behavior of Cs, Pu and Am to natural clay: Effect of various components</i>	280 Y. Martinez CERN, Switzerland / KU Leuven, Belgium <i>CERN-MEDICIS (medical isotopes collected from ISOLDE): A new facility</i>
15:00	25 S.-S. Kim Korea Atomic Energy Research Institute, South Korea <i>Decontamination of radioactive concrete</i>	349 A. Aerts Belgian Nuclear Research Centre, Belgium <i>Polonium evaporation from liquid lead bismuth eutectic coolant for accelerator driven systems</i>	380 X. Dai China Institute for Radiation Protection, China <i>Ultra-sensitive analysis of actinides using compact accelerator mass spectrometry</i>	264 N. Guo SUBATECH, France <i>Evidence for the predominance in aqueous solutions of a mixed trihalogen species, AtI⁻: A combined experimental and computational study</i>
15:20	338 M. Długosz-Lisiecka Technical University of Lodz, Poland <i>The fate of Po-210 in the urban air</i>	365 S. K. Johal Lancaster University, United Kingdom <i>Ruthenium volatilisation from reprocessed spent nuclear fuel – Studying the baseline thermodynamics of Ru(III)</i>	559 X. Hou Technical University of Denmark, Denmark <i>Determination of low level ¹²⁹I in biological samples using accelerator mass spectrometry measurement</i>	254 S. W. Kwon Korea Atomic Energy Research Institute, South Korea <i>A study on salt separation with high throughput from uranium deposits</i>

15:40	<p>153 M. Omeje Covenant University, Nigeria <i>Radiological and chemical toxicity risks of uranium in groundwater based-drinking at Gosa and Lugbe area of Abuja, North Central Nigeria</i></p>	<p>251 E. C. Jung Korea Atomic Energy Research Institute, South Korea <i>Spectroscopic characterization of uranyl(VI) and natural organic matters in groundwater using laser-induced luminescence spectroscopy</i></p>	<p>175 X. Hou Technical University of Denmark, Denmark <i>AMS and ICP-MS for measurement of low-level radionuclides</i></p>	<p>345 S. Erenturk Istanbul Technical University, Turkey <i>Removal of ²²⁶Ra from aqueous media and its thermodynamics and kinetics</i></p>
16:00	Coffee			
	ECO / Radioecology and environmental radioactivity	ACT / Actinide analytical chemistry	NIM / Nuclear instrumentation and methodology	LAB / Radiolabeled compounds and radiopharmaceuticals
	Chair: Š. Palágyi	Chair: P. L. Thompson	Chair: M. Roszbach	Chair: J. Zhang
16:30	<p>312 M. Eriksson / INVITED Swedish Radiation Safety Authority, Sweden <i>On the plutonium isotopic composition in East Atlantic surface waters, levels and trends</i></p>	<p>21 L. Tandon / INVITED Los Alamos National Laboratory, USA <i>Actinide analytical chemistry associated with nuclear forensics characterization of bulk special nuclear materials: An operational and research & development perspective</i></p>	<p>282 L. Szentmiklósi / INVITED Hungarian Academy of Sciences, Hungary <i>Geant4 simulations of the Budapest Compton-suppressed PGAA spectrometer</i></p>	<p>196 H. Jia / INVITED Beijing Normal University, China <i>Synthesis and evaluation of ¹⁸F-labeled indole-based analogs as highly selective sigma-2 receptor probes</i></p>
17:00	<p>288 T. Zalewska Institute of Meteorology and Water Management, Poland <i>Radioactivity in the Baltic Sea as an element of the marine environment status assessment</i></p>	<p>85 C.-T. Yang China Academy of Engineering Physics, China <i>Fluorescent recognition of uranyl ions by a phosphorylated cyclic peptide</i></p>	<p>342 P. Völgyesi Hungarian Academy of Sciences, Hungary <i>Characterization of nuclear fuel assemblies by gamma-ray spectrometry</i></p>	<p>463 J. Jeon Korea Atomic Energy Research Institute, South Korea <i>Efficient radiosynthesis of ¹²⁵I-labeled rutin for biodistribution study of rutin</i></p>
17:20	<p>305 K. M. Szufa Institute of Nuclear Physics PAN, Poland <i>Artificial and natural radionuclides in Antarctic biota</i></p>	<p>60 E. Alekseev Forschungszentrum Jülich/RWTH Aachen University, Germany <i>U(V) stabilization in oxo-materials: Aliovalent substitution and extreme pressure effect</i></p>	<p>119 L. Gačnik Jožef Stefan Institute, Slovenia <i>HPGe detector full-energy peak efficiency calculation for inhomogeneously activated samples</i></p>	<p>401 S. Sekimoto Kyoto University Research Reactor Institute, Japan <i>Separation and purification of technetium-99m from molybdenum-99 produced by electron linear accelerator</i></p>
17:40	<p>208 W. Bu Institute of Nuclear Physics and Chemistry, China <i>Pu contamination in the soils of Gansu province in Northwestern China</i></p>	<p>136 P. Natarajan Indira Gandhi Centre for Atomic Research, India <i>Light scattering studies on polymerization and colloid formation of actinides in aqueous solutions</i></p>	<p>113 Y.-Y. Ji Korea Atomic Energy Research Institute, South Korea <i>Limitations of gamma-ray spectrometry in the quantification of ²³⁸U and ²³²Th in raw materials and by-products</i></p>	<p>356 F. Groppi Università degli Studi di Milano & INFN, Italy <i>The metallobiochemistry of ultratrace levels of technetium-99 in the rat</i></p>
18:00	<p>173 E. M. Lindner Austrian Agency for Health and Food Safety, Austria <i>Radiochemical analysis of sample matrices encountered during the evaluation of potentially contaminated sites in Austria</i></p>	<p>445 L. Benedik Jozef Stefan Institute, Slovenia <i>Analysis of actinides in solid samples after digestion by lithium borate fusion</i></p>	<p>132 R. M. S. De Zanger Erasmus MC, the Netherlands <i>Improving radio detection for high resolution radio-UPLC</i></p>	<p>411 K. M. S. Salem Egyptian Atomic Energy Authority, Egypt <i>Radioimmunochemical studies to development of solid phase radioimmunoassay system using coated beads for the assessment of human chorionic gonadotropin</i></p>
18:20	Poster Session 1/1 (Rooms Akadémia & Szent István)			
	Actinide analytical chemistry • Advances in radiochemistry supporting the nuclear fuel cycle • Mass spectrometry • Nuclear forensics • Nuclear safeguards • Production of radionuclides • Radio- and nuclear analytical methods • Radioanalytical methods of long-lived radionuclides • Radiolabeled compounds and radiopharmaceuticals • Radionuclide separation • Special applications on radioanalytical and nuclear chemistry			
19:00	Snack			

Tuesday, 12 April				
Plenary lectures (Rooms Mátyás I & II) Chair: A. Chatt				
8:30	563 H.-A. Synal, ETH Zurich, Switzerland: How far can we get? Latest progress in accelerator mass spectrometry			
9:10	358 R. M. Lindstrom, National Institute of Standards and Technology, USA: Believable statements of uncertainty			
9:50	201 Z. Chai, Institute of High Energy Physics, Chinese Academy, China: New advances of nuclear energy radiochemistry in China			
10:30	Coffee			
	Room Mátyás I	Room Mátyás II	Room Krisztina	Room Szent László
	LON / Radioanalytical methods of long-lived radionuclides	FOR / Nuclear forensics	NAA / Neutron activation analysis	PRO / Production of radionuclides
	Chair: N. Vajda	Chair: S. P. LaMont	Chairs: R. Zeisler, M. Fukushima	Chair: F. Tárkányi
11:00	381 X. Dai / INVITED China Institute for Radiation Protection, China <i>Fast, sensitive and accurate: Challenges to radioanalytical methods for difficult-to-detect radionuclides</i>	362 J. D. Borgardt / INVITED US Department of State/ Juniata College, USA <i>Results from the galaxy serpent web-based table top exercise utilizing the concept of nuclear forensics libraries</i>	139 B. Smodiš / INVITED Jožef Stefan Institute, Slovenia <i>NAA – The method with nearly unlimited measurement range</i>	181 O. Lebeda / INVITED Nuclear Physics Institute of the CAS, Czech Republic <i>Cyclotron production of ^{99m}Tc – Review of the current status</i>
11:30	229 S. Maxwell Savannah River Nuclear Solutions, USA <i>Rapid method to determine actinides and Sr-89/90 in limestone and marble samples following a radiological emergency</i>	121 J. M. Schwantes Pacific Northwest National Laboratory, USA <i>The state of practice and art of nuclear forensic analysis: Highlights from the 4th Collaborative Materials Exercise (CMX-4) of the Nuclear Forensics International Technical Working Group (ITWG)</i>	340 E. Chajduk Institute of Nuclear Chemistry and Technology, Poland <i>Elemental analysis of infant formulas by INAA and ICP-MS. Comparison of estimated intakes with the safety limits for trace elements</i>	180 A. Hermanne Vrije Universiteit Brussel, Belgium <i>Investigation of production at light charged particle accelerators of medical radioisotopes in the rare earth region</i>
11:50	354 Á. Bihari MTA ATOMKI, Hungary <i>Method development for the determination of Pd-107 in L/ILW liquid wastes</i>	68 A. Nelwamondo NECSA, South Africa <i>The experience of South Africa NECSA nuclear forensics laboratory participation in the International Technical Working Group (ITWG) Fourth Collaborative Material Exercise (CMX-4)</i>	351 A. Contini University of Sassari, Italy <i>Developing a method based on neutron activation analysis to determine the origin of metals used in antiquity</i>	74 P. G. Sennikov Institute of Chemistry of High-Purity Substances, Russia <i>Conversion of high-enriched (98.5%) ⁹⁸MoF₆ to ⁹⁸Mo and ⁹⁸MoC nanocrystal targets in RF plasma</i>
12:10	84 Sz. Osvath National Public Health Center, Hungary <i>Determination of ⁹³Zr in nuclear power plant wastes: Critical evaluation of measurements</i>	120 A. T. Johnson Idaho National Laboratory, USA <i>Preparation of volatile chelates of trivalent and tetravalent neptunium</i>	331 M. Anvia ANSTO, Australia <i>Delayed neutron activation analysis at ANSTO</i>	296 S. Heinitz Paul Scherrer Institute, Switzerland <i>Production and separation of radioactive beryllium isotopes at PSI</i>
12:30	188 D. Zhang Institute of Earth Environment, CAS, China <i>Environmental ¹²⁹I level, distribution and source in Qinghai region of China</i>	14 É. Kovács-Széles MTA Centre for Energy Research, Hungary <i>Development of a national nuclear forensic library in Hungary</i>	299 J. Mizera The Czech Academy of Sciences, Czech Republic <i>Activation analysis in geochemical characterization of moldavites and their parent materials</i>	211 J. K. Pfeiffer Idaho National Laboratory, USA <i>Production of high purity lanthanide isotopes from the spontaneous fission of Cf-252</i>

12:50	Lunch			
	ECO / Radioecology and environmental radioactivity	FUE / Advances in radiochemistry supporting the nuclear fuel cycle	MAS / Mass spectrometry	SEP / Radionuclide separation
	Chair: G. Steinhauser	Chair: D. DiPrete	Chair: H.-A. Synal	Chair: S. Lahiri
14:10	160 J. Guillén Gerada / INVITED University of Extremadura, Spain <i>Modification of the uptake of ²³⁹Pu and ²⁴¹Am by wheat plantlets by application of inorganic fertilizers</i>	97 B. C. Childs / INVITED University of Nevada, USA <i>The nature of the volatile technetium species formed during vitrification of borosilicate glass</i>	384 A. J. T. Jull / INVITED University of Arizona, USA <i>Some interesting applications of accelerator mass spectrometry to ¹⁴C, ¹⁰Be and ¹²⁹I</i>	244 B. T. Wolterbeek / INVITED Delft Technical University, the Netherlands <i>Optimization of radioisotope quality by bond rupture</i>
14:40	61 F. I. Khalili The University of Jordan, Jordan <i>Removal of uranium(VI) and thorium(IV) by insolubilized humic acid from Azraq soil in Jordan</i>	529 E. H. K. Aneheim Chalmers / University of Gothenburg, Sweden <i>Dissolution performance of plutonium nitride based fuel materials</i>	382 M. Christl ETH Zurich, Switzerland <i>Reconstruction of the ¹²⁹I/²³⁶U input function and its application for transient tracer studies in the North Atlantic and Arctic Ocean</i>	474 V. Ostapenko Lomonosov MSU/INR RAN, Russia <i>Separation of ²³⁰Pa from radionuclides generated in natural thorium irradiated by protons</i>
15:00	314 H. Shams University of Surrey, United Kingdom <i>Determination of levels of naturally occurring radioactive materials in lagoon samples containing produced water from the Minagish oil field in the State of Kuwait</i>	501 G. Zhang Beijing Institute of Occupational Medicine for Chemical Industry, China <i>Nuclear fuel cycle modelling using message</i>	232 Y. Kumamoto JAMSTEC, Japan <i>Fukushima-derived radiocesium in the western North Pacific in 2014</i>	326 J. He Third Institute of Oceanography, S.O.A., China <i>An improvement in the pretreating technique for determining radionuclides in seawater</i>
15:20	253 F. Pichierri Tohoku University, Japan <i>Cucurbituril macrocycles for the complexation of radiocesium in the contaminated environment</i>	504 M. Hedberg Chalmers University of Technology, Sweden <i>Americium losses in plutonium nitride during nitride fabrication and pellet sintering</i>	258 G. Lujanienė SRI Center for Physical Sciences and Technology, Lithuania <i>Mass spectrometry techniques for tracer studies of environmental processes</i>	207 M. Losno CEA, France <i>Micro-chromatographic systems for radiochemistry: An organic monolith for the separation U/Eu</i>
15:40	140 Gy. Szabó National Public Health Center, Hungary <i>Determination of conditional stability constants for Co²⁺ with humic acid using humic acid grafted on silica gel</i>		289 S.-H. Lee Korea Research Institute of Standards and Science, South Korea <i>The application of mass spectrometric technique for analyzing plutonium isotopes in the environmental samples including food stuffs</i>	355 P. Moeyaert CEA Marcoule, France <i>Experimental and modeling study of fission products extraction with N,N-dialkylamides</i>
16:00	Coffee			
	ANA / Radio- and nuclear analytical methods	ACT / Actinide analytical chemistry	NIM / Nuclear instrumentation and methodology	LAB / Radiolabeled compounds and radiopharmaceuticals
	Chair: Z. Homonnay	Chair: L. Tandon	Chair: L. Szentmiklósi	Chair: H. Jia
16:30	17 S. Kubuki / INVITED Tokyo Metropolitan University, Japan <i>Photocatalytic ability and ⁵⁷Fe-Mössbauer study of iron-containing silicate glass</i>	95 R. M. Essex / INVITED National Institute of Standards and Technology, USA <i>Certification of uranium reference materials for trace-abundance U isotopes</i>	142 O. Delaune / INVITED CEA, France <i>Gamma³, an advanced ultra-low background gamma spectrometer</i>	78 J. Zhang / INVITED Beijing Normal University, China <i>Preparation and applications of ^{99m}Tc labeled dithiocarbamate complexes as radiopharmaceuticals</i>

17:00	324 Z. Homonnay Eötvös Loránd University, Hungary <i>Mössbauer study of biofilm formation in hypogenic spring caves in Hungary</i>	266 L. Yuan Sichuan University, China <i>Pillar[5]arene-based fluorescent sensor for detection of thorium(IV) ion</i>	287 A. B. E. Hedman Swedish Defence Research Agency, Sweden <i>Characterization of HPGe detectors using computed tomography</i>	285 A. Yurt Kilcar Ege University, Turkey <i>Investigation of ^{99m}Tc labeled plumbagin via ER dependent examination against breast cancer cells and comparison with PLGA encapsulated form</i>
17:20	243 E. Esbelin CEA, France <i>ED-XRF for non-destructive analysis on high level nuclear sample</i>	63 A. Barkleit Helmholtz-Zentrum Dresden-Rossendorf, Germany <i>Complex formation of europium and curium with the digestive enzyme alpha-amylase</i>	81 A. Cagniant CEA, France <i>Gamma³/PIPSBox: A high efficiency and high resolution electron/ photon spectrometer for radioxenon trace detection</i>	311 T. Basaco Bernabeu University of Bern, Switzerland <i>Characterization of girentuximab-DOTA conjugates for labelling with therapeutic radionuclides</i>
17:40	439 B. Ni China Institute of Atomic Energy, China <i>Comparison of multi- analytical techniques for determination of ratio of ²³⁵U/²³⁸U isotopes</i>	555 S. Salah Belgian Nuclear Research Centre (SCK-CEN), Belgium <i>Uranium dissolution in hyperalkaline TMA-OH solutions: Preliminary results</i>	43 X. Zhang University of Tennessee- Knoxville, USA <i>Simulation and first proof-of-concept of next generation, micro-order spatial resolution thermal neutron detector</i>	344 F. Z. Biber Mufftler Ege University, Turkey <i>Investigation of anticancerogenic effects of radioiodinated indole3carbinol and PLGA encapsulated indole3carbinol compounds utilizing in vitro methods</i>
18:00	70 B. Constantinescu Bogdan National Institute of Nuclear Physics & Engineering, Romania <i>Portable XRF spectrometer use for archaeometrical studies in Romania – A review</i>		102 J. S. Kim KOREA Atomic Energy Research Institute, South Korea <i>Development of gamma rays image plate for single photon counting using plastic scintillator</i>	56 E. de Blois Erasmus MC, the Netherlands <i>Semi-automated system for purification, concentrating and labeling of ⁶⁸Ga-radiopharmaca for preclinical application</i>
18:20	Poster Session 1/2 (Rooms Akadémia & Szent István)			
	Actinide analytical chemistry • Advances in radiochemistry supporting the nuclear fuel cycle • Mass spectrometry • Nuclear forensics • Nuclear safeguards • Production of radionuclides • Radio- and nuclear analytical methods • Radioanalytical methods of long-lived radionuclides • Radiolabeled compounds and radiopharmaceuticals • Radionuclide separation • Special applications on radioanalytical and nuclear chemistry			
19:00	Snack			

	Wednesday, 13 April			
	Plenary lectures (Rooms Mátyás I & II) Chair: R. B. Firestone			
8:30	406 C. Ekberg, Chalmers University of Technology, Sweden: Novel nuclear fuels for a sustainable fuel cycle, production and recyclability			
9:10	397 S. LaMont, Los Alamos National Laboratory, USA: Nuclear forensics: A maturing discipline			
9:50	184 E. Sabbioni, CeSI-G.D'Annunzio University Foundation, Italy: Nuclear and radioanalytical techniques in metallobiochemistry research: Studies over 50 years			
10:30	Coffee			
	Room Mátyás I	Room Mátyás II	Room Krisztina	Room Szent László
	LON / Radioanalytical methods of long-lived radionuclides	FOR / Nuclear forensics	NAA / Neutron activation analysis	PRO / Production of radionuclides
	Chair: X. Hou	Chair: K. Mayer	Chairs: A. J. Stopic, E. Mauerhofer	Chair: O. Lebeda

11:00	109 N. Vajda / INVITED RADANAL Ltd., Hungary <i>Simultaneous determination of actinides using DGA resin</i>	551 P. L. Thompson / INVITED AWE, United Kingdom <i>Age dating of bulk plutonium materials</i>	306 J. Kučera / INVITED Nuclear Physics Institute, CAS, Czech Republic <i>Radiochemical separation of mostly short-lived neutron activation products</i>	178 F. Ditrói / INVITED Institute for Nuclear Research, Hungarian Academy, Hungary <i>Thin layer activation, radioactive tracers and nuclear data</i>
11:30	238 G. Jia National Institute of Environmental Protection and Research, Italy <i>Sequential separation and determination of thorium and uranium isotopes in soil sample with Microthene-TOPO chromatographic column and alpha-spectrometry</i>	129 K. Changkrueg Office of Atoms for Peace, Thailand <i>Nuclear Forensics Center in Thailand</i>	145 R. Zeisler National Institute of Standards and Technology, USA <i>INAA contributions to the certification of arsenic species and other trace elements in SRM 3232 kelp</i>	218 A. Mitu IFIN-HH, Romania <i>The challenge of high performance targets preparation for nuclear physics experiments</i>
11:50	221 D. Párkányi Centre for Energy Research, HAS, Hungary <i>Radiochemical separation of lanthanides and americium by extraction chromatography using DGA resin</i>	190 V. N. Gluchshenko Institute of Nuclear Physics, Kazakhstan <i>Capabilities and experience of the Institute of Nuclear Physics in the Republic of Kazakhstan in nuclear forensics</i>	206 M. Fukushima Ishinomaki Senshu University, Japan <i>APDC/MIBK and water extractable inorganic arsenic(III) and arsenic(V) species in Japanese hijiki by neutron activation analysis</i>	357 N. P. van der Meulen Paul Scherrer Institute, Switzerland <i>The production of radionuclides for diagnostic and therapeutic application in nuclear medicine</i>
12:10	276 M. Luo China Institute for Radiation Protection, China <i>Sequential analyses of actinides in soil and sediment with total sample dissolution</i>	202 D. Zheltov Institute of Nuclear Physics, Kazakhstan <i>Spectral methods for elemental and isotopic analysis of nuclear forensics objects in the Institute of Nuclear Physics in the Republic of Kazakhstan</i>	367 O. A. Culicov Joint Institute for Nuclear Research, Romania <i>Investigation of particular species of mosses and lichenized fungi from Antarctica: Influence of altitude and substrates on the elemental content</i>	22 M. C. Sahagia IFIN-HH, Romania <i>Standardisation of a ⁶⁸(Ge+Ga) solution within the CCRI(II)-K2.GE68 key comparison</i>
12:30	394 A. Tarancón University of Barcelona, Spain <i>Selective analysis of ²¹⁰Pb in river water samples with plastic scintillation resins</i>	417 A. Hodgson AWE plc, United Kingdom <i>Advances in the development of a dissolution method for the evaluation of iridium source materials</i>	371 I. Zinicovscaia Joint Institute for Nuclear Research, Russia <i>Spirulina platensis as biosorbent of heavy metals from model solutions and industrial effluents</i>	409 S. A. Happel TrisKem International, France <i>Characterisation of a hydroxamate based extraction chromatographic resin and its application to Zr/Y, Ti/Sc and Ge/Ga separation</i>
12:50	Lunch			
	ECO / Radioecology and environmental radioactivity	SAF / Nuclear safeguards	MAS / Mass spectrometry	SEP / Radionuclide separation
	Chair: M. Eriksson	Chair: A. Berlizov	Chair: K. Hirose	Chairs: S. Lahiri, B. T. Wolterbeek
14:10	223 Š. Palágyi / INVITED Czech Technical University, Czech Republic <i>Simplified modeling in dynamic column technique for the determination of radionuclide transport parameters in systems of solid granular materials and groundwater</i>	552 A. Berlizov / INVITED IAEA, Austria <i>Role and evolution of non-destructive assay for IAEA safeguards verifications</i>	66 J. Zheng / INVITED National Institute of Radiological Sciences, Japan <i>ICP-MS/MS and SF-ICP-MS for the determination of radiocesium isotopes in environmental samples</i>	348 I. Spahn / INVITED Forschungszentrum Jülich, Germany <i>Isolation of no-carrier-added radiomanganese for positron emission tomography</i>

14:40	213 Y. Lin Norwegian Institute for Water Research, Norway <i>Integrated catchment model for prediction of radionuclide riverine transport</i>	163 M. C. Tweardy University of Tennessee, USA <i>A coupled framework to estimate uranium multiplication and enrichment in tagged neutron measurements</i>	177 S. D. Gates Lawrence Livermore National Laboratory, USA <i>Resonance ionization mass spectrometry for actinide isotope measurements: Modeling and simulations</i>	33 B. Li College of Chemistry, Sichuan University, China <i>An adaptive supramolecular organic framework for highly efficient separation of uranium via in situ induced fit mechanism</i>
15:00	290 M. A. Zoran National Institute of R&D for Optoelectronics, Romania <i>Presignal signature of radon (Rn²²²) for seismic events</i>	117 D. Chernikova Chalmers University of Technology, Sweden <i>A simple method for replacing/complementing the traditional image reconstruction techniques for spent nuclear fuel</i>	73 M. R. Savina Lawrence Livermore National Laboratory, USA <i>Resonance ionization mass spectrometry for actinide isotope measurements: Plutonium analysis</i>	20 M. Fourie North West University & Necsa, South Africa <i>Uranium recovery from simulated ⁹⁹Mo production waste using non-dispersive membrane based solvent extraction</i>
15:20	176 A. V. Konoplev Fukushima University, Japan <i>Radiocesium behavior in ponds of the close proximity to the Fukushima Dai-ichi Nuclear Power Plant</i>	42 L. R. Cao The Ohio State University, USA <i>Detection of actinides with gallium nitride alpha particle detector</i>	300 C. Maden ETH Zurich, Switzerland <i>Advances of thermal ionization cavity sources for mass spectrometry applications (TIMS)</i>	395 T. S. Grimes Idaho National Laboratory, USA <i>The effect of nitric acid concentration on higher valence americium reduction kinetics</i>
15:40	189 A. Martin Sanchez University of Extremadura, Spain <i>Actions for remediation in cases with large concentration of radon indoor</i>	41 J. Zsigrai EC JRC ITU, Germany <i>Influence of Bi X-rays on uranium isotope ratios determined by gamma spectrometry</i>		402 L. Yuan Institute of High Energy Physics, Chinese Academy, China <i>Phenanthroline-based tetradentate ligand for selective U(VI) capture: From liquid-liquid extraction to solid-phase extraction</i>
16:00	Coffee			
16:30	Excursion			
19:00	Gala Dinner			

	Thursday, 14 April
	Plenary lectures (Rooms Mátyás I & II) Chair: R. M. Lindstrom
8:30	197 R. B. Firestone, University of California, Berkeley, USA: <i>Analysis of the global radiocarbon record for evidence of near-earth supernovae</i>
9:10	171 A. Türler, Paul Scherrer Institute & University of Bern, Switzerland: <i>Progress in superheavy element research</i>
9:50	553 P. P. Povinec, Comenius University, Slovakia: <i>Low background gamma-spectrometry: Limits and applications</i>
10:30	Coffee

	Room Mátyás I	Room Mátyás II	Room Krisztina	Room Szent László
	COM / Companies' presentations	FOR / Nuclear forensics	NAA / Neutron activation analysis	SHO / Short presentations
	Chair: T. Kocsor	Chair: A. M. Hubert	Chairs: J. Mizera, A. Chatt	
11:00	410 S. Happel TrisKem International, France <i>Overview over some recently developed extraction-chromatographic resins and their application in radioanalysis and radionuclide production</i>	35 A. M. Hubert / INVITED CEA, DAM, DIF, France <i>²³³Pa tracer calibration for uranium radiochronometry</i>	241 M. V. Frontasyeva / INVITED Joint Institute for Nuclear Research, Russia <i>Neutron activation analysis and microscopy of extraterrestrial materials</i>	See details on Page 28
11:30	558 W. Westmeier Dr. Westmeier GmbH, Germany <i>Physics, no numerology</i>	214 V. Venchiarutti European Commission – Joint Research Centre – IRMM, Belgium <i>IRMM-1000A, IRMM-1000B and REIMEP-22 – Improving the metrological basis for uranium age dating</i>	267 G. Baccolo University of Siena, Italy <i>Instrumental neutron activation analysis applied to ice cores</i>	
11:50	562 W. Hennig XIA LLC, USA <i>Advances in detector readout electronics for nuclear spectroscopy</i>	186 A. Fankhauser European Commission, Joint Research Centre, IRMM, Belgium <i>A novel certified reference material – ²⁴³Am</i>	265 A. J. Štopić ANSTO, Australia <i>Performance of NAA Laboratories in the Asia-Pacific region in determining rare earth elements</i>	
12:10	560 J. Petrányi Gamma Műszaki Zrt., Hungary <i>Nuclear measurement solutions of Gamma Technical Corporation</i>	172 M. Mathuthu North-West University (Mafikeng), South Africa <i>Isotopic techniques in resolving nuclear forensic signatures for U & Th mining and processing</i>	352 M. Clemenza Università di Milano Bicocca e INFN, Italy <i>Low background neutron activation analysis: A high sensitivity technique for physics of rare events</i>	
12:30	567 G. Di Maio CAEN GmbH, Germany <i>CAEN Electronic Instrumentation for physics experiments</i>	105 A. Apostol IFIN-HH, Romania <i>Identification of elemental signatures in uranium sample from nuclear fuel cycle by PIXE, PIGE and NRA methods using 3 MV Tandatron particles accelerator</i>	346 S. Hacıyakupoglu Istanbul Technical University, Turkey <i>Investigation of Istanbul's neolithic age animal findings by neutron activation analysis</i>	
12:50	Lunch			
	ECO / Radioecology and environmental radioactivity	ACT / Actinide analytical chemistry	MAS / Mass spectrometry	PGA / Prompt gamma activation analysis
	Chair: F. J. Guillén Gerada	Chair: L. Tandon	Chair: A. J. T. Jull	Chair: R. M. Lindstrom
14:10	88 E. Steinnes / INVITED Norwegian University of Science and Technology, Norway <i>Use of mosses for monitoring atmospheric deposition of radionuclides: Possibilities and limitations</i>	29 J. L. R. King / INVITED AWE Plc, United Kingdom <i>Determination of gallium in plutonium by isotope dilution mass spectrometry</i>	309 M. Molnár / INVITED MTA ATOMKI – Isotoptech Zrt., Hungary <i>Environmicadas: A C-14 AMS for nuclear environmental protection in Hungary</i>	182 R. B. Firestone / INVITED University of California, Berkeley, USA <i>Determination of thermal neutron capture cross sections from prompt gamma-ray data</i>

14:40	98 J. C. S. P. Dembo ELTE – Eötvös Loránd University, Hungary <i>First survey of radioactivity levels in Angolan adobe determined by gamma spectrometry</i>	127 F. Quinto Institute for Nuclear Waste Disposal – KIT-INE, Germany <i>Simultaneous analysis of U, Np, Pu, Am, and Cm isotopes at ultra-trace levels in groundwater samples with AMS and a comparison with SF-ICPMS</i>	86 K. Hirose Sophia University, Japan <i>Plutonium in atmospheric environment</i>	148 D. J. Turkoglu National Institute of Standards and Technology, USA <i>Alternative beam stop for minimizing gamma- ray and fast-neutron background</i>
15:00	47 E. Kabai Federal Office for Radiation Protection, Germany <i>Combined method for the fast determination of pure beta emitting radioisotopes in food samples</i>	50 I. Izosimov Joint Institute for Nuclear Research (JINR), Russia <i>Multi-step excitation schemes in laser spectroscopy and detection of actinides and lanthanides in solutions</i>	281 S. Nisi Istituto Nazionale Fisica Nucleare, Italy <i>Determination of radium 226 in groundwater by SF-ICP-MS: A revised and optimized method</i>	94 M. Rossbach Forschungszentrum Jülich GmbH, Germany <i>Fast neutrons for PGAA applications</i>
15:20	170 D. Xarchoulakos Greek Atomic Energy Commission, Greece <i>Uranium isotopes in Greek rivers</i>	62 M. Krachler European Commission, Germany <i>²³⁴U/²³⁸Pu age dating of plutonium materials using high resolution ICP-OES and sector field ICP-MS</i>	537 C. K. Black Nu Instruments, United Kingdom <i>Automatic multi-collector total evaporation measurements with ion counter initialisation</i>	72 R. L. Paul NIST, USA <i>Prompt gamma-ray activation analysis for certification of sulfur in fuel oil SRMs</i>
15:40	275 Y. Yang China Institute for Radiation Protection, China <i>A rapid method for radio- strontium in soil samples</i>	30 N. Xu Los Alamos National Laboratory, USA <i>Bulk plutonium chemical analysis at microscale</i>	75 P. P. Povinec Comenius University, Slovakia <i>Low and high energy radioisotope mass spectrometry vs. radiometrics</i>	18 Zs. Révay Technische Universität München, Germany <i>Further development of in- beam activation analysis at MLZ, Garching</i>
16:00	Coffee			
16:30	Poster Session 2 (Rooms Akadémia & Szent István) Neutron activation analysis • Nuclear instrumentation and methodology • Prompt gamma activation analysis • Radiation chemistry • Radioecology and environmental radioactivity			
18:20	Committee Meetings			
19:00	(Rooms Krisztina & Szent László)			

SHO / Short presentations (Chair: Z. Homonnay)				
11:00	408 C.-P. Lee National Cheng Kung University, Taiwan <i>A preliminary investigation of stable carbon and nitrogen isotope values in Taiwan milk</i>	11:40	79 M. K. Khan Pohang University of Science and Technology, South Korea <i>Liquid scintillation counting methodology for ⁹⁹Tc analysis in various aqueous matrices</i>	
11:10	261 D. Strumińska-Parulska University of Gdańsk, Poland <i>Polonium ²¹⁰Po and radiolead ²¹⁰Pb in calcium and magnesium supplements</i>	11:50	450 E. Borai Atomic Energy Authority, Egypt <i>Radichemical distribution of hazardous natural radionuclides during monazite mineral processing</i>	
11:20	528 E. H. K. Aneheim Chalmers / University of Gothenburg, Sweden <i>Towards an automatic procedure for the production of astatinated radiopharmaceuticals</i>	12:00	199 T. T. Tran VNUHCM-University of Science, Vietnam <i>A procedure to estimate thickness of inner dead-layer of N type HPGe detector using MCNP code</i>	
11:30	429 J. Wen China Academy of Engineering Physics, China <i>Fluorescent TPE-based sensor for uranium recognition with AIE characteristics</i>	12:10	156 T. T. Tran VNUHCM-University of Science, Vietnam <i>Intercomparison NaI(Tl) and HPGe spectrometry to studies of natural radioactivity on geological samples</i>	

Friday, 15 April				
Plenary lectures (Rooms Mátyás I & II) Chair: Zs. Révay				
8:30	564 H.-J. Wester, Technical University of Munich, Germany: New trends in radiopharmaceuticals			
9:10	55 F. Cataldo, Università della Tuscia, Italy: Radiation chemical aspects of the origins of life			
9:50	400 A. V. R. Reddy, Formerly Bhabha Atomic Research Center, India: An overview of our work in nuclear chemistry			
10:30	Coffee			
	Room Mátyás I	Room Mátyás II	Room Krisztina	Room Szent László
	RAC / Radiation chemistry	FOR / Nuclear forensics	NIM / Nuclear instrumentation and methodology	LAB / Radiolabeled compounds and radiopharmaceuticals
	Chair: E. Takács	Chair: S. LaMont	Chair: R. M. Lindstrom	Chair: Y. Liu
11:00	377 L. Wojnárovits / INVITED MTA EK, Hungary <i>Water purification by ionizing radiation</i>	24 M. Wilkerson / INVITED Los Alamos National Laboratory, USA <i>Morphologic and chemical characterization for forensic science</i>	372 J. W. Mietelski / INVITED IFJ PAN, Poland <i>Digital coincidence gamma spectrometer – Initial tests, results and perspectives</i>	343 Z. Varga / INVITED Research Centre for Natural Sciences, Hungary <i>Development of a theranostic liposomal drug delivery system for radio nucleosides</i>
11:30	388 L. Szabó MTA Energiatudományi Kutatóközpont, Hungary <i>•OH induced oxidation of penicillins in relation to advanced oxidation techniques</i>	533 J. L. Canaday Argonne National Laboratory, USA <i>The radiological sealed source library: A compilation of forensic signatures and distribution pathways</i>	257 A. Kocsonya Hungarian Academy of Sciences, Centre for Energy Research, Hungary <i>Direct measurement of correction factors for gamma-gamma true-coincidence</i>	250 W. Yang Institute of High Energy Physics, CAS, China <i>Technetium-99m labeled multivalent galactosyl dendrimer for hepatic ASGP receptor imaging</i>
11:50	215 Z. I. Ali National Center for Radiation Research and Technology, Egypt <i>Radiation-induced in-situ synthesis of gold nanostructured materials</i>	233 R. Kips Lawrence Livermore National Laboratory, USA <i>The next frontier for nuclear forensic signatures: Microanalysis of nuclear fuel pellets</i>	543 G. Gambarini Università degli Studi di Milano, Italy <i>Quenching of the sensitivity of gel dosimeters and radiochromic films in high LET radiation</i>	230 M. Cui Beijing Normal University, China <i>Synthesis and in vivo evaluation of (R)-(+)- and (S)-(-)-¹⁸F-labeled 2-arylbenzoheterocyclic derivatives for PET mapping of β-amyloid plaques</i>
12:10	110 Q. Zhu Wuhan University of Technology, China <i>The cross-linked polymerization of polystyrene and divinyl benzene within γ-irradiation</i>	536 R. E. Steiner Los Alamos National Laboratory, USA <i>Measurement and assessment of nuclear testing fallout in the southwest United States</i>	478 S. Jednorog Institute of Plasma Physics and Laser Microfusion, Poland <i>Examination of large fusion device by means of nanosecond neutron pulse generated by dense plasma focus PF-6</i>	389 K. M. S. Salem Egyptian Atomic Energy Authority, Egypt <i>Radiolabeling of melatonin using different oxidizing agents for immunoassay purpose</i>
12:30	386 T. Fekete MTA Energiatudományi Kutatóközpont, Hungary <i>Synthesis of cellulose derivative/acrylic acid superabsorbent hydrogels crosslinked by gamma irradiation</i>	561 J. Jiang AWE plc, United Kingdom <i>Rapid analysis of ^{89/90}Sr in nuclear forensics samples</i>	341 M. Długosz-Lisiecka Technical University of Lodz, Poland <i>Comparison of two spectrometric counting modes for fast analysis of selected radionuclide activity</i>	
12:50	Closing Ceremony (Rooms Mátyás I & II) Best Poster & Best Young Lecturer Awards			
14:10	Lunch			

Poster Presentations

Poster Sessions 1/1 and 1/2

Monday and Tuesday, 11–12 April, 18:20–19:00

Actinide analytical chemistry • Advances in radiochemistry supporting the nuclear fuel cycle • Mass spectrometry • Nuclear forensics • Nuclear safeguards • Production of radionuclides • Radio- and nuclear analytical methods • Radioanalytical methods of long-lived radionuclides • Radiolabeled compounds and radiopharmaceuticals • Radionuclide separation • Special applications on radioanalytical and nuclear chemistry

Poster Session 2

Thursday, 14 April, 16:30–18.20

Neutron activation analysis • Nuclear instrumentation and methodology • Prompt gamma activation analysis • Radiation chemistry • Radioecology and environmental radioactivity

All presenting authors are kindly asked to be close to their poster during the poster sessions.

Author(s) (presenting author is underlined)	Title	Presenting author's affiliation	Poster ID
Actinide analytical chemistry			
<u>P. Heads</u> , C. Poile, P. Thompson	GCMS analysis of organic compounds on plutonium	Department of Nuclear Analytical Science, AWE, Aldermaston, Reading, England	40
T. Renz, <u>M. Plaschke</u> , F. Quinto, M. Lagos, A. Bauer, H. Taubald, H. Geckeis	Development of an analytical procedure for the simultaneous determination of Np and Pu in clay samples	Institut für Nukleare Entsorgung, Karlsruher Institut für Technologie, Eggenstein-Leopoldshafen, Germany	128
X. Yuan, Y. Jia, Q. Gan, L. Yuan, <u>W. Feng</u>	Thorium-induced vesicular self-assemblies based on pillar[5]arene oximes	Institute of Nuclear Science and Technology, Key Laboratory for Radiation Physics and Technology of Ministry of Education, College of Chemistry, Sichuan University, Chengdu, China	503
Advances in radiochemistry supporting the nuclear fuel cycle			
<u>B. Remenec</u> , S. Dulanská, L. Mátel, G. Wallová	Determination of difficult to measure radionuclides in reactor components and fuel assemblies	Radiation Protection SE-EBO, Jaslovské Bohunice, Slovakia	69
Mass spectrometry			
<u>D. L. Y. Tiong</u> , P. B. Kin, R. D. Webster	Confidence levels for categorizing uranium materials by inductively coupled plasma mass-spectrometry (ICP-MS) without clean-room facilities	School of Physical and Mathematical Sciences, Chemistry and Biological Sciences, Nanyang Technological University, Singapore	89
<u>D. Zheltov</u> , A. Bychenko, M. Edomskaya, P. Kharkin, G. Gluchshenko, L. Matiyyenko	Developing the method for direct determination of Pu-239 by ICP-MS in acid solutions after doil digestion	Center of Complex Environment Research, Institute of Nuclear Physics, Almaty, Republic of Kazakhstan	203
Neutron activation analysis			
L. F. Barros, <u>M. S. Dias</u> , M. F. Koskinas, I. M. Yamazaki, R. Semmler, R. V. Ribeiro	Determination of k_0 and Q_0 for $^{113}\text{In}(n,\gamma)^{114\text{m}}\text{In}$ reaction with covariance analysis	Laboratório de Metrologia Nuclear, Centro do Reator de Pesquisas, Instituto de Pesquisas Energéticas e Nucleares, São Paulo, Brazil	443
<u>L. Castro</u> , E. G. Moreira, M. B. A. Vasconcellos	Use of INAA in the homogeneity evaluation of a bovine kidney candidate reference material	Instituto de Pesquisas Energéticas e Nucleares, São Paulo, Brasil	313
<u>L. Chang-lin</u> , X. Bao-lin, Z. Yi, P. Meng, Y. Ze-en, K. Xiang-zhong	Determination of the neutron capture cross-section of ^{232}Th induced by D-D/D-T neutrons using the neutron activation method	School of Nuclear Science and Technology, Lanzhou University, Gansu Province, China	404
<u>J. O. dos Santos</u> , C. S. Munita, J. E. da Silva, M. S. Reis	Box-Cox transformation on dataset from compositional studies of archaeological potteries	Coordenação de Física, Instituto Federal de Sergipe – Campus Lagarto, Sergipe, Brazil	428
<u>M. Frontasyeva</u> , S. Pavlov	State-of-the-art of neutron activation analysis at the reactor IBR-2 of joint institute for nuclear research in Dubna, Russia	Department of Neutron Activation Analysis and Applied Research, Division of Nuclear Physics, Frank Laboratory of Neutron Physics, Joint Institute for Nuclear Research, Dubna, Russian Federation	242

Author(s) (presenting author is underlined)	Title	Presenting author's affiliation	Poster ID
<u>C.-K. Huang</u> , W.-C. Tsai, S.-H. Jiang	Neutron Activation Analysis using a modified absolute calibration method	Institute of Nuclear Engineering and Science, National Tsing Hua University, Hsinchu, Taiwan	521
<u>J. Kameník</u> , K. Dragounová, J. Kučera, Z. Brykner, V. A. Trepakov, V. Strunga	Determination of vanadium in titanate-based ferroelectrics by INAA with discriminating gamma-ray spectrometry	Nuclear Physics Institute of the Czech Academy of Sciences, Řež, Czech Republic	466
<u>Z. Lamari</u> , R. Larbi, H. Neggache	Analysis of aristolochia longa medicinal plant from Algeria	Department Recherche, Comena, Bp43 Centre de Recherche Nucleaire de Draria, Algeria	71
C. N. Lange, <u>M. B. Agostini Vasconcellos</u> , A. M. Graciano Figueiredo, I. M. Carneiro de Camargo, L. Castro, R. Beck Ticcianeli	Rare earth elements content and leachability in coal fly ash from Figueira Coal Power Plant	Instituto de Pesquisas Energéticas e Nucleares, São Paulo, Brasil	538
<u>C. N. Lange</u> , A. M. Graciano Figueiredo, J. Enzweiler	Soil trace element status in an impounded vehicles scrapyards	Instituto de Pesquisas Energéticas e Nucleares, São Paulo, Brasil	248
J. Mizera, Z. Řanda, <u>I. Krausová</u>	Neutron and photon activation analyses in geochemical characterization of Libyan Desert Glass	Nuclear Physics Institute, The Czech Academy of Sciences, Řež, Czech Republic	444
<u>M. Nadeem</u> , G. N. Kim, M. Zaman, K. Kim, H. Naik, M. Shahid, T. Hien	Activation cross-section and isomeric ratio studies for the $^{nat}\text{Ag}(n,x)^{106g,m,105,104g,m}\text{Ag}$ reactions for neutrons with average energies from 15.11 MeV to 35.3 MeV	Department of Physics, Kyungpook National University, Daegu, Republic of Korea	271
<u>L. Szentmiklósi</u> , Zs. Révay, B. Maróti, D. Párkányi, I. Harsányi	High-energy calibration data for neutron activation analysis	Centre for Energy Research, Hungarian Academy of Sciences, Budapest, Hungary	283
<u>C. Xiao</u> , Y. Yao, L. Hua, X. Jin, P. Wang, B. Ni	k0-NAA for determination of REE in reference materials of ore sources	Department of Nuclear Physics, China Institute of Atomic Energy, Beijing, China	436
Nuclear forensics			
<u>A. Castro</u> , H. Boylan, B. Griffiths, N. Xu	Low level determination of uranium in concrete by Laser-Induced Breakdown Spectroscopy	Chemistry Division, Los Alamos National Laboratory, Los Alamos, NM, USA,	467
<u>B. Henn</u> , K. Tólos, K. Fél, I. Almási, A. Kocsonya, P. Völgyesi, N. Cong Tam, L. Lakosi, A. Kovács, É. K. Széles, T. Bíró	Identification of high confidence nuclear forensics signatures by analysis of confiscated nuclear materials	Hungarian Academy of Sciences, Centre for Energy Research, Budapest, Hungary	391
<u>D. M. L. Ho</u> , D. Tiong, B. K. Pong	Complete ICP-MS analysis of plutonium samples contaminated with uranium	DSO National Laboratories, Singapore	522
<u>J. A. Mars</u> , J. F. Guambe, J. Day	Application of IBA in the forensic profiling of environmental pollution of natural resources	Faculty of Health and Wellness Sciences, Cape Peninsula University of Technology, Bellville, South Africa	523
<u>H. Ramebäck</u> , P. Lagerkvist, S. Holmgren, S. Jonsson, B. Sandström, A. Tovedal, A. Vesterlund, T. Vidmar, J. Kastlander	On the accuracy of gamma spectrometric isotope ratio measurements of uranium	Swedish Defence Research Agency, FOI, CBRN Defence and Security, Umeå, Sweden	449
<u>M. Tyra</u> , J. Mann, R. Vocke	Recertification of a ^{84}Sr isotope reference material	Physical Measurement Laboratory, National Institute of Standards and Technology, Gaithersburg, MD, USA	496
<u>A. Vesterlund</u> , P. Lagerkvist, C. Ekberg, H. Ramebäck	Comparison of methods for measuring lanthanides in uranium matrices	Swedish Defence Research Agency, FOI, CBRN Defence and Security, Umeå, Sweden	451
Nuclear instrumentation and methodology			
T. Alrefae	Monte Carlo methods for gamma spectrometry efficiency calibration for environmental applications	Physics Department, Kuwait University, Khaldia, Kuwait	390
H. Bagán, A. Tarancón, L. Yei, <u>J. F. García</u>	Activity determination of alpha and beta emitters in organic and aqueous aggressive media by Crosslinked Plastic Scintillators (C-PS)	Department of Analytical Chemistry, University of Barcelona, Barcelona, Spain	534
C.-H. Chen, <u>M.-J. Tsai</u> , Y.-W. Tsang, C.-Y. Chiu, H.-Y. Chao, C.-H. Yao, Y.-J. Chang	Comparing dose calibration methods of Nipam gel dosimeter used for RapidArc [™] treatment	Department of Biomedical Imaging and Radiological Science / School of Chinese Medicine, China Medical University, Taichung City, Taiwan, R.O.C.	495
Z. Guiying, L. Jingyun, X. Guoliang, L. Jue, <u>W. Jianguo</u> , N. Dongsheng, C. Lei, N. Bangfa, X. Caijin, J. Xiangchun, Y. Yonggang, G. Zeqin, W. Zhichao, Q. Yutong	Study on determination of low neutron dose in strong X(γ) radiation field	Beijing Institute of Occupational Medicine for Chemical Industry, Beijing, China	546

Author(s) (presenting author is underlined)	Title	Presenting author's affiliation	Poster ID
<u>J. Halleröd</u> , L. Bauhn, C. Ekberg, E. Aneheim	Analytical methods for using alpha-spectrometry	Department of Chemistry and Chemical Engineering, Chalmers University of Technology, Gothenburg, Sweden	517
<u>A. Hedman</u> , G. Ågren, L. Johansson, J. Bahar Gogani, H. Ramebäck	Optimized detector for <i>in situ</i> low energy gamma spectrometry in close geometries	Swedish Defence Research Agency, Division of CBRN Defence and Security, Umeå, Sweden; Umeå University, Department of Radiation Sciences, Radiation Physics, Umeå, Sweden	291
J.-W. Lee, <u>J. Jeon</u> , C.-H. Kim, S.-J. Kim, J.-I. Kim	A new alloy compensation method for thickness measurement	Korea Atomic Energy Research Institute, Advanced Radiation Technology Institute RI-Biomics Research Center, Korea	234
Y. J. Lee, M. J. Kim, <u>D. G. Hong</u>	Luminescence characteristics of Al ₂ O ₃ :C TL glow peaks separated by computerized glow curve deconvolution	Department of Physics, Kangwon National University, Chuncheon, South Korea	12
C. Lei, W. Jianguo, <u>L. Jingyun</u> , Z. Guiying, D. Jun, S. Yanchao, G. Zeqin, W. Zhichao, Q. Yutong	Preliminary design of CR39 fast/thermal neutron personal dosimeter used in oil & gas field logging	Beijing Institute of Occupational Medicine for Chemical Industry, Beijing, China	514
S. H. Lim, S.-H. Han, R. Park, M. Lee, C.-G. Lee, <u>J. Park</u> , K. Song	Development of analysis techniques for precise measurements of ²³³ U in environmental safeguards samples with high thorium contents	Nuclear Chemistry Research Division, Korea Atomic Energy Research Institute, Daejeon, Republic of Korea	488
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