

Conference Program

Overview:

Sunday, March 13 – George Bush Presidential Library Rotunda

4:00 – 6:00 p.m. Registration

6:00 – 8:00 p.m. Welcome Reception

Monday, March 14 – Interdisciplinary Life Sciences Building Auditorium

7:00 a.m. – 5:00 p.m. Registration

8:30 a.m. Welcome and Opening Remarks

8:50 – 9:20 a.m. Session MOAMA: MTAA 50th Anniversary Review

9:20 – 10:40 a.m. Session MOAMB: Fritz Grass Memorial Session

11:00 a.m. – 12:00 p.m. 2010 Hevesy Award Ceremony and Lecture

1:00 – 2:40 p.m. Session MOPMA: Facility and Method Development (I)

3:10 – 4:50 p.m. Session MOPMB: Facility and Method Development (II)

Tuesday, March 15 - Interdisciplinary Life Sciences Building Auditorium

7:00 a.m. – 5:00 p.m. Registration

8:00 – 10:00 a.m. Session TUAMA: Epidemiology and Trace Elements in Medicine

10:30 a.m. – 12:20 p.m. Session TUAMPA: Poster Session A

1:20 – 3:00 p.m. Session TUPMA: Nuclear Imaging in Medicine

3:30 – 5:00 p.m. Session TUPMB: Introductions to Special Symposia

5:30 – 6:30 p.m. Buffet dinner and special symposia – Hagler Center

6:30 – 8:30 p.m. Session TUPMC: Nano-technology

6:30 – 8:30 p.m. Session TUPMD: Archaeometry

6:30 – 8:30 p.m. Session TUPME: Nuclear Forensics/Border Security

Wednesday, March 16 - Interdisciplinary Life Sciences Building Auditorium

7:00 a.m. – 5:00 p.m. Registration

8:00 – 10:20 a.m. Session WEAMA: Applications in Environmental Studies

10:50 a.m. – 12:30 p.m. Session WEAMB: Applications in Agriculture and Foods

1:00 – 2:05 p.m. Session WEPMA: Applications in Geochemistry

2:05 – 2:30 p.m. Buses load for trip to the Houston Livestock Show and Rodeo

Thursday, March 17 - Interdisciplinary Life Sciences Building Auditorium

8:00 a.m. – 5:00 p.m. Registration

9:00 – 10:40 a.m. Session THAMA: Nuclear Beams and PGAA

11:10 a.m. – 1:00 p.m. Session THAMPB: Poster Session B

2:00 – 3:40 p.m. Session THPMA: Prompt Gamma Activation Analysis

4:10 – 5:50 p.m. Session THPMB: Method Enhancements/RNAA/Speciation

6:30 – 8:30 p.m. Conference Banquet and 2011 Hevesy Award Ceremony and Lecture

Friday, March 18 - Interdisciplinary Life Sciences Building Auditorium

7:00 – 10:00 a.m. Registration

8:00 – 9:40 a.m. Session FRAMA: Metrology/QC/Standards (I)

10:00 – 11:00 a.m. Session FRAMB: Metrology/QC/Standards (II)

11:00 a.m. – 12:00 p.m. Session FRAMC: Next Generation/Conference Closing

Monday Morning, March 14

- 8:30 a.m.** **Conference Opening Remarks** **E.A. Schweikert and W.D. James, Co-chairs**
University Welcome Texas A&M President R. Bowen Loftin
- 8:50 a.m. Session: MOAMA** **MTAA Anniversary Historical Review** **Richard E. Wainerdi, Honorary Chair**
Time Log
8:50 [318](#) [THE BIRTH OF MODERN TECHNIQUES IN ACTIVATION ANALYSIS IN 1961, Richard E. Wainerdi, Texas Medical Center, USA](#)
- 9:20 a.m. Session: MOAMB** **Fritz Grass Memorial Session** **Rolf Zeisler, Chair**
Time Log
9:20 [303](#) [PROFESSOR FRITZ GRASS AND k0 FACTORS FOR SHORT TIME NAA, Franz De Corte, University of Gent and Research Foundation-Flanders, Belgium](#)
- 9:40 [325](#) [CYCLIC NEUTRON ACTIVATION ANALYSIS HYPHENATED WITH HPLC-MS/MS FOR STUDY OF FLUORINATED POLLUTANTS VIA SHORT-LIVED NUCLIDE F-20, Hong Zhang, Zhifang Chai, Shenzhen University, China](#)
- 10:00 [324](#) [ARE THERE STILL CHALLENGES AFTER 41 YEARS OF SHORT HALF-LIFE MEASUREMENTS AT REACTOR INSTITUTE DELFT, Peter Bode, Delft University of Technology, The Netherlands](#)
- 10:20 [320](#) [ILLICIT UTILIZATION OF ARSENIC COMPOUNDS IN FIREWORKS? -AN ANALYSIS OF THE SUSPENDEd PARTICLE EMISSION DURING VIENNA'S NEW YEAR FIREWORKS 2007 AND 2008, Johannes H. Sterba, Fritz Grass, Georg Steinahuser, Johann Wernisch, Max Bichler, Atominstitut, Vienna University of Technology, Austria](#)
- 10:40 – 11:00 a.m.** **Coffee Break**
- 11:00 a.m.** **2010 Hevesy Medal Ceremony** **Amares Chatt, Chair**

 304 DEVELOPMENT, RELEVANCE, AND APPLICATIONS OF “ATOM-AT-A-TIME” TECHNIQUES, Darleane C. Hoffman, University of California at Berkeley, USA
- 12:00 - 1:00 p.m.** **Lunch Break**

Monday Afternoon, March 14

1:00 p.m. Session: MOPMA Facility and Method Development (I) Zhifang Chai and Peter Bode, Chairs

Time Log

1:00 [218](#) [TRENDWATCHER OR TRENDSETTER; 50 YEARS OF MTAA, Marcel de Bruin, Peter Bode, Technical University of Delft, Delft, The Netherlands](#)

1:20 [311](#) [NAA FACILITIES OF CHINA ADVANCE RESEARCH REACTOR AT CIAE, Bangfa Ni, Donghui Huang, Caijing Xiao, Hongchao Sun, Guiying Zhang, Cunxiong Liu, Pingsheng Wang, Haiqing Zhang, Weizhi Tian, China Institute of Atomic Energy, China](#)

1:40 [119](#) [MONTE CARLO SIMULATIONS FOR A NEW APPROACH TO PARAMETRIC NEUTRON ACTIVATION ANALYSIS AT MURR, Nickie J. Peters, John D. Brockman, John D. Robertson, University of Missouri, USA](#)

2:00 [286](#) [APPLICABILITY OF LABR₃ SCINTILLATION DETECTORS TO PGNAAP APPLICATIONS, A. Favallil, V. Mozin, Los Alamos National Laboratory, USA](#)

2:20 [317](#) [RECENT ADVANCES IN THE USE OF ASEDRA IN POST-PROCESSING SCINTILLATOR SPECTRA FOR RESOLUTION ENHANCEMENT, Glenn E. Sjoden, James Maniscalco, Mac Chapman, Georgia Institute of Technology, USA](#)

2:40 – 3:10 p.m.

Coffee Break

3:10 p.m. Session: MOPMB Facility and Method Development (II) Zhifang Chai and Peter Bode, Chairs

Time Log

3:10 [269](#) [NON-DESTRUCTIVE, MULTI-ELEMENT AND SITE-SELECTIVE ANALYSIS OF BULK MATERIALS BY MUONIC X-RAY, M.K. Kubo, K. Ninomia, T. Nagatomo, P. Strasser, N. Kawamura, K. Shimomura, Y. Miyake, T. Saito, W. Higemoto, International Christian University, Japan](#)

3:30 [248](#) [IRRADIATION AND MEASUREMENT DEVICES AND METHODS DEVELOPMENT FOR LSNAAP APPLICATIONS AT THE TRIGA-ACPR CORE, Csaba Roth, Dumitru Barbos, Daniela Gugiu, Adrian Datcu, Dumitru Dobrea, Mihai Gligor, Marin Preda, Madinka Bright Mweetwa, Institute for Nuclear Research Pitesti, Romania](#)

3:50 [168](#) [COLLIMATED SCANNING FOR LARGE SAMPLE NEUTRON ACTIVATION ANALYSIS OF INHOMOGENEOUS SAMPLES, Theodora Vasilopoulou, Faidra Tzika, Ion E. Stamatelatos, Institute of Nuclear Technology-Radiation Protection, Greece](#)

4:10 [215](#) [LARGE SAMPLE NEUTRON ACTIVATION ANALYSIS AND ISOTOPICALLY ENRICHED ACTIVATABLE TRACERS: COMBINING THE STRENGTHS OF TWO METHODS, Peter Bode, Delft University of Technology, The Netherlands](#)

4:30 [319](#) [NEW OPPORTUNITIES FOR THE ENHANCED NAA SERVICES THROUGH THE RESEARCH REACTOR COALITIONS AND NETWORKS, Danas Ridikas, Pablo Adelfang, Kevin Alldered, Marta Ferrari, International Atomic Energy Agency, Austria](#)

Tuesday Morning, March 15

8:00 a.m. Session: TUAMA **Epidemiology and Trace Elements in Medicine** **Steve Morris, Chair**

Time Log

8:00 **132** [THE CONTINUING ROLE FOR NEUTRON ACTIVATION ANALYSIS IN TRACE-ELEMENT EPIDEMIOLOGY, J. Steven Morris, University of Missouri, USA](#)

8:20 **233** [EPITHERMAL NEUTRON ACTIVATION ANALYSIS IN APPLIED MICROBIOLOGY, Marina V. Frontasyeva, Joint Institute for Nuclear Research, Russian Federation](#)

8:40 **153** [A RADIOCHEMICAL METHOD FOR NEUTRON ACTIVATION ANALYSIS OF AS IN BIOLOGICAL SAMPLES AND ITS POTENTIAL USE IN EPIDEMIOLOGY STUDIES, John D. Brockman, University of Missouri, USA](#)

9:00 **339** TRACE-ELEMENT HYPOTHESES, AN EPIDEMIOLOGIST'S PERSPECTIVE: EXPERIENCES FROM THE EURAMIC STUDY, Eliseo Guallar, Johns Hopkins Medical Institutions, USA

9:20 **231** [IN-VIVO BONE LEAD MEASUREMENT USING 109Cd EXCITED K-XRF: SYSTEM PERFORMANCE AND THE RELATIONSHIP BETWEEN CUMULATIVE BLOOD LEAD AND BONE LEAD, Sepideh Behinaein, David R. Chettle, Jovica Atanackovic, Lesley M Egden, David E.B. Fleming, Norbert Richard, and Susan Stever, McMaster University, Canada](#)

9:40 **322** BIOCHEMICAL NEUTRON ACTIVATION ANALYSIS, C.K. Jayawickreme and A. Chatt, Dalhousie University, Canada

10:00 – 10:30 a.m.

Coffee Break

10:30 a.m. Session: TUAMPA

Poster Session A

Sam Glover, Chair

Agricultural Applications

Log

115 DETERMINATION OF SELENIUM IN WHEAT SAMPLES, Catarina Galinha, Mario do Carmo Freitas, Adriano M.G. Pacheco, Ana Sofia Almeida, José Coutinho, Benvindo Macãs, Technical University of Lisbon, Portugal

164 NAA TO WHITE RICE COLLABORATIVELY PERFORMED IN SIX ASIAN COUNTRIES, J.H. Moon, M. Ebihara, B.F. Ni, B Arporn, P. Setyo, R.M. Theresia, B.S. Wee, N.A. Abd. Salim, P.C.B. Pabroa, Korea Atomic Energy Research Institute, Korea

212 COMPARISON OF ELEMENTAL CONTENTS OF KOREAN SPACE FOODS USING INSTRUMENTAL NEUTRON ACTIVATION ANALYSIS, Yong Sam Chung, Sun Ha Kim, Gwang Min Sun, Jong Myung Lim, Jong Hwa Moon, Kye Hong Lee, Jong Il Choi, Ju Woon Lee, Korea Atomic Energy Research Institute, Korea

222 NEUTRON ACTIVATION ANALYSIS TRACE ELEMENTS IN ELEVEN FRUITS WIDELY CONSUMED IN THE U.S. AS DETERMINED BY NEUTRON ACTIVATION ANALYSIS, Sheldon Landsberger, Alexis Michenaud-Rague, Sam Robinson, University of Texas, USA

254 INAA STUDY OF CHEMICAL COMPOSITION OF BARLEY SILICA PHYTOLITHS, Jan Kameník, Jiří Mizera, Zdeněk Řanda, Nuclear Physics Institute, Czech Republic

262 MINERAL COMPOSITION OF TARO FOR DETERMINATION OF GEOGRAPHIC ORIGIN, Yoshimi Ohmae, Natsuko I. Kobayashi, Keitaro Tanoi, Atsushi Hirose, Takayuki Saito, Akihiko Noda, Naoko Iwata, Akimasa Nakano, Satoru Nakamura, Tomoko M. Nakanishi, University of Tokyo, Japan

263 IDENTIFICATION OF GEOGRAPHICAL PRODUCTION SITE OF AGRICULTURAL PRODUCTS THROUGH INSTRUMENTAL ACTIVATION ANALYSIS, Tomoko M Nakanishi, The University of Tokyo, Japan

Agricultural Applications

Log

- 281** NEUTRON ACTIVATION ANALYSIS FOR ASSESSING CHEMICAL COMPOSITION OF DRY DOG FOODS, Camila Elias, Elisabete A. De Nadai Fernandes, Márcio A. Bacchi, São Paulo University, Brazil
- 283** SOIL-TO-PLANT TRANSFER FACTORS OF CHEMICAL ELEMENTS FOR THE NATIVE TREE SPECIES IN ATLANTIC FOREST, SERRA DO MAR STATE PARK, BRAZIL, André Luis L. de Araújo, Elisabete A. De Nadai Fernandes, Elvis Joacir De Franca, Márcio Arruda Bacchi, São Paulo University, Brazil
- 291** OPTIMIZED SAMPLING IN THE BRAZILIAN SUGAR CANE INDUSTRY, Elisabete A. De Nadai Fernandes, Peter Bode, Gabriel A. Sarriés, Márcio A. Cacchi, São Paulo University, Brazil
- 293** TOMATO RESISTANCE TO PESTS AND DISEASES DEPENDING ON THE CHEMICAL COMPOSITION OF LEAVES, Felipe A. Biguzzi, Elisabete A. De Nadai Fernandes, Márcio A. Bacchi, Gabriel A. Sarriés, Andrés E.L. Reyes, São Paulo University, Brazil
- 296** DISTINCTION OF PRODUCTION AREA OF KOREAN GINSENGS USING NEUTRON ACTIVATION TECHNIQUES, Y.N. Lee, G.M. Sun, S.H. Yoo, Y.J. Kim, Korea Atomic Energy Research Institute, Korea
- 300** PERFORMANCE OF COMPTON SUPPRESSION SYSTEM (CSS) AND APPLICABILITY IN FOOD MATRICES, Luís Gustavo Cofani dos Santos, Márcio Arruda Bacchi, Elisabete A. De Nadai Fenandes, Simore Sliveira Nery da Silva Cofani dos Santos, São Paulo University, Brazil
- 301** CHEMICAL COMPOSITION OF BOVINE MILKS FROM TWO LARGE DAIRY BASINS IN BRAZIL, Luís Gustavo Cofani dos Santos, Elisabete A. De Nadai Fenandes, Gabriel A. Sarriés, Simore Sliveira Nery da Silva Cofani dos Santos, São Paulo University, Brazil

Environmental Applications

Log

- 117** ELEMENTAL COMPOSITION OF AIR MASS UNDER DIFFERENT ALTITUDES ON AZORES, CENTRAL NORTH ATLANTIC, Bruno J. Vieira, Maria C. Freitas, H.Th. Wolterbeek, Isabel Dionísio, Technical University Delft, The Netherlands
- 118** NEUTRON ACTIVATION METHODOLOGIES ON BIOLOGICAL AND GEOLOGICAL SAMPLES – INTER-COMPARISON STUDY, Bruno J. Vieira, Maria C. Freitas, H.Th. Wolterbeek, Isabel Dionísio, Technical University Delft, The Netherlands.
- 124** DETERMINATION OF BASELINE RADIOACTIVITY CONCENTRATION AT MKUJU URANIUM DEPOSIT IN TANZANIA, N.K. Mohammed, D. Mwalongo, F.P. Banzi, P. Msaki, University of Dar es Salaam, Tanzania
- 151** ELEMENTAL COMPOSITION EVALUATION IN LICHENS FROM AN INDUSTRIAL AREA OF SHALE OIL PROCESSING IN SÃO MATEUS DO SUL, PARANA, BRAZIL, Angélica B. Ferreira, Mitiko Saiki, José O. Santos, Andreza P. Ribeiro, Paulo H.N. Saldiva, Instituto de Pesquisas Energéticas e Nucleares, Brazil
- 159** INAA APPLIED TO THE HOMOGENEITY STUDY OF A PERNA PERNA MUSSEL REFERENCE MATERIAL, Edson G. Moreira, M.B.A. Vasconcellos, M.G.M. Catharino, V.A. Maihara, M. Saiki, Instituto de Pesquisas Energéticas e Nucleares, Brazil
- 161** ANALYSIS OF SALIVA FROM AMBLYOMMA CAJENNENSE (ACARI: IXODIDAE) SPECIES FROM BRAZIL BY NAA, Daniella G.L. Oliveira, Cibele B. Zamboni, Simone M. Simons, Ana M. Chudzinski-Tavassi, Instituto de Pesquisas Energéticas e Nucleares, Brazil
- 169** INVESTIGATING THE ANTIMONY DETERMINATION IN ENVIRONMENTAL SAMPLES BY NAA, Tassiane C.M. Matsubara, Mitiko Saiki, Guilherme S. Zahn, Instituto de Pesquisas Energéticas e Nucleares, Brazil

Environmental Applications

Log

- 179** EXPLORING THE POTENTIAL FOR USING NEUTRON ACTIVATION ANALYSIS TO SUPPORT THE PORTUGUESE AND EU AIR POLLUTION POLICIES, S. Marta Almeida, Ho M. Dung, Marina Aleida Silva, Alexandra Silva, Maria C. Freitas, Instituto Tecnológico e Nuclear, Portugal **WITHDRAWN**
- 183** METALS AND SEMI-METALS IN STREET SOILS OF SÃO PAULO CITY, BRAZIL, Andreza P. Ribeiro, Ana Maria G. Figueiredo, Regina B. Ticianelli, Georges M. Nammoura-Neto, Nathalia C. Silva, Instituto Tecnológico e Nuclear, Portugal
- 197** CHARACTERIZATION OF DUST MATERIAL EMITTED DURING HARBOR ACTIVITIES BY K₀-INAA AND PIXE, S.M. Almeida, A. Silva, M.C. Freitas, A.M. Marques, A.I. Silva, C.A. Ramos, T. Pinheiro, Instituto Tecnológico e Nuclear, Portugal
- 203** ASSESSMENT OF METALS AND TRACE ELEMENTS IN SEDIMENTS FROM RIO GRANDE RESERVOIR, BRAZIL, BY NEUTRON ACTIVATION ANALYSIS, Robson L. Franklin, Francisco J. Ferreira, Jose E. Bevilacqua, Deborah I.T. Fávaro, Instituto Tecnológico e Nuclear, Portugal
- 207** THE STUDY OF RN-222 AS A NATURAL OCCURRING TRACER FOR ASSESSMENT OF NAPL CONTAMINATED AQUIFER ESTIMATION, Yoon Yeol Yoon, Dong Chan Koh, Kil Yong Lee, Soo Young Cho, Kyung Seok Ko, Korea Institute of Geoscience and Mineral Resources, Korea
- 230** CONCENTRATIONS OF TRACE ELEMENTS IN LIVERS OF THE GREAT EGRET (ARDEA ALBA) FROM THE METROPOLITAN REGION OF SÃO PAULO, SP, BRAZIL, Rita de Cássia A. Silva, Mitiko Saiki, Instituto de Pesquisas Energéticas e Nucleares, Brazil
- 237** ELEMENTAL ANALYSIS OF OLIVE TREE LEAVES COLLECTED FROM THE VICINITY OF FIVE DIFFERENT CEMENT FACTORIES IN LIBYA USING INAA, Ibrahim O. Abugassa, Alia A. Alfeel, Najla A. Al-Falah, Heyam S. Bin-Rabha, Tajoura Nuclear Research Center, Libya
- 261** BIOMONITORING FROM COASTAL REGIONS OF SÃO PAULO STATE, BRAZIL, (23°58′-23°39′S, 46°30′-45°25′W) USING MUSSELS PERNA PERNA (LINNAEUS, 1758: MOLLUSCA, BIVALVIA), M.G.M. Catharino, M.B.A. Vasconcellos, A.A. Kirschbaum, M.R. Gasparro, C.C. Minei, E.C.P.M. de Sousa, D. Seo, E.G. Moreira, Instituto de Pesquisas Energéticas e Nucleares, Brazil
- 266** NEUTRON ACTIVATION ANALYSIS APPLIED IN SEDIMENT SAMPLES FROM THE GUARAPIRANGA RESERVOIR FOR METALS AND TRACE ELEMENTS ASSESSMENT, Guilherme M. Guimarães, Guilherme S. Zahn, Robson L. Franklin, Déborah I. T. Fávaro, Instituto de Pesquisas Energéticas e Nucleares, Brazil
- 276** DISTRIBUTION CHARACTERISTICS OF ANTIMONY AND ARSENIC CONCENTRATION IN CONTAMINATED SOIL AROUND SMELTER AND MINE IN JAPAN, Satoshi Fukutani, Masato Horiuchi, Naoya Satta, Koichi Takamiya, Tomoyuki Takahashi, Akio Koyama, Kyoto University, Japan
- 282** CHEMICAL COMPOSITION OF BROMELIADS OF ATMOSPHERIC AND TANK NUTRITIONAL MODES USING INAA, Camila Elias, Elisabete A. De Nadai Fernandes, Elvis J. De Franca, Márcio A. Bacchi, , São Paulo University, Brazil
- 287** THE ELEMENTAL POLLUTION STATUS OF THE DEPOSITED COVER SOIL AT PAVE ROAD SIDE USING NEUTRON ACTIVATION ANALYSIS, J.M. Lim, J.H. Jeong, B.W. Jung, J.H. Lee, J.H. Moon, Y.S. Chung, Korea Atomic Energy Research Institute
- 302** LICHENS USE AS BIOMONITORS AT INDOOR ENVIRONMENTS OF PRIMARY SCHOOLS, Nuno Canha, Marina Almeida, Mario do Carmo Freitas, Susana Marta Almeida, H.Th. Wolterbeek, , Instituto Tecnológico e Nuclear, Portugal
- 309** EVALUATION OF TOXIC METALS FOR RISK ASSESSMENT AT INDUSTRIAL SITE BY INAA, Pasquale Avino, INAIL, Italy
- 312** PRELIMINARY STUDY OF AIR POLLUTION SOURCE IDENTIFICATION AT BEIJING SUBURB AREA, Bangfa Ni, Guiying Zhang, Donghui Huang, Cunxiong Liu, Caijing Xiao, Hongchao Sun, Haiqing Zhang, Pingsheng Wang, Weizhi Tian, China Institute of Atomic Energy, China

Environmental Applications

Log

336 PARTICLE SIZE DISTRIBUTION OF A CONTAMINATED URANIUM SITE, D. Tamalis, T. Meadow, B. Clanton and S. Landsberger, Florida Memorial University, USA

Medical Applications

Log

102 ELEMENTAL ANALYSIS OF BIOLOGICAL TISSUES OF ANIMAL MODEL FOR MUSCULAR DYSTROPHY INVESTIGATION, Sabrina Metairon, Cibele B. Zamboni, Miriam F. Suzuki, Carlos R. B. Júnior, Oswaldo A. Sant'Anna, Instituto de Pesquisas Energéticas e Nucleares, Brazil

136 STUDIES OF LIPIDIC CHLORINE, BROMINE AND IODINE IN BOVINE MILK BY SPE-NAA, K. Isaac-Olive, T. T. Kyaw, A. Chatt, Dalhousie University, Canada

154 RADIOMETRIC DETERMINATION OF ENZYME ACTIVITIES INVOLVED IN BIOTRANSFORMATIONS OF THYROID HORMONES, Stanislav Pavelka, Academy of Sciences of the Czech Republic, Czech Republic

155 RADIOMETRIC ENZYME ASSAYS: EXTREMELY SENSITIVE DETERMINATION OF IODOTHYRONINE DEIODINASES, Stanislav Pavelka, Academy of Sciences of the Czech Republic, Czech Republic

156 SIMULTANEOUS WHOLE-BODY GAMMA-RAY SPECTROMETRY OF ^{24}Na AND ^{82}Br RADIONUCLIDES: RELATION BETWEEN EXCRETION RATES OF SODIUM AND BROMIDE IONS, Stanislav Pavelka, Academy of Sciences of the Czech Republic, Czech Republic

170 CA AND MG DETERMINATION FROM INHABITANTS OF BRAZIL USING NEUTRON ACTIVATION ANALYSIS, L.C. Oliveira, C.B. Zamboni, L. Kovacs, Instituto de Pesquisas Energéticas e Nucleares, Brazil

171 DETERMINATION OF ELEMENTS IN BLOOD OF WHITE RABBITS BY NAA, Cibele B. Zamboni, Laura C. Oliveira, Sabrina Metairon, Simone M. Simons, Daniella G.L. Oliveira, Instituto de Pesquisas Energéticas e Nucleares, Brazil

185 ANALYSIS OF ELEMENTS IN SERUM, URINE AND KIDNEY OF WISTAR RATS WITH ACUTE RENAL INSUFFICIENCY USING NAA, Laura C. Oliveira, Cibele B. Zamboni, Edson A. Pessoa, Fernanda T. Borges, Instituto de Pesquisas Energéticas e Nucleares, Brazil

193 CYCLIC NEUTRON ACTIVATION ANALYSIS FOR STUDY OF DISTRIBUTION PATTERNS OF FLUORINATED COMPOUNDS IN BIOLOGICAL MATRICES, Hong Zhang, Shaoqiang Yin, Zhifang Chai, Bo Yang, Shenzhen University, China

194 SCANDIUM AS AN INDICATOR OF PERSISTENT EXOGENOUS CONTAMINATION IN NAIL SAMPLES IN EPIDEMIOLOGICAL INVESTIGATIONS, Ruth Ann Ngwenyama, Vickie L. Spate, Stacy B. Crane, J. Steven Morris, University of Missouri, USA

195 DETERMINATION OF SELENIUM STATUS USING THE NAIL BIOLOGIC MONITOR IN A CANINE MODEL, J. Steven Morris, Vickie L. Spate, David J. Waters, University of Missouri, USA

196 LIMITATIONS OF THE SCALP-HAIR BIOLOGIC MONITOR IN ASSESSING SELENIUM STATUS IN EPIDEMIOLOGICAL INVESTIGATIONS, Vickie L. Spate, Stacy B. Crane, Alejandra Gudino, J. Steven Morris, University of Missouri, USA

205 DETERMINATION OF IODINE CONCENTRATION IN AQUEOUS SOLUTIONS BY PROTON ACTIVATION ANALYSIS – PRELIMINARY RESULTS FOR DIGESTED HUMAN THYROIDS, Anna K. Wójcik, Paweł Zagrodzki and Jerzy W. Mietelski, The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, Poland

208 INORGANIC ELEMENTS DETERMINATION IN WHOLE BLOOD FROM CRIOLA BREED HORSE BY ANALYTICAL NUCLEAR TECHNIQUES (NAA AND EDXRF), Tatyana S. Baptista, Marcelo M. Redígolo, Cibele B. Zamboni, Ivone M. Sato, Jose R. Marcelino, Instituto de Pesquisas Energéticas e Nucleares, Brazil

Medical Applications

Log

211 DETERMINATION OF IODINE IN ORIENTAL MEDICINAL PRODUCTS FOR THYROID CANCER PATIENT USING NEUTRON ACTIVATION ANALYSIS, Yong Sam Chung, Sun Ha Kim, Gwang Min Sun, Jong Hwa Moon, Kye Hong Lee, Hwa Seung Yoo, Korea Atomic Energy Research Institute

224 SELENIUM AND MERCURY CONCENTRATION DETERMINATION IN BIOLOGICAL SAMPLES USING GAMMA-GAMMA COINCIDENCE AND COMPTON SUPPRESSION, Steven Horne, Sheldon Landsberger, University of Texas, USA

235 STUDIES ON ELEMENTAL ANALYSIS OF WIDELY CONSUMED TRADITIONAL HERBS IN LIBYA BY k_0 INSTRUMENTAL NEUTRON ACTIVATION ANALYSIS, Ibrahim O. Abugassa and Mohamed E. Abunawael, Tajoura Nuclear Research Center, Libya

260 DETERMINATION OF TRACE ELEMENTS IN SAMPLES OF PEPEROMIA PELLUCIDA BY INSTRUMENTAL NEUTRON ACTIVATION ANALYSIS (INAA), Fábio V. Sussa, Paulo S.C.Silva, Barbara P. Mazzilli, Instituto de Pesquisas Energéticas e Nucleares, Brazil

289 THE CHEMICAL COMPOSITION IN PHELLINUS MUSHROOMS MEASURED BY INAA AND PGAA, J. M. Lim, G. M. Sun, J. H. Moon, Y. S. Chung, J. H. Lee, Korea Atomic Energy Research Institute, Korea

306 PET IMAGING PERFORMANCE OF LONG-LIVED POSITRON EMITTERS: ^{89}Zr AND ^{124}I COMPARED TO ^{18}F USING GATE MONTE CARLO SIMULATIONS, K.S. Alzimami, A. A. Alfuraih, K. G. Alsafi, M. A. Alkhorayef, N.M. Spyrou, King Saud University, Kingdom of Saudi Arabia

Geochemical Applications

Log

338 THE USE OF ACTIVATION ANALYSIS IN THE DETERMINATION OF METEORITIC COMPONENTS IN IMPACT BRECCIAS AND MELT ROCKS, Christian Koeberl, Dieter Mader, Natural History Museum and University of Vienna, Austria

Education

Log

335 UNDERGRADUATE RESEARCH OPPORTUNITIES IN NEUTRON ACTIVATION ANALYSIS FOR LOCAL, REGIONAL AND INTERNATIONAL STUDENTS, S. Landsberger, T. Tipping¹, D. Tamalis, J. Jones, S. Alexander, G. Ban, University of Texas, USA

12:30 - 1:20 p.m.

Lunch Break

Tuesday Afternoon, March 15

- 1:20 p.m. Session: TUPMA Nuclear Imaging in Medicine Nicholas Spyrou, Chair**
Time Log
1:20 **199** APPLICATIONS AND PROBLEMS OF PHOTONEUTRON REACTIONS USING MEDICAL ELECTRON ACCELERATORS FOR THERAPY AND ELEMENTAL ANALYSIS, Nicholas M. Spyrou, University of Surrey, United Kingdom
- 1:40 **234** [DIGITAL NUCLEAR IMAGE METHODS IN ACTIVATION ANALYSIS AND RELATED SUBJECTS, Vladimir P. Kolotov, Dmitry S. Grozdov, Nikolai N. Dogadkin, Vernadsky Institute of Geochemistry and Analytical Chemistry of Russian Academy of Sciences, Russia](#)
- 2:00 **206** [DEVELOPMENT OF A DELAY-LINE BASED THGEM IMAGING DETECTOR, A. Hanu, S.H. Byun, and W.V. Prestwich, McMaster University, Canada](#)
- 2:20 **213** [X-RAY CT IN THE DETECTION OF PALM WEEVILS, Andy K. W. Ma, Ali A. Alghamdi, Kassem Tofailli and Nicholas N. Spyrou, University of Dammam, Saudi Arabia](#)
- 2:40 **214** MONTE CARLO SIMULATION OF FUSED IMAGES FROM NEUTRON AND X-RAY TOMOGRAPHY FOR PALM WEEVIL DETECTION, Ali A. Alghamdi, University of Dammam, Saudi Arabia
- 3:00 – 3:30 p.m. Coffee Break**
- 3:30 p.m. Session: TUPMB Introductions to Special Symposia Sheldon Landsberger, Chair**
Time Log
3:30 **315** [NANOMATERIALS: AN OPPORTUNITY FOR NAA METROLOGY, R. Gregory Downing, National Institute of Standards and Technology, USA](#)
- 4:00 **125** [ARCHAEOLOGY AND ARCHAEOMETRY: USING SCIENTIFIC METHODS TO INTERPRET THE ARCHAEOLOGICAL RECORD, Michael D. Glascock, University of Missouri, USA](#)
- 4:30 **334** [INNOVATIONS IN HARDWARE, SOFTWARE AND INFORMATION SYSTEMS TO COUNTER NUCLEAR THREATS, William S. Charlton, Texas A&M University, USA](#)
- 5:00 – 6:30 p.m. Bus Transport to Hagler Center and Buffet Dinner**
- 6:30 p.m. Session: TUPMC Nano-Technology Greg Downing, Chair**
Time Log
6:30 **240** NUCLEAR ANALYTICAL TECHNIQUES FOR NANOTOXICOLOGY STUDIES, Zhang Zhiyong, Zhao Yuliang, Chai Zhifang, Institute of High Energy Physics, Chinese Academy of Sciences, China
- 6:45 **314** APPLICATION OF INSTRUMENTAL NEUTRON ACTIVATION ANALYSIS TO THE STUDY OF GOLD NANOPARTICLES IN BIOLOGICAL SYSTEMS, Russell P. Watson, Gabriela Kramer-Merak, Jacek Capala, National Institute of Standards and Technology, USA
- 7:00 **310** QUANTIFICATION OF GOLD NANOPARTICLES IN CIRCULATING BLOOD, D. Patrick O'Neal, Gregory J. Michalak, Glenn P. Goodrich, Jon A. Schwartz and William D. James, Louisiana Tech University, USA
- 7:15 **186** USE OF NEUTRON ACTIVATION ANALYSIS FOR THE CHARACTERIZATION OF SINGLE-WALL CARBON NANOTUBE MATERIALS, Rolf Zeisler, Rabia Oflaz, Rick L. Paul, Jeffrey Fagan, National Institute of Standards and Technology, USA

Time Log

6:30 **103** EVALUATION OF RELATIVE COMPARATOR AND k_0 -NAA FOR CHARACTERIZATION OF ABORIGINAL AUSTRALIAN OCHRE, Rachel S. Popelka-Filcoff, Claire E. Lenehan, Michael D. Glascock, John W. Bennett, Attila Stopic, Jamie Quinton, Allan Pring and Keryn Walshe, Flinders University, Australia

6:42 **148** RAISING THE TEMPER - μ -SPOT ANALYSIS OF TEMPER INCLUSIONS IN EXPERIMENTAL CERAMICS, Johannes H. Sterba, Frans Munnik and Nick J. G. Pearce, Atominstitut, Vienna University of Technology, Austria

6:54 **129** MODELING CLINAL VARIATION IN CLAY GEOCHEMISTRY FOR CERAMIC PROVENANCE DETERMINATION IN THE VALLEY OF OAXACA, Leah D. Minc, Oregon State University, USA

7:06 **126** COMPOSITIONAL ANALYSIS OF PREHISTORIC SHELL FROM EASTERN NORTH AMERICA, Matthew T. Boulanger, University of Missouri, USA

7:18 **128** PAST AND FUTURE DIRECTIONS OF ARCHAEOMETRY AT TAMU'S CENTER FOR CHEMICAL CHARACTERIZATION AND ANALYSIS, Suzanne L. Eckert, Texas A&M University, USA

Posters

130 ELEMENTAL ANALYSIS OF FINE-GRAINED BASALT ARTIFACTS FROM SAMOA: AN INVESTIGATION OF PROCUREMENT, PRODUCTION, DISTRIBUTION, AND CONSUMPTION DURING THE TRADITIONAL SAMOAN PERIOD (1700-300BP) ON TUTUILA ISLAND, Phillip R. Johnson, Texas A&M University, USA

140 REVITALIZING ARCHAEOMETRY IN AUSTRALIA WITH THE 20 MW OPAL RESEARCH REACTOR, John W. Bennett, Attila Stopic, Peter Grave, Australian Nuclear Science and Technology Organization, Australia

163 NEUTRON ACTIVATION ANALYSIS OF ARCHAEOLOGICAL ARTIFACTS USING THE CONVENTIONAL RELATIVE METHOD: A REALISTIC APPROACH FOR ANALYSIS OF LARGE SAMPLES, Patricia Bedregal Pablo Mendoza, Isaac Marcos Cohen, Eduardo Montoya, Instituto Peruano de Energía Nuclear, Perú

172 THE FENN CLOVIS CACHE: NEW ANALYSES OF ARTIFACT FORM AND FUNCTION, Ted Goebel, Jim Wiederhold, Heather Smith, and Michael R. Waters, Texas A&M University, USA

173 TRACKING INTRA-ISLAND MOVEMENT OF TOOL-STONE: CHEMICAL CHARACTERIZATION ON LITHIC TOOLS FROM AGANOA VILLAGE, TUTUILA ISLAND, AMERICAN SAMOA, Christopher T. Crews, Texas A&M University, USA

174 INAA AND DISTRIBUTION PATTERNS OF CLASSIC MIMBRES BLACK-ON-WHITE VESSELS DURING THE CLASSIC PERIOD, Eleanor S. Dahlin, Texas A&M University, USA

175 COMPOSITIONAL ANALYSIS OF SPANISH CEREMONIAL CERAMICS IN TEXAS, Shawn Carlson, Texas A&M University, USA

176 FINDING A SUCCESSFUL TECHNIQUE TO DETERMINE THE PRODUCTION PROVENANCE OF 13TH AND 14TH CENTURY SANTA FE B/W POTTERY MADE FROM IGNEOUS CLAYS, Suzanne L. Eckert, Texas A&M University, USA

192 COMPARISON OF INAA ELEMENTAL COMPOSITION DATA BETWEEN LAGO GRANDE AND OSVALDO ARCHAEOLOGICAL SITES IN THE CENTRAL AMAZON: A FIRST PERSPECTIVE, Roberto Hazenfratz, Guilherme Mongeló, Casimiro S. Munita, Eduardo G. Neves, University of São Paulo, Brazil

292 PROVENANCE STUDIES OF ARCHAEOLOGICAL ARTIFACTS FROM BUDDHIST SITES OF INDIA BY INTERNAL MONOSTANDARD NEUTRON ACTIVATION ANALYSIS, N. Lakshmana Das, K.B. Dasari, R. Acharya, A.V.R. Reddy, GITAM University, India

6:30 p.m. Session: TUPME

Nuclear Forensics/Border Security

Bill Charlton, Chair

Time Log

6:30 326 IMPROVED IAEA ENVIRONMENTAL SAFEGUARDS SAMPLE ANALYSIS AT LOS ALAMOS NATIONAL LABORATORY, Stephen LaMont, Robert Steiner, Don Dry, William Kinman, Rebecca Foley, Jeff Roach, Fred Roensch, Los Alamos National Laboratory, USA
WITHDRAWN

6:30 177 PRODUCTION OF ³⁷AR IN THE UNIVERSITY OF TEXAS TRIGA REACTOR FACILITY, Christine M. Egnatuk, Justin Lowrey, Steven R. Biegalski, Theodore Bowyer, Derek Haas, John Orrell, and Vincent Woods, University of Texas, USA

6:45 184 XENON DIFFUSION STUDIES WITH PROMPT GAMMA ACTIVATION ANALYSIS, C. Rios Perez, J. Lowrey, S. Biegalski, M. Deinert, University of Texas, USA

7:00 329 NEUTRON DETECTING SEMICONDUCTOR CHIP (NISC) - A SENSITIVE NEW DETECTOR, Tim Z. Hossain, Cerium Laboratories, USA

7:15 328 THE POTENTIAL APPLICATION OF GALLIUM NITRIDE NEUTRON SENSOR FOR SPECIAL NUCLEAR MATERIALS DETECTION, Lei Cao, Jinghui Wang, Roberto Myers, Praneeth Kandlakunta, The Ohio State University, USA

Posters

101 AN AUTOMATED DELAYED NEUTRON COUNTING SYSTEM (DNCS) FOR MASS DETERMINATIONS OF FISSILE ISOTOPES IN SPECIAL NUCLEAR MATERIALS, Madison T. Sellers, Emily C. Corcoran, David G. Kelly, Royal Military College of Canada, Canada

162 A PERFORMANCE STUDY OF RADIO-OPAQUE PERSONAL PROTECTIVE FABRICS FOR ATTENUATION OF GAMMA-RAYS AND NEUTRONS, Emily C. Corcoran, William Forest, Robert Horton, David G. Kelly, Kristine Mattson, Kathy S. Nielsen, Kristin Topping, Ron D. Weir, Andre Yonkeu, Royal Military College of Canada, Canada

204 NEUTRON ACTIVATION ANALYSIS OF CONCRETE FOR CROSS-BORDER NUCLEAR SECURITY, Christopher M. Ryan, Craig M. Marianno, William S. Charlton, William D. James, Texas A&M University, USA

Wednesday Morning, March 16

8:00 a.m. Session: WEAMA

Applications in Environmental Studies

Susan Parry, Chair

Time Log

8:00 [290](#) [THE ROLE OF NEUTRON ACTIVATION ANALYSIS IN SOLVING ENVIRONMENT PROBLEMS TODAY, Susan J. Parry, Imperial College London, United Kingdom](#)

8:20 [279](#) [ATMOSPHERIC SUPPLY OF HALOGENS AND SELENIUM FROM OCEAN TO LAND STUDIED BY NEUTRON ACTIVATION ANALYSIS, Eiliv Steinnnes, Marina V. Frontasyeva, Norwegian University of Science and Technology, Norway](#)

8:40 [190](#) [HYBRID NEUTRON ACTIVATION ANALYSIS FOR STUDY OF ORGANIC HALOGENS IN PRECIPITATION IN BEIJING, CHINA, Diandou Xu, Lingling Ma, Yang Chen, Zhifang Chai, Guofei Xu, Shuzhen Li, Guosheng Yang, Institute of High Energy Physics, Chinese Academy Sciences, China](#)

9:00 [120](#) [BURN WOOD INFLUENCE ON OUTDOOR AIR QUALITY IN A SMALL VILLAGE , PORTUGAL, Nuno Canha, Marina Almeida, Maria C. Freitas, Susana M. Almeida, Dung M. Ho, Isabel Dionísio, João Cardoso, Casimiro Pio, Alexandre Caseiro, Nuclear and Technological Institute, Portugal](#)

9:20 [147](#) [VANADIUM BIOMONITORING USING PERNA PERNA MUSSELS TRANSPLANTED IN NORTH COAST OF THE STATE OF SAO PAULO, BRAZIL, Daniele Seo, Marina B.A. Vasconcellos, Marília G.M. Catharino, Edson G. Moreira, Camilo D.S. Pereira, Eduinetty C.P.M. de Sousa, Mitiko Saiki, Instituto de Pesquisas Energéticas e Nucleares, Brazil](#)

9:40 [149](#) [PGAA HEAVY METALS ANALYSIS IN TAILINGS IN ZAIDA ABANDONNED MINE, HIGH MOULOUYA, MOROCCO, M. Bounakhla, K. Embarch, B. Baghdad, M. Naimi, A. Bouabdli, P. Sonnet, ZS. Révay, T. Belgya, Centre National de l'Énergie des Sciences Techniques Nucléaires, Morocco](#)

10:00 [134](#) [NEUTRON ACTIVATION ANALYSIS OF ANTIMONY IN SOILS: A COMPARISON OF NAA WITH IN SITU HF DIGESTION AND 'CONSENSUS' LABORATORY DATA, David G. Kelly, Kristine Mattson, Kathy S. Nielsen, and Steven D. White, Royal Military College of Canada, Canada](#)

10:20 – 10:50 a.m.

Coffee Break

10:50 a.m. Session: WEAMB

Applications in Agriculture and Food

Elisabete Fernandes, Chair

Time Log

10:50 [141](#) [METROLOGICAL IMPROVEMENTS IN FOOD & NUTRITION AND HEALTH SAFETY MEASUREMENTS: CONTRIBUTION OF NUCLEAR AND RELATED ANALYTICAL TECHNIQUES, Venkatesh Iyengar, Tufts University, USA](#)

11:10 [116](#) [SELENIUM AND IODINE AS RADIOTRACERS IN WHEAT SAMPLES, Catarina Galinha, Maria do Carmo Freitas, Adriano M.G. Pacheco, José Coutinho, Benvindo Maçãs, Ana Sofia Almeida, Technical University of Lisbon, Portugal](#)

11:30 [285](#) [FURTHER INVESTIGATING THE DETERMINATION OF PHOSPHORUS IN PLANTS BY INAA, Tassiane C.G. Martins, Márcio A. Bacchi, Elisabete A. De Nadai Fernandes, São Paulo University, Brazil](#)

11:50 [238](#) [BORON DETERMINATION IN CANADIAN VEGETABLES BY PROMPT GAMMA ACTIVATION ANALYSIS, Michiko Fukushima, Hideaki Matsue and Amares Chatt, Ishinomaki Senshu University, Japan](#)

12:10 [178](#) [DETERMINATION OF INORGANIC ELEMENTS IN HEAD, BODY AND LEG PART OF KOREAN RED GINSENG BY INSTRUMENTAL NEUTRON ACTIVATION ANALYSIS, J. H. Moon, S. H. Kim, S. H. You, G. M. Sun, C. M. Chung, Korea Atomic Energy Research Institute, Korea](#)

12:30 - 1:00 p.m.

Lunch Break

Wednesday Afternoon, March 16

1:00 p.m. Session: WEPMA

Applications in Geochemistry

Matthias Rossbach, Chair

Time Log

1:00 **110** [DETERMINATION OF TRACE AMOUNT OF NICKEL IN COSMIC SPHERULES BY PHOTON ACTIVATION ANALYSIS, Shun Sekimoto, Kentaro Hirose, Masaki Takimoto, Tsutomu Ohtsuki and Seiichi Shibata, , Kyoto University, Japan](#)

1:20 **241** INSTRUMENTAL NEUTRON ACTIVATION ANALYSIS OF IRON METEORITES – REVISITED, M. John M. Duke, University of Alberta, Canada **WITHDRAWN, later presentations will be moved up**

1:20 **191** MEASUREMENTS OF IRIIDIUM CONCENTRATION IN GEOLOGICAL STANDARD SAMPLES USING NEUTRON ACTIVATION ANALYSIS WITH GAMMA-GAMMA COINCIDENCE METHOD, Yuichi Hatsukawa Takahito Osawa, Masumi Oshima, Yosuke Toh, Atsushi Kimura, Mitsuo Koizumi, Kazuyoshi Furutaka, Japan Atomic Energy Agency, Japan

1:40 **308** [RARE EARTH ELEMENTS, THORIUM AND URANIUM IN ORES OF THE NORTH-LATIUM \(ITALY\), Geraldo Capannesi, Alberto Rosada, Pasquale Avino, DIPIA, INAIL, Italy](#) **MOVED to session THAMPB, later presentation will be moved up**

1:45 **105** [GAMMA-ACTIVATION DIGITAL AUTORADIOGRAPHY OF LARGE SAMPLES, EQUALIZATION OF ACTIVATING DOSE OVER THE MICROTRON-IRRADIATED SAMPLE SURFACE, D.S. Grozdov, V.P. Kolotov, N.N. Dogadkin, V.I. Korobkov, V.I. Vernadsky Institute of Geochemistry and Analytical Chemistry of the Russian Academy of Sciences, Russian Federation](#)

2:30 p.m.

Buses Leave for Houston Livestock Show and Rodeo

Thursday Morning, March 17

9:00 a.m. Session: THAMA Nuclear Beams and PGAA Greg Downing and Zsolt Révay, Chairs

Time Log

9:00 [167](#) [PROMPT GAMMA ACTIVATION ANALYSIS: PAST, PRESENT, AND FUTURE, Zsolt Révay, Hungarian Academy of Sciences, Hungary; Technical University Munich, Germany](#)

9:20 [265](#) [PROMPT-GAMMA ACTIVATION ANALYSIS AT NIST: THEN, NOW, AND NEXT, Richard M. Lindstrom, Rick L. Paul, and Elizabeth A. Mackey, National Institute of Standards and Technology, USA](#)

9:40 [143](#) [RADIOGRAPHY-DRIVEN PROMPT-GAMMA ACTIVATION ANALYSIS AT THE BUDAPEST RESEARCH REACTOR, László Szentmihályi, Zoltán Kis, Zsolt Révay, Tamás Belgya, Hungarian Academy of Sciences, Hungary](#)

10:00 [113](#) [FROM STANDARD PROMPT GAMMA ACTIVATION ANALYSIS \(PGAA\) TO POSITION SENSITIVE ACTIVATION ANALYSIS, Stefan Söllradl, Lea Canella, Ralf Schulze, Nathalie Munnikes, Petra Kudejova, Andreas Türler, University of Bern, Switzerland](#)

10:20 [297](#) DEVELOPMENT OF A NEW COLD NEUTRON PROMPT GAMMA ACTIVATION ANALYSIS SYSTEM AT HANARO COLD NEUTRON SOURCE, G.M. Sun, Y.N. Lee, J.H. Moon, K.H. Lee, Korean Atomic Energy Research Center, Korea

10:40 – 11:10am Coffee Break

11:10 a.m. Session: THAMPB Poster Session B Steve Biegalski, Chair

Detectors, Facilities and Workforce Development

Log

[108](#) NEUTRON ACTIVATION ANALYSIS AFTER THE FUEL CONVERSION TO LOW ENRICHED URANIUM AT KYOTO UNIVERSITY RESEARCH REACTOR, Ryo Okumura, Koichi Takamiya, Yukihiko Nakano, Shun Sekimoto, Yasushi Saito, Yuji Kawabata, Hajimu Yamana, Kyoto University, Japan

[109](#) COMPARISON OF THE NEUTRON ENERGY SPECTRA AND NEUTRON FLUENCE RATES IN THE REACTOR LVR-15 WITH THE IRT-2M AND IRT-4M NUCLEAR FUEL, M. Vins, L. Viererbl, Z. Lahodova, M. Marek, A. Voljanskij, V. Klupak, M. Koleska, Nuclear Research Institute Rez plc, Czech Republic

[133](#) CAPABILITIES OF CONSORT-II RESEARCH REACTOR (NAA AND GAMMA RAY SPECTROMETRY AS AN EXAMPLE), Sami Kafala, Nasser Baghini, David Bond, Trevor Chamber, Imperial College London Reactor Centre, UK

[142](#) DESIGN OPTIMIZATION OF A COMPTON-SUPPRESSED PGAA SPECTROMETER, Monte Carlo Calculations, Zoltán Kis, László Szentmihályi, Tamás Belgya, Zsolt Révay, Andrey N. Berlizov, Hungarian Academy of Sciences, Hungary

[144](#) INSTALLATION OF A PERMANENT CD-LINED IRRADIATION CHANNEL IN NIRR-1 FACILITY FOR IMPLEMENTATION OF EPITHERMAL NEUTRON ACTIVATION ANALYSIS, Sunday A. Jonah, Umar Sadiq, Seydou Hankourou, Ahmadu Bello University, Nigeria

Detectors, Facilities and Workforce Development

Log

- 157** PERFORMANCE TESTS OF A PORTABLE NEUTRON GENERATOR USING PGNA TECHNIQUE, Naqvi A. A.1, M. Maslehuddin, O.S.B. Al-Amoudi, M. Raashid, Khateeb-ur-Rehman, Zameer Kalkada, King Fahd University of Petroleum & Minerals, Saudi Arabia
- 158** PERFORMANCE OF LA(CL) CE AND BGO DETECTORS IN PROMPT GAMMA ANALYSIS, A.A. Naqvi, M. Maslehuddin, F. Z. Khiari, A. H. Issab, M. I. Al-Jarallah, M. Raashid, Khateeb-ur-Rehman, M. Azad-ul-Islam, Al-Anezi, Zamir Kalakada, King Fahd University of Petroleum and Minerals, Saudi Arabia
- 180** IMPLEMENTATION OF kO-INAA METHOD AT THE NEUTRON ACTIVATION ANALYSIS LABORATORY, LAN-IPEN, SÃO PAULO, BRAZIL. APPLICATION TO GEOLOGICAL SAMPLES, Davi B. Mariano, Ana M. G. Figueiredo, Renato Semmler, Instituto de Pesquisas Energéticas e Nucleares, Brazil
- 200** AUTOMATIC SAMPLE CHANGER FOR ROUTINE NEUTRON ACTIVATION ANALYSIS, C.S. Munita, J. García-Campo E., R. Quezada G., R. Hazenfratz, Instituto de Pesquisas Energéticas e Nucleares, Brazil
- 217** ROBUSTNESS OF A MULTI-USER, MULTI-SPECTROMETER SYSTEM FOR INAA, Peter Bode, Menno Blaauw, Delft University of Technology, The Netherlands
- 228** AN AUTOMATED THERMAL AND EPITHERMAL NEUTRON PNEUMATIC SYSTEM USED FOR IN-CORE IRRADIATIONS USING THE TRIGA REACTOR AT THE PICKLE RESEARCH CENTER AT THE UNIVERSITY OF TEXAS AT AUSTIN, Larry Welch, Michael Krause, Blake Cople, Alex Brand, Tin Hei Pun, Kenny Dayman, Steven Biegalski, Sheldon Landsberger, University of Texas, USA
- 242** MEASUREMENT OF THREE GAMMA ANNIHILATION BY LANTHANUM-BASED CRYSTALS COMPARED WITH NAI(TL) AND HPGe, M. Alkhorayef, K. Alzimami, A. Alfuraih, M. Alnafea, N. M. Spyrou, King Saud University, Saudi Arabia
- 251** LARGE SAMPLE NEUTRON ACTIVATION ANALYSIS (LSNAA) USING KAMINI REACTOR, N.P.Seshadreesan, E.Senthilvadivu, J.S.Brahmaji Rao, C.R.Venkata Subramani, Indira Gandhi Centre for Atomic Resrch, India WITHDRAWN
- 267** DEVELOPMENT OF AN EXTERNAL NEUTRON BEAM FACILITY AT THE OHIO STATE UNIVERSITY, Danyal J. Turkoglu, Josh Burke, Praneeth Kandlakunta, Lei R Cao, Ohio State University, USA
- 295** DETERMINATION OF NB IN THE HIGHLY ACTIVATED PRESSURE TUBES OF THE WOLSONG 1ST CANDU REACTOR USING REACTIVATION METHOD, G.M. Sun, S.H. Yoo, Y.N. Lee, D.K. Cho, Korea Atomic Energy Research Institute, Korea
- 298** IDAHO ACCELERATOR CENTRE – A NEW LABORATORY FOR PHOTON ACTIVATION ANALYSIS, Chr. R. Segebade, D. P. Wells, H. D. G. Maschner, Idaho State University, USA
- 305** INVESTIGATION OF LABr3:CE PROBE FOR GAMMA-RAY SPECTROSCOPY AND DOSIMETRY MEASUREMENTS, K.S. Alzimami, K. G. Alsafi, M. A. Alkhorayef, N.M. Spyrou, King Saud University, Saudi Arabia
- 327** DEVELOPMENT OF A PROMPT GAMMA ACTIVATION ANALYSIS FACILITY AT DALAT REACTOR, Nguyen Canh Hai, Vuong Huu Tan, Nguyen Nhi Dien, Pham Ngoc Son, Tran Tuan Anh, Viet Nam Atomic Energy Institute, Viet Nam
- 330** REVIEW: DEVELOPMENT OF INSTRUMENTAL NEUTRON ACTIVATION ANALYSIS (INAA) METHOD IN MALAYSIA, AirezaYavar, Sukiman Sarmani, Abdul Khalid Wood, Kok Siong Khoo, The National University of Malaysia, Malaysia

Geochemical Applications

Log

- 111** RECOGNITION OF MICROMETEORITES EXISTENCE IN ANTARCTIC ICE BY IR CONCENTRATION OF NUCLEPORE FILTER ANALYZED BY INAA AND 120 KA AGO, ACCRETION RATE OF MICROMETEORITES, A. Miura, Y. Saito, Y. Tazawa, T. Fukuoka, Rissho University, Japan
- 166** APPLICATION OF NATURAL ACTIVATION IN SOME TASKS OF GEOLOGY, Igor O. Nevinsky, Tatyana V. Tsvetkova, Research Center of Natural Radioactivity, Russia
- 182** A COMBINED METHOD OF NEUTRON ACTIVATION ANALYSIS AND RADIOMETRIC MEASUREMENTS FOR ^{234}U AND ^{238}U DETERMINATION IN SOIL SAMPLES OF LOW URANIUM CONCENTRATION, Eduardo H. Montoya, Oscar R. Baltuano, Pablo A. Mendoza, Patricia S. Bedregal, Isaac M. Cohen, Instituto Peruano de Energía Nuclear, Perú
- 232** ACCURATE DETERMINATION OF ULTRA-TRACE AMOUNTS OF RARE EARTH ELEMENTS IN GEOCHEMICAL AND COSMOCHEMICAL SAMPLES, Haruka Aihara, Mitsuru Ebihara, Tokyo Metropolitan University, Japan
- 239** APPLICATION OF MULTIPLE PROMPT GAMMA-RAY ANALYSIS (MPGA) TO GEOCHEMICAL AND COSMOCHEMICAL SAMPLES, Y. Oura, R. Watanabe, M. Ebihara, Y. Murakami, Y. Toh, A. Kimura, M. Koizumi, K. Furutaka, M. Oshima, K. Hara, T. Kin, S. Nakamura, H. Harada, Tokyo Metropolitan University, Japan
- 243** DETERMINATION OF RADON EMANATION FROM PHOSPHOGYPSUM BY USING AN LSC, K.Y. Lee, S.Y. Cho, Y.Y. Yoon, Y.N. Jang, Korea Institute of Geoscience & Mineral Resources, Korea
- 250** THE CHEMICAL COMPOSITION OF SEDIMENTS IN MARINE SHALLOW-WATER HYDROTHERMAL MOUNDS IN WAKAMIKO SUBMARINE CRATER REVEALED BY MULTIPLE PROMPT GAMMA-RAY ANALYSIS, Katsumi Shozugawa, Motoyuki Matsuo, Yuji Sano, Yosuke Toh, Yukihiro Murakami, Kazuyoshi Furutaka, Mitsuo Koizumi, Atsushi Kimura, Kaoru Hara, Tadahiro Kin, Masumi Oshima, Shoji Nakamura, Hideo Harada, University of Tokyo, Japan
- 255** ADVANTAGE OF INAA COMPARED TO AA FOR GEOCHEMICAL SOLID SAMPLES, M.Ishimoto, T. Fukuoka, University of Tokyo, Japan
- 257** FLUORINE ASSAY IN GEOCHEMICAL AND COAL REFERENCE MATERIALS BY INSTRUMENTAL PHOTON ACTIVATION ANALYSIS, Ivana Krausová, Jiří Mizera, Zdeněk Řanda, David Chvátil, Jan Kučera, Nuclear Physics Institute, Czech Republic
- 258** NEUTRON AND PHOTON ACTIVATION ANALYSES IN GEOCHEMICAL CHARACTERIZATION OF MOLDAVITES, Jiří Mizera, Zdeněk Řanda, Jan Kučera, Nuclear Physics Institute, Czech Republic
- 277** MEASURING ACTIVITY OF ^{235}U , ^{238}U AND ^{232}Th DECAY CHAINS AND K-40 IN GEOLOGICAL SAMPLES USING PASSIVE GAMMA-RAY COUNTING AND NEUTRON ACTIVATION ANALYSIS, Sheldon Landsberger, Jason Dolloff, Roger Kapsimalis, University of Texas, USA

Methods Development

Log

- 137** DEVELOPMENT OF THE K₀-BASED CYCLIC NEUTRON ACTIVATION ANALYSIS FOR SHORT-LIVED RADIONUCLIDES, Ho Manh Dung, Daniel Beasley, Menno Blaauw, Maria do Carmo Freitas, Technological and Nuclear Institute, Portugal

Methods Development

Log

- 139** PHOTOPeAK EFFICIENCY AND THE VOLUME OF THE CALIBRATED SOURCES. INFLUENCE ON THE GAMMA SPECTROMETRY RESULTS, Solo Kuanda Th., Namegabe Mulikuza R., Kabeya Ngalamulume S.D., Mbata Albert, Matamba Kaleji P.A., Tshiashala Mutshipaie D.A., Efoto Eale; Mukendi Kabongo.R., Commissariat Général à l'Énergie Atomique, Congo
Methods Development
- 160** IMPROVING NEUTRON ACTIVATION ANALYSIS ACCURACY FOR THE MEASUREMENT OF SILVER IN THE CHARACTERIZATION OF HETEROGENEOUS CATALYSTS USING A TRIGA REACTOR, Siaka Yusuf, Melinda Krahenbuhl, Bryan Haskins, The Dow Chemical Company, USA
- 165** AUTOMATIC NUCLIDE IDENTIFICATION OF HYPERGAM FOR γ -RAY SPECTRUM ANALYSIS, B.G. Park, N.S. Jung, J.H. Kim, H.D. Choi, C.S. Park, Seoul National University, Korea
- 188** INVESTIGATION ON THE CONSISTENCY AND SUITABILITY OF SOME NUCLEAR REACTIONS FOR CHARACTERIZATION OF THE REACTOR NEUTRON SPECTRUM IN ACTIVATION ANALYSIS, Pablo A. Mendoza, Eduardo H. Montoya, Patricia S. Bedregal, Isaac M. Cohen, Instituto Peruano de Energía Nuclear, Perú.
- 198** DEVELOPMENT OF METHOD FOR CONSIDERATION OF BREMSSTRAHLUNG FIELD NON-UNIFORMITY WHILE PHOTO ACTIVATION ANALYSIS, D.S. Grozdov, V.P. Kolotov, N.N. Dogadkin, Vernadsky, Institute of Geochemistry and Analytical Chemistry of the Russian Academy of Sciences, Russian Federation
- 202** DIGITAL TIME-DISCRIMINATED GAMMA-RAY SPECTROMETRY AT NIST, Bryan E. Tomlin, U.S. National Institute of Standards and Technology, USA
- 209** COMPARISON OF TWO k₀-BASED NEUTRON ACTIVATION ANALYSIS SOFTWARE PACKAGES, Marie Kubešová, Jan Kučera, Nuclear Physics Institute (NPI), Czech Republic
- 210** THE APPLICATION OF NEUTRON-BASED ANALYTICAL TECHNOLOGIES TO ENERGY RELATED MATERIALS' CHARACTERIZATION, Lei Cao, Danyal Turkoglu, Jinsuo Zhang, Byun Thak Sang, Ohio State University, USA
- 220** MONTE CARLO ASSISTED ESTIMATION OF THE UNCERTAINTY OF MEASUREMENT IN INAA, Anneke Koster-Ammerlaan, Peter Bode, Robert R.Greenberg, Richard M.Lindstrom, Delft University of Technology, The Netherlands
- 223** A DEMONSTRATION OF SELF-SHIELDING FOR THE ANALYSIS OF GOLD WITH NEUTRON ACTIVATION ANALYSIS, Kenny Dayman, Vishal Patel, Sheldon Landsberger, University of Texas, USA
- 225** NEUTRON FLUX CHARACTERIZATION TECHNIQUES FOR RADIATION EFFECTS STUDIES, Joseph Graham, Sheldon Landsberger, Paulo Ferreira, Jon Ihlefeld, Geoffrey Brennecka, University of Texas, USA
- 226** MONITORING OF NEUTRON FLUX CHANGES IN SHORT-LIVED NEUTRON ACTIVATION ANALYSIS, Kenny Dayman, Vishal Patel and Sheldon Landsberger, University of Texas, USA
- 227** EUROPIUM INTERFERENCE WHEN DETERMINING TRACE AMOUNTS OF NICKEL IN BIOLOGICAL AND GEOLOGICAL SAMPLES BY NEUTRON ACTIVATION ANALYSIS, Sheldon Landsberger, Sam Robinson, University of Texas, USA

Methods Development

Log

- 229** DETERMINATION OF SILVER USING CYCLIC EPITHERMAL NEUTRON ACTIVATION ANALYSIS, Tin Hei Pun, Sheldon Landsberger, University of Texas, USA
- 244** METHODS OF CHARGED-PARTICLE ACTIVATION ANALYSIS, M. Anwar Chaudhri , M. Nasir Chaudhri, University of Erlangen-Nuernberg, Germany
- 249** COUNTING EFFICIENCY COMPUTATION FOR LSNAAP APPLICATIONS, Daniela Gugiu, Csaba Roth, Alexe Ghinescu, Institute for Nuclear Research Pitesti, Romania
- 253** SOME PROBLEMS OF PARAMETRIC NEUTRON ACTIVATION ANALYSIS BASED ON THE USE OF RADIOACTIVE DAUGHTERS OF LONGER-LIVED MOTHERS WITH LOW MOTHER/DAUGHTER HALF-LIFE RATIOS , Isaac M. Cohen, María C. Fornaciari Iljadica, Comisión Nacional de Energía Atómica, Argentina
- 272** NUCLEAR CRITICALITY SAFETY CALCULATIONAL METHODS ASSOCIATED WITH PUO₂ AND MIXED OXIDE POWDER PROCESSES, Ashraf Elsayed Mohamed Mohamed, Al-Imam Mohamed Ibn Saud Islamic University, Saudi Arabia
- 288** Complete and Incomplete Fusion in $^{20}\text{Ne} + ^{165}\text{Ho}$ and Mass-asymmetry Effect on Incomplete Fusion, D. Singh, R. Ali and M. Afzal Ansari, Inter University Accelerator Centre, India
- 299** THE USE OF DT FUSION NEUTRONS IN PROMPT GAMMA ANALYSIS OF LARGE SAMPLES, Alexander Barzilov, Bruce Kessler, Ivan Novikov, Phillip C. Womble, Western Kentucky University, USA
- 323** IMPROVEMENT OF DETECTION LIMITS OF SHORT-LIVED NEUTRON ACTIVATION PRODUCTS USING COMPTON-SUPPRESSION GAMMA-RAY SPECTROSCOPY, W.H. Zhang and A. Chatt, Dalhousie University, Canada
- 331** Applicability of Nisle unified formulation to k_0 – NAA standardization method, B.J.B. Nyarko, A.N.A Adazabra, S.A. Bamford, E.H.K. Akaho, University of Ghana, Ghana.
- 332** DEVELOPMENT AND IMPLEMENTATION OF HØGDAHL - WESTCOTT METHOD FOR THE k_0 -INAA AT MALAYSIAN NUCLEAR AGENCY REACTOR, AlirezaYavar, Sukiman Sarmani, Abdul Khalid Wood, Nurul Syakireen Zainal, Kok Siong Khoo, University Kebangsaan Malaysia, Bangi, Malaysia.

Quality Assessment

Log

- 112** ATTEMPTS TO ANALYZE THE GEOCHEMICAL REFERENCE SAMPLES BY PHOTON ACTIVATION ANALYSIS, Masaki Takimoto, Shun Sekimoto, Kentaro Hirose, Tsutomu Ohtsuki , Seiichi Shibata, Kyoto University, Japan
- 216** INHOMOGENEOUS REFERENCE MATERIALS FOR LARGE SAMPLE NEUTRON ACTIVATION ANALYSIS, Peter Bode, Anneke Koster-Ammerlaan, Delft University of Technology, The Netherlands
- 252** Estimation of Expanded Uncertainties and their Agreement among Four INAA Methods for Arsenic Determination in Shellfish, R. Acharya, A. Chatt, Dalhousie University, Canada

Quality Assessment

Log

313 THE STUDY ON SAMPLING BEHAVIOR OF MULTIELEMENTS IN A NEW STREAM SEDIMENT MATERIAL BY USING NUCLEAR ANALYTICAL METHODS, Huang Donghui, Ni Bangfa, Tian Weizhi, Wang Pingsheng, Zhang Guiying, Liu Cunxiong, Xiao Caijin, Sun Hongchao, Zhang Haiqing, China Institute of Atomic Energy, China

Education

Log

259 EDUCATION IN NUCLEAR SCIENCE AT IPEN/CNEN, SÃO PAULO, BRAZIL: ADVANCED SCHOOL OF NUCLEAR ENERGY – EAEN, Renato Semmler, Marília G. M. Catharino, Marina B. A. Vasconcellos, Instituto de Pesquisas Energéticas e Nucleares, Brazil

Materials

Log

337 QUANTIFICATION OF SELENIUM FROM CIGS MATERIAL USED IN PHOTOVOLTAIC CELLS USING CONVENTIONAL NEUTRON, ACTIVATION ANALYSIS, Latha Vasudevan, Tim Hossain, Amiya GhatakRoy, Texas A&M University, USA

1:00 - 2:00 p.m.

Lunch Break

Thursday Afternoon, March 17

- 2:00 p.m. Session: THPMA Prompt Gamma Activation Analysis Zsolt Revay, Chair**
Time Log
- 2:00 [150](#) [CONCEPTION OF THE MOROCCAN PGAA SYSTEM USING MONTE CARLO SIMULATION METHOD, H. Amsil, K. Embarch, H. Bounouira, M. Bounakhla, CNESTEN, Morocco](#)
- 2:20 [221](#) [THE DEVELOPMENT AND OPERATION OF A BEAM CHOPPER SYSTEM AT THE UNIVERSITY OF TEXAS AT AUSTIN, Alex Brand, Steven R.F. Biegalski, Christine Egnatuk, Larry Welch, Mike Krause, University of Texas, USA](#)
- 2:40 [145](#) [PROMPT GAMMA INVESTIGATION OF SELECTED ACTINIDES, M. Rossbach, E. Mauerhofer, Z. Revay, T. Belgya, Institute for Energy- and Climate Research, IEK-6, Forschungszentrum Juelich GmbH, Germany](#)
- 3:00 [123](#) [A COMPARISON OF MULTIPLE PROMPT GAMMA-RAY ANALYSIS \(MPGA\) AND PROMPT GAMMA-RAY ANALYSIS \(PGA\) FOR DETERMINATION OF TRACE ELEMENTS IN GEOCHEMICAL AND COSMOCHEMICAL SAMPLES, M.A. Islam, M. Ebihara, Y. Toh, H. Harada, Toyko Metropolitan University, Japan](#)
- 3:20 [114](#) [THE NEW PGAA FACILITY IMPLEMENTATION PROCESS AT ITN, PORTUGAL, Nuno Canha, Dung Manh Ho, Maria do Carmo Freitas, Susana Marta Almeida, Lea Canella, Stefan Söllradl, Petra Kudějová, Zsolt Révay, Instituto Tecnológico e Nuclear, Portugal](#)
- 3:40 - 4:10pm Coffee Break**
- 4:10 p.m. Session: THPMB Method Enhancements/RNAA/Speciation Bob Greenberg, Chair**
Time Log
- 4:10 [294](#) [CURRENT AND FUTURE APPLICATIONS OF RADIOCHEMICAL NEUTRON ACTIVATION ANALYSIS, Robert R. Greenberg, National Institute of Standards and Technology, USA](#)
- 4:30 [256](#) [THE PRESENT ROLE OF RADIOCHEMICAL NEUTRON ACTIVATION ANALYSIS \(RNAA\) FOR DETERMINATION OF ESSENTIAL AND TOXIC TRACE ELEMENTS IN BIOLOGICAL MATERIALS – A COMPARISON WITH ICP-MS AND AAS, Jan Kučera, Viktor Kanický, Jiří Dědina, Nuclear Physics Institute, Czech Republic](#)
- 4:50 [104](#) [SEPARATION OF NO-CARRIER ADDED GD FROM THE NATURAL PRASEODYMIUM, Moumita Maiti, B.S. Tomar and Susanta Lahiri, Saha Institute of Nuclear Physics, India](#)
- 5:10 [321](#) [STUDIES OF PROTEIC, LIPIDIC AND IONIC SPECIES OF TRACE ELEMENTS IN BIOLOGICAL MATERIALS BY NEUTRON ACTIVATION AND OTHER TECHNIQUES, A. Chatt, Dalhousie University, Canada](#)
- 5:30 [268](#) [A MULTIVARIATE APPROACH TO GAMMA-RAY SPECTRUM ANALYSIS, Gregory M. Beachley, John M. Ondov, Bryan E. Tomlin, University of Maryland, USA](#)
- 6:00 p.m. Buses leave from ILSB to Clayton Williams Former Students Center**
- 6:30 – 8:30 p.m. Banquet Conference and 2011 Hevesy Award Ceremony**
[333](#) [OPPORTUNITIES FOR INNOVATION IN NEUTRON ACTIVATION ANALYSIS, Peter Bode, Delft University of Technology, The Netherlands](#)

Friday Morning, March 18

8:00 a.m. Session: FRAMA

Metrology/QC/Standards (I)

Richard Lindstrom , Chair

Time Log

8:00 [280](#) [12 YEARS AFTER': THE ROLE OF NAA FOR METROLOGY IN CHEMICAL MEASUREMENTS, Elisabete A.De Nadai Fernandes, Peter Bode, Robert R.Greenberg, Universidade de São Paulo, Brazil](#)

8:20 [189](#) [AN INTERNATIONAL PROFICIENCY TEST OF EIGHT NAA LABORATORIES IN ASIA USING STREAM SEDIMENTS, John W. Bennett, Mitsuru Ebihara, Tsuyoshi Tanaka, Paul Armishaw, Vu Dong Cao, Syed M. Hossain, Donghui Huang, Sutisna, Nazaratul A. Abd. Salim, Tokyo Metropolitan University, Japan](#)

8:40 [152](#) [45 YEARS OF NEUTRON ACTIVATION ANALYSIS IN SLOVENIA: ACHIEVEMENTS TOWARDS IMPROVED QUALITY OF MEASUREMENTS RESULTS, Borut Smodiš, Jožef Stefan Institute, Slovenia](#)

9:00 [146](#) [NEUTRON SELF-SHIELDING IN IRRADIATION CHANNELS OF SMALL REACTORS IS ISOTROPIC, Gregory Kennedy, Cornelia Chilian, Radojko Jaćimović, Gašper Žerovnik, Luka Snoj, Andrej Trkov, Ecole Polytechnique, Canada](#)

9:20 [219](#) [PHOTONEUTRONS FROM A BERYLLIUM REFLECTOR: THE SOURCE OF PROBLEMS WITH Zr-AU FLUX MONITORING IN K0 STANDARDIZATION BASED NEUTRON ACTIVATION ANALYSIS?, Anneke Koster-Ammerlaan, Peter Bode, August Einkelman, Delft University of Technology, The Netherlands](#)

9:40 – 10:00 a.m.

Coffee Break

10:00 a.m. Session: FRAMB

Metrology/QC/Standards (II)

Gregory Kennedy, Chair

Time Log

10:00 [273](#) [EXPERIMENTAL VALIDATION OF VARIOUS NEUTRON SELF-SHIELDING CALCULATION METHODS FOR CYLINDRICAL SAMPLES IN INAA, F. Farina Arboccò, P. Vermaercke, K. Strijckmans, L. Verheyen, L. Sneyers, Ghent University, Belgium](#)

10:20 [135](#) [An Online Analysis System for Photon Activation Analysis, Z. J. Sun, C. Segebade1, D. Wells, J. Green, Idaho State University, USA](#)

10:40 [264](#) [DETERMINATION OF SELF SHIELDING FACTORS AND GAMMA ATTENUATION EFFECTS FOR TREE RING SAMPLES, Dağistan Şahin, Kenan Ünlü, The Pennsylvania State University, USA](#)

11:00 a.m. Session: FRAMC

Next Generation/ Conference Close

Emile Schweikert, Chair

Time Log

11:20 [316](#) [EDUCATING THE NUCLEAR WORKFORCE: A MODEL FOR RADIOANALYTICAL EDUCATION FOR THE FUTURE, Kenneth L. Peddicord, Valerie G. Segovia, Texas A&M University, USA](#)

12:00 p.m.

Conference Closed

Errata: (in chronological order of changes made)

Log #241 is withdrawn, later papers will be moved up.

Log #179 is withdrawn.

Log #117 title is changed.

Log #118 title is changed.

Log #308 has been changed from oral in WEPMA to poster in THAMPB

Log #251 is withdrawn.

Log #326 is withdrawn.

Log #241 is withdrawn

Log #308 is withdrawn but later reinserted with only five minutes scheduled.

Log #175 title and author has been changed.