

APSORC '97 PLENARY LECTURES

Tuesday, 7 October 1997

09:30-10:20, Tuesday, 7 October

PL1 NEUTRON ACTIVATION ANALYSIS CHALLENGES: PROBLEMS AND APPLICATIONS IN BIOMEDICAL AND OTHER AREAS

Dr. N.M. SPIROU
(Dept. Phys., Univ. of Surrey, UK)

10:40-11:30, Tuesday, 7 October

PL2 THE PARITY METHOD FOR ACTIVITY MEASUREMENTS

Dr. J.W. Müller
(Bureau Int'l des Poids et Mesures, FRANCE)

13:30-14:20, Tuesday, 7 October

PL3 FRONTIERS OF HEAVY ELEMENT Nucl. AND RADIOCHEMISTRY

Prof. D.C. HOFFMAN
(Dept. Chem. Univ. of California, Berkeley &
Heavy Element Nucl. & Radiochem. Grp. Nucl. Sci. Div., LBL, USA)

14:20-15:10, Tuesday, 7 October

PL4 ISOTOPIC STUDY OF NATURAL FISSION REACTORS AT OKLO AND BANGOMBE, GABON

Prof. H. HIDAKA
(Dept. Earth and Planetary System Sci., Hiroshima Univ., JAPAN)

15:30-16:20, Tuesday, 7 October

PL5 FRONTIERS OF ENVIRONMENTAL RADIOACTIVITY

Dr. B.D. AMIRO
(Canadian Forestry Service, Northern Forestry Centre, CANADA)

Wednesday, 8 October 1997

13:00-13:50, Wednesday, 8 October

PL6 NEW FRONTIERS OF DIAGNOSTIC RADIOLOGY

Prof. M. TAKAHASHI, M.D.
(Dept. of Radiology, Kumamoto Univ. School of Medicine, JAPAN)

14:40-15:40, Wednesday, 8 October

PL7 MÖSSBAUER SPECTROSCOPY - A POWERFUL NUCLEAR TOOL IN SOLID STATE RESEARCH

Prof. Dr. P. GÜTLICH
(Inst für Anorg. u. Anal. Chem., Johannes Gutengerg Univ., GERMANY)

APSORC '97 LEAD LECTURES

- LL1 **A RETROSPECTIVE VIEW OF A CENTURY OF RADIOCHEMISTRY: ITS GROWTH AND DEVELOPEMENT AS A UNIQUE SCIENTIFIC DICIPLINE**
R.E. JERVIS (*Dept. Chem. Eng. & App. Chem., Univ. of Tronto, CANADA*)
11:30-12:00, Tuesday, 7 October
- LL2 **FORMATION AND SEPARATION OF CARRIER-FREE RADIONUCLIDES OF FIRST TRANSITION SERIES ELEMENTS**
N.R. DAS (*Nucl. Chem. Div., Saha Inst. of Nucl. Phys., INDIA*)
09:15-09:45, Wednesday, 8 October
- LL3 **FRONTIERS OF POSITRON AND POSITRONIUM CHEMISTRY IN CONDENCED MEDIA**
A. V'ERTES (*Dept. Nucl. Chem., Eötvös Lorand Univ., HUNGARY*)
09:45-10:15, Wednesday, 8 October
- LL4 **UNDERSTANDING OF BURNING RATE BEHAVIOUR BASED ON NEUTRON ACTIVATION ANALYSIS OF ROCKET PROPELLANT INGREDIENTS**
V.G. DEDGAONKAR (*Dept of Chem., Univ. OF Pune, INDIA*)
09:45-10:15, Wednesday, 8 October
- LL5 **IN-VIVO NEUTRON ACTIVATION ANALYSIS FOR MEDICAL APPLICATIONS**
S. KRISHNAN (*Medical Phys. Lab., The Tronto Hosp., General Div., CANADA*)
10:30-11:00, Wednesday, 8 October
- LL6 **TRACE ELEMENTS IN BONE DETERMINED BY NEUTRON ACTIVATION ANALYSIS: ITS ROLE IN OSTEOPOROSIS**
N.K. ARAS, (*Dept. of Chem., Middle East Tech. Univ., TURKEY*)
11:00-11:30, Wednesday, 8 October
- LL7 **NUCLEAR ACTIVATION AND RELATED TECHNIQUES FOR ANALYSIS OF HUMAN TISSURES AND DIETARY SAMPLES**
G.V. IYENGAR (*Biominerall Sci., USA; NIST/SRMP, UAS*)
10:30-11:00, Wednesday, 8 October
- LL8 **CHARGE-INDUCED X-RAYS (CHIX) FROM INSULATED METAL TARGETS WITH 700 keV PROTONS**
A.E. PILLAY (*Dept. of Chem., Center for App. Chem., Univ. of Witwatersrand, SOUTH AFRICA*)
13:50-14:20, Wednesday, 8 October
- LL9 **MULTITRACER - A TRACER TECHNIQUE DEVELOPED BY USING RIKEN RING CYCROTRON**
F. AMBE (*Inst. Phys. Chem. Rres. (RIKEN), JAPAN*)
17:1-1740, Wednesday, 8 October

SORC-41 LEAD LECTURE

- LLJ **ROLE OF RADIOCHEMISTRY IN DEVELOPMENT OF THERMONUCLEAR FUSION REACTORS**
K. OKUNO (*Radiochem. Res. Lab., Shizuoka Univ., JAPAN*)
13:00-13:40, Monday, 6 October

APSORC '97 PROGRAM

Contributed Paper : 15 min. (12-min. presentation plus 3-min. discussion)

Lead Lecture : 30 min. (25-min. lecture plus 5-min. discussion)

Plenary Lecture : 50 min. (45-min. lecture plus 5-min. discussion)

Speaker in underline

Tuesday, 7 October 1997 morning

PLENARY SESSION

Room C

09:00-09:20, Tuesday, 7 October

Chairman: Prof. I. TANIGUCHI

OPN

Opening Ceremony

Symposium Chairman's Remarks

Prof. T. KISHIKAWA, Symposium Chairman

Opening Remarks

Pres. G. EGUCHI, Hon. Chairman, Kumamoto Univ.

Intern'l Advisory Board's Remarks

Prof. D.C. HOFFMAN

Greetings from The ESSC

Room C

Invited Paper

09:30-10:20, Tuesday, 7 October

Chairmen: Prof. Y. MAKIDE & Dr. S. KRISHNAN

PL1

NEUTRON ACTIVATION ANALYSIS CHALLENGES: PROBLEMS AND APPLICATIONS IN BIOMEDICAL AND OTHER AREAS

N.M. SPIROU (*Dept. Phys., Univ. of Surrey, UK*)

Invited Paper

10:40-11:30, Tuesday, 7 October

Chairmen: Prof. H. BABA & Dr. K. HEYDORN

PL2

THE PARITY METHOD FOR ACTIVITY MEASUREMENTS

J.W. MÜLLER (*Bureau Int'l des Poids et Mesures, FRANCE*)

Invited Paper

11:30-12:00, Tuesday, 7 October

Chairmen: Prof. K.-S. PARK & Prof. M. EBIHARA

LL1

A RETROSPECTIVE VIEW OF A CENTURY OF RADIOCHEMISTRY: ITS GROWTH AND DEVELOPMENT AS A UNIQUE SCIENTIFIC DISCIPLINE

R.E. JERVIS (*Dept. Chem. Eng. & App. Chem., Univ. of Toronto, CANADA*)

<12:00-13:30 Cafeteria Lunch at the Student Union >

<SORC-41 Committee Meeting >

Tuesday, 7 October 1997 afternoon

PLENARY SESSION

Room C

Invited Paper

13:30-14:20, Tuesday, 7 October

Chairmen: Prof. H. NAKAHARA & Prof. R.E. JERVIS

PL3

FRONTIERS OF HEAVY ELEMENT NUCLEAR AND RADIOCHEMISTRY

D.C. HOFFMAN (*Dept. Chem. Univ. of California, Berkeley & Heavy Element Nucl. & Radiochem. Grp. Nucl. Sci. Div., LBL, USA*)

Invited Paper

14:20-15:10, Tuesday, 7 October

Chairmen: Prof. A. TOSTE & Prof. T. HASHIMOTO

PL4

ISOTOPIC STUDY OF NATURAL FISSION REACTORS AT OKLO AND BANGOMBE, GABON

H. HIDAHA (*Dept. Earth and Planetary System Sci., Hiroshima Univ., JAPAN*)

Invited Paper

15:30-16:20, Tuesday, 7 October

Chairmen: Prof. K. SAKAMOTO & Dr. G.V. IYENGAR

- PL5 **FRONTIERS OF ENVIRONMENTAL RADIOACTIVITY**
B.D.AMIRO (Canadian Forestry Service, Northern Forestry Centre, CANADA)

POSTER SESSIONS

Room P1

Poster Session

16:20-17:50, Tuesday, 7 October

Contributed Papers

- P101 **ISOMERIC YIELD RATIOS OF FISSION PRODUCTS IN PROTON-INDUCED FISSION OF ^{232}Th**
S. GOTO, D. KAJI, H. KUDO (Dept. Chem., Faculty of Sci., Niigata Univ., JAPAN)
M. FUJIOKA, T. SHINOZUKA, M. FUJITA (Cyclotron and Radioisotope Center, Tohoku Univ.)
- P102 **Nucl. CHARGE DISTRIBUTION OF FISSION PRODUCTS IN THE SYSTEM OF PROTON-INDUCED FISSION OF ^{232}Th .**
D. KAJI, S. GOTO, H. KUDO (Dept. of Chem., Faculty of Sci., Niigata Univ., JAPAN)
M. FUJIOKA, T. SHINOZUKA, M. FUJITA (Cyclotron and Radioisotope Center, Tohoku Univ., JAPAN)
- P103 **CHARACTERISTICS OF SHELL-GOVERNED SCISSION STATE IN PROTON INDUCED FISSION OF ^{244}Pu**
Y. L. ZHAO, H. NAKAHARA, Y. OURA, K. SUEKI (Tokyo Metropolitan Univ., JAPAN)
Y. L. ZHAO, I. NISHINAKA, Y. NAGAME, K. TSUKADA, Z. QIN, S. ICHIKAWA, Y. HATSUKAWA, K. HATA, H. IKEZOE (Japan Atomic Energy Res. Inst., JAPAN)
M. TANIKAWA (Univ. of Tokyo, JAPAN)
T. OHTSUKI (Tohoku Univ., JAPAN)
S. GOTO, H. KUDO (Niigata Univ., JAPAN)
- P104 **MASS YIELD DISTRIBUTIONS PROTON-INDUCED FISSION OF ^{248}Cm**
Z. QIN, K. TSUKADA, N. SHINOHARA, Y. L.ZHAO, Y. HATSUKAWA, I. NISHINAKA, S. ICHIKAWA, K. HATA, Y. NAGAME (Japan Atomic Energy Res. Inst., JAPAN)
Z. QIN (Inst. of Modern Phys., Academia Sinica, CHINA)
Y. L. ZHAO (Tokyo Metropolitan Univ., JAPAN)
- P105 **CORRELATION BETWEEN MASS Div. MODES AND NEUTRON MULTIPLICITY IN FISSION OF ACTINIDES**
I. NISHINAKA, Y. L. ZHAO, Y. NAGAME, K. TSUKADA, S. ICHIKAWA, H. IKEZOE (Japan Atomic Energy Res. Inst., JAPAN)
M. TANIKAWA (Univ. of Tokyo, JAPAN)
Y. L. ZHAO, H. NAKAHARA (Tokyo Metropolitan Univ., JAPAN)
- P106 **FISSION FRAGMENT CONFIGURATIONS AT SCISSION POINT OF ^{233}U , ^{235}U AND ^{239}Pu (nth,f)**
K. TAKAMIYA, T. INOUE, K. NAKANISHI, A. YOKOYAMA, N. TAKAHASHI, T. SAITO, H. BABA (Dept. Chem. Grad. School of Sci., Osaka Univ., JAPAN)
Y. NAKAGOME (Kyoto Univ. Res. Reactor Inst., JAPAN)
- P107 **PRODUCTION OF LIGHT NUCLEI FROM VARIOUS TARGETS WITH INTERMEDIATE-ENERGY BREMSSTRAHLUNG**
H. MATSUMURA, K. WASHIYAMA, H. HABA, Y. MIYAMOTO (Div. of Phys. Sci., Grad. School of Natural Sci. and Tech., Kanazawa Univ., JAPAN)
K. SAKAMOTO (Dept. Chem., Faculty of Sci., Kanazawa Univ., JAPAN)
Y. OURA (Dept. Chem., Faculty of Sci., Tokyo Metropolitan Univ., JAPAN)
S. SHIBATA (Res. Reactor Inst., Kyoto Univ., JAPAN)
M. FURUKAWA (Faculty of Environ. and Information Sci., Yokkaichi Univ., JAPAN)
I. FUJIWARA (School of Economics, Otemongakuin Univ., JAPAN)
- P108 **REACTION MECHANISM FOR THE TARGET-LIKE PRODUCTS FROM THE ^{197}Au TARGET BOMBARDED WITH ^{12}C IONS OF ENERGIES ABOVE 100 MeV/u**
A. YOKOYAMA, S. MORIMOTO, T. INOUE, J. SANADA, H. ARAKI, T. SAITO, H. BABA (Dept.

- Chem., Grad. School of Sci., Osaka Univ., JAPAN)
 S. SHIBATA (Nat. Inst. of Radiological Sci., JAPAN)
 A. SHINOHARA, T. MUROYAMA (Dept. Chem., Faculty of Sci., Nagoya Univ., JAPAN)
 Y. OHKUBO (Res. Reactor Inst., Kyoto Univ., JAPAN)
- P109 **REINVESTIGATION OF LOW-LYING LEVELS OF ^{231}Th**
 T. OHTSUKI, H. YUKI, K. NAKAZAWA, T. SATOH, H. YAMAZAKI, J. KASAGI (Lab. of Nucl. Sci., Tohoku Univ., JAPAN)
 T. MITSUGASHIRA (The Oh-arai Branch, IMR, Tohoku Univ., JAPAN)
- P110 **MEASUREMENTS OF NUCLEAR DATA OF MINOR ACTINIDES FOR TRANSMUTATION OF HIGH-LEVEL WASTE**
 N. SHINOHARA, Y. HATSUKAWA, K. HATA, N. KOHNO, M. ANDOH (Japan Atomic Energy Res. Inst., Japan)
 H. H. SALEH, W. S. CHARLTON, T. A. PARISH (Texas A & M Univ., USA)
 S. RAMAN (Oak Ridge Nat. Lab., USA)
- P111 **IDENTIFICATION OF NEW NEUTRON-RICH RARE-EARTH ISOTOPES PRODUCED IN PROTON-INDUCED FISSION OF ^{238}U**
 S. ICHIKAWA, K. TSUKADA, H. IIMURA, I. NISHINAKA, Y. HATSUKAWA, Y. NAGAME (Japan Atomic Energy Res. Inst., JAPAN)
 M. ASAI, Y. KOJIMA, T. HIROSE, M. SHIBATA, K. KAWADE (Nagoya Univ., JAPAN)
 A. OSA (Japan Atomic Energy Res. Inst., Takasaki, JAPAN)
 Y. OURA (Tokyo Metropolitan Univ., JAPAN)
- P112 **MASS SEPARATION OF NEUTRON DEFICIENT AMERICIUM ISOTOPES USING THE GAS-JET COUPLED JAERI-ISOL**
 K. TSUKADA, S. ICHIKAWA, Y. NAGAME, I. NISHINAKA, K. HATA, Y. HATSUKAWA, N. SHINOHARA, Z. QIN (Japan Atomic Energy Res. Inst., JAPAN)
 Y. OURA, Y. L. ZHAO, K. SUEKI, T. OHYAMA, H. NAKAHARA (Tokyo Metropolitan Univ., JAPAN)
 M. ASAI, T. HIROSE, Y. KOJIMA, H. YAMAMOTO, K. KAWADE (Nagoya Univ., JAPAN)
- P113 **RECENT RESULTS FROM THE JAERI RECOIL MASS SEPARATOR**
 S. MITSUOKA, H. IKEZOE, T. IKUTA, S. HAMADA, Y. NAGAME, K. TSUKADA, I. NISHINAKA (Japan Atomic Energy Res. Inst., Tokai, JAPAN)
 T. OHTSUKI (Tohoku Univ., JAPAN)
- P114 **PREPARATION OF ^{18}F SOURCE FOR SLOW POSITRON BEAM BY PROTON BOMBARDMENT OF ^{18}O -WATER**
 T. NOZAKI, Y. ITOH, Z. L. PENG, N. NAKANISHI, A. GOTO (Inst. of Phys. and Chem. Res. (RIKEN), JAPAN)
 Y. ITO (RCNST, Univ. of Tokyo, APAN)
 H. YOSHIDA (Res. and Dev. Dept, The Japan Steel Works Ltd, JAPAN)
- P115 **NEGATIVE PION TRANSFER PROCESS IN HYDROGEN-CONTAINING GAS MIXTURES**
 T. MUROYAMA (Low Level Radioisotope Lab., Kanazawa Univ., JAPAN)
 A. SHINOHARA (Grad. School of Sci., Nagoya Univ., JAPAN)
 T. SAITO, A. YOKOYAMA, K. TAKAMIYA, S. MORIMOTO, K. NAKANISHI, H. BABA (Grad. School of Sci., Osaka Univ., JAPAN)
 T. MIURA (Radiation Sci. Center, KEK, JAPAN)
 Y. HAMAJIMA (Faculty of Sci., Kanazawa Univ., JAPAN)
 T. KANEKO (Faculty of Sci., Niigata Univ., JAPAN)
 H. MURAMATSU (Faculty of Education, Shinshu Univ., JAPAN)
 S. KOJIMA (Radioisotope Res. Center, Aichi Medical Univ., JAPAN)
 M. FURUKAWA (Faculty of Environmental and Information Sci.s, Yokkaichi Univ., JAPAN)
- P116 **Chem. BEHAVIOR OF POSITIVE MUONS IN DIAMAGNETIC METAL ACETYLACETONATE SOLID SOLUTIONS**
 M. K. KUBO (Dept. Chem., School of Sci., Univ. of Tokyo, JAPAN)
 K. NISHIYAMA (Meson Sci. Lab., Inst. of Materials Structure Sci., JAPAN)
- P117 **MÖSSBAUER SPECTROSCOPY OF ^{133}Cs FOLLOWING THE DECAY OF ^{133}Xe ATOMS IMPLANTED IN METALS**

- H. MURAMATSU, H. ISHII, E. TANAKA, H. ITO, M. MISAWA (*Dept. Chem., Faculty of Education, Shinshu Univ., JAPAN*)
 T. MIURA, S. MUTO (*High Energy Accelerator Res. Org., JAPAN*)
 M. KOIZUMI, A. OSA, T. SEKINE (*Dept. Chem. and Fuel Res., Japan Atomic Energy Res. Inst., JAPAN*)
 M. YANAGA (*Dept. Chem., Faculty of Sci., Shizuoka Univ., JAPAN*)
- P118 237Np MÖSSBAUER SPECTROSCOPIC STUDY ON HEPTAVALENT NEPTUNIUM COMPOUND**
 T. NAKAMOTO, M. NAKADA, N. M. MASAKI, M. SAEKI (*Adv. Sci. Res. Center, Japan Atomic Energy Res. Inst., JAPAN*)
 T. YAMASHITA (*Dept. Chem. and Fuel Res., Japan Atomic Energy Res. Inst., JAPAN*)
 N. N. KROT (*Inst. of Phys. Chemistry, Russian Academy of Sci., RUSSIA*)
- P119 IN-BEAM MÖSSBAUER SPECTROSCOPY IN MATERIALS SCIENCE AT RIKEN ACCELERATOR RESEARCH FACILITY**
 Y. KOBAYASHI, J. NAKAMURA, N. INABE, Y. WATANABE, A. YOSHIDA, M. KASE, A. GOTO, S. YANO, E. YAGI, F. AMBE (*Inst. of Phys. Chem. Res. (RIKEN), JAPAN*)
 Y. YOSHIDA, K. HAYAKAWA, K. YUKIHARA (*Shizuoka Inst. of Sci. and Tech., JAPAN*)
 H. HÄÖLEIN, R. SIELEMANN (*Hahn-Meitner-Institut, Germany*)
 S. NASU (*Faculty of Engr. Sci., Osaka Univ., JAPAN*)
- P120 MÖSSBAUER CHARACTERIZATION AND PROMPT ϵ_i -RAY ANALYSIS OF PRODUCTS OF THERMIT REACTIONS**
 Y. SAKAI, K. OHSHITA, S. IWAMA (*Dept. of Chem., Daido Inst. of Tech., JAPAN*)
 M. K. KUBO (*School of Sci., Univ. of Tokyo, JAPAN*)
 C. YONEZAWA, H. MATSUE (*Dept. Chem. and Fuel Res., Japan Atomic Energy Res. Inst., JAPAN*)
 H. SAWAHATA, Y. ITO (*Res. Center for Nucl. Sci. and Tech., Univ. of Tokyo, JAPAN*)
- P121 DEVELOPMENT AND APPLICATION OF RADIOISOTOPE METHODS FOR SULFIDE HYDROTREATMENT CATALYST TESTING**
 V. M. KOGAN (*N. D. Zelinsky Inst. of Org. Chem., Russian Academy of Sci., RUSSIAN FED.*)
 N. M. PARFENOVA (*Inst. of Chem., Turkmenian Academy of Sci., RUSSIAN FED.*)
- P122 STRUCTURAL INFORMATION FROM THE INTERFERENCE EFFECT OF ELECTRON-CAPTURE X-RAYS**
 Y. C. SASAKI, K. YASUDA (*Adv. Res. Lab., Hitachi Ltd., JAPAN*)
 M. TAKAHASHI, I. SATOH (*Inst. for Materials Res., Tohoku Univ., JAPAN*)
 S. ISHIWATA (*Dept. of Phys., Waseda Univ., JAPAN*)
- P123 NATURAL ALPHA ACTIVE ISOTOPES CONTAINED IN HIGH PURITY MEMORY DEVICE MATERIALS**
 T. MITSUGASHIRA, M. HARA, Y. SUZUKI, M. WATANABE (*Oarai-branch, Inst. for Materials Res., Tohoku Univ. JAPAN*)
 S. HIRAI, Y. OKADA, M. MORI (*Atomic Energy Res. Lab., Musashi Inst. of Tech., JAPAN*)
- P124 RADIATION DAMAGE IN Si_{1-x}G_x HETEROEPITAXIAL DEVICES**
 H. OHYAMA, K. HAYAMA, J. TOKUYAMA (*Kumamoto Nat. College of Tech., JAPAN*)
 E. SIMOEN, C. CLAEYS, J. VANHELLEMONT, J. POORTMANS, M. CAYMAX (*IMEC, BELGIUM*)
 J. VANHELLEMONT (*Wacker Siltronic AG, GERMANY*)
 Y. TAKAMI (*Rikkyo Univ., JAPAN*)
 H. SUNAGA (*Takasaki JAERI, JAPAN*)
- P125 DEGRADATION OF MOSFETs ON SIMOX BY IRRADIATION**
 T. HAKATA, H. OHYAMA (*Kumamoto Nat. College of Tech., JAPAN*)
 E. SIMOEN, C. CLAEYS (*IMEC, BELGIUM*)
 K. MIYAHARA (*Kumamoto Univ., JAPAN*)
 K. KAWAMURA (*Nippon steel Co., JAPAN*)
 Y. OGITA (*Kanagawa Inst. of Tech., JAPAN*)
- P126 EFFECT OF IRRADIATION IN InGaAs PHOTO DEVICES**
 T. KUDOU, H. OHYAMA, K. SHIGAKI (*Kumamoto Nat. College of Tech., JAPAN*)
 E. SIMOEN, C. CLAEYS, J. VANHELLEMONT (*IMEC, BELGIUM*)

APSORC '97 ASIA-PACIFIC SYMPOSIUM ON RADIOCHEMISTRY-KUMAMOTO, JAPAN

- J. VANHELLEMONT (*Wacker Siltronic AG, GERMANY*)
Y. TAKAMI (*Rikkyo Univ., JAPAN*)
A. FUJII (*Kumamoto Univ., JAPAN*)
- P127 **TRITIUM AUTORADIOGRAPHIC STUDY OF HYDROGEN INGRESS INTO OXIDIZED ZIRCALOY-2**
H. HANADA, K. ISOBE, Y. HATANO, M. SUGISAKI (*Dept. of Nucl. Engr., Faculty of Engr., Kyushu Univ., JAPAN*)
- P128 **MÖSSBAUER PHASE DIAGRAM IN THERMALLY TREATED EUROPIUM IRON MIXED OXIDE**
P. A. de SOUZA Jr. (*Dept. de Física, Centro de Ciências Exatas, Univ. de Federal do Espírito Santo, BRAZIL*)
V. K. GARG (*Dept. de Física, Inst. de Ciências Exatas, Univ. de Brasília, BRAZIL*)
- P129 **EFFECT OF PRESSURE ON THE ELECTRICAL RESISTIVITY OF α -Ce**
G. OOMI, T. KAGAYAMA (*Dept. Mech. Engr. and Mat. Sci., Kumamoto Univ., JAPAN*)
- P130 **THE SIZE DISTRIBUTIONS OF Po-210 IN THE ATMOSPHERE AROUND MT. SAKURAJIMA IN KAGOSHIMA PREFECTURE, JAPAN**
N. ASHIKAWA, N. MATSUOKA, S. TAKAO, Y. TAKASHIMA (*Kyushu Environ. Eval. Assn., JAPAN*)
N. SYOJO, H. IMAMURA (*Kagoshima Pref. Inst. for Environ. Sci., JAPAN*)
- P131 **DETERMINATION OF ^{137}Cs , FALLOUT Pu and ^{90}Sr IN THE VOLCANIC SOIL OF KOREA**
M.H. LEE, C.W. LEE, J.H. LEE (*Korea Atomic Energy Res. Inst., KOREA*)
- P132 **cancelled**
- P133 **KINETICS OF ELEMENT PROFILE PATTERN DURING LIFE CYCLE STAGE OF MORNING-GLORY**
T.M. NAKANISHI, M. TAMADA (*Grad. School of Agr. and Life Sci., Univ. of Tokyo, JAPAN*)
- P134 **PHOTON ACTIVATION ANALYSIS OF I, TL, AND U IN ENVIRONMENTAL MATERIALS**
K. MASUMOTO (*Rad. Sci. Center, High Energy Accelerator Org., JAPAN*)
T. OHTSUKI (*Lab. NUcl. Sci., Faculty of Sci., Tohoku Univ., JAPAN*)
Y. MIYAMOTO, J.H. ZAIDI, A. KAJIWARA, H. HABA, K. SAKAMOTO (*Faculty of Sci., Kanazawa Univ., JAPAN*)
- P135 **AEROSOL SIZE DISTRIBUTION OF RADON DAUGHTERS IN THE ACCELERATOR TUNNEL AIR**
Y. OKI, K. KONDO, Y. KANDA, T. MIURA (*Rad Sci. Center, High Energy Accelerator Org., JAPAN*)
- P136 **COMBINATION OF MICROWAVE DIGESTION AND INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY FOR DETERMINATION OF LEAD ISOTOPE RATIOS**
H. KAWAMURA, H. TAGOMORI, T. NAGANO, N. MATSUOKA, S. TAKAO, Y. TAKASHIMA (*Kyushu Environ. Eval. Assn., JAPAN*)
K. SAEKI, M. KOIKE (*Energy Res. Sec., Res. Lab. Kyushu Electric Power Co. Inc., JAPAN*)
- P137 **cancelled**

Room P2

Poster Session

16:20-17:50, Tuesday, 7 October

Contributed Papers

- P201 **OPTIMIZATION OF LIQUID SCINTILLATION COUNTING TECHNIQUES FOR THE DETERMINATION OF CARBON-14 IN ENVIRONMENTAL SAMPLES**
H. J. WOO, S. K. CHUN (*Korea Inst. of Geology, Mining and Materials, KOREA*)
S. Y. CHO, Y. S. KIM, D. W. KANG (*Korea Electric Power Res. Inst., KOREA*)
- P202 **RADIOCARBON DATING FOR ACCIDENTAL RELEASES OF CHERNOBYL NPP**
M. BUZINNY (*Res. Center for Rad. Medicine Acad. of Medical Sci. of Ukraine, UKRAINE*)
- P203 **RADIOCARBON DATING FOR TREE RINGS OF DENDROCHRONOLOGICALLY DATED JAPAN CEDARS BURIED IN THE PADDY FIELD AT FUKUI.**

APSORC'97 ASIA-PACIFIC SYMPOSIUM ON RADIOCHEMISTRY-KUMAMOTO, JAPAN

- S. SHIBATA, E. KAWANO (*Isotope Center, Res. Inst. for Adv. Sci. and Tech. Osaka Pref. Univ. JAPAN*)
K. KIMURA (*Nat. Inst. for Environ. Studies, JAPAN*)
T. MINE, M. HARADA (*SUNTORY Limited, Res. Center, JAPAN*)
- P204 **TRANSFER OF ^{137}Cs FROM SOIL TO PLANTS IN A WET MONTANE FOREST IN SUBTROPICAL AREA**
C.-Y. CHIU (*Inst. of Botany, Academia Sinica, TAIWAN*)
S.-Y. LAI, C.-J. WANG, Y.-M. LIN (*Taiwan Rad. Monitoring Center, TAIWAN*)
- P205 **RELATION BETWEEN TRITIUM CONCENTRATION AND CHEMICAL COMPOSITION IN RAIN IN FUKUOKA**
Y. HAYASHI, N. MOMOSHIMA, H. KAKIUCHI, Y. MAEDA (*Dept. Chem., Faculty of Sci., Kyushu Univ., JAPAN*)
- P206 **TRITIUM CONCENTRATION IN OCEAN**
H. KAKIUCHI, N. MOMOSHIMA, Y. MAEDA (*Dept. of Chem., Faculty of Sci., Kyushu Univ., JAPAN*)
T. OKAI (*Dept. of Nucl. Engr., Faculty of Engr., Kyushu Univ., JAPAN*)
- P207 **VARIATION OF ATMOSPHERIC TRITIUM CONCENTRATIONS IN THREE DIFFERENT CHEMICAL FORMS IN FUKUOKA, JAPAN**
T. OKAI (*Dept. of Nucl. Engr., Faculty of Engr., Kyushu Univ. 33, JAPAN*)
N. MOMOSHIMA (*Dept. of Chem., Faculty of Sci., Kyushu Univ. 36, JAPAN*)
Y. TAKASHIMA (*Kyushu Environ. Eval. Assn., JAPAN*)
- P208 **RAPID DETERMINATION OF Sr-89 AND Sr-90 FOR AQUEOUS SAMPLE BY LIQUID SCINTILLATION SPECTROMETRY**
C. W. LEE, M. H. LEE, H. K. PARK, D. W. PARK, G. S. CHOI, K. H. HONG (*Korea Atomic Energy Res. Inst., KOREA*)
- P209 **DETERMINATION OF THORON AND RADON ACTIVITY BY LIQUID SCINTILLATION SPECTROMETRY**
M. SAKAMA, Y. OURA, K. KAWAMURA, K. SUEKI, H. NAKAHARA (*Tokyo Metropolitan Univ., JAPAN*)
H. YOSHIKAWA (*Power Res. and Nucl. Fuel Dev. Corp., JAPAN*)
- P210 **CALIBRATION OF LIQUID SCINTILLATION COUNTER FOR MEASURING LOW-LEVEL CONCENTRATION OF RADON IN WATER SAMPLE**
M. N. AL-HADDAD, I. AL-JABRI, M. A. ISLAM (*Energy Res. Lab., Res. Inst., King Fahd Univ. of Petroleum and Minerals, SAUDI ARABIA*)
- P211 **A RADON MEASUREMENT SYSTEM FOR STANDARDIZATION**
J.-M. LEE, T.-S. PARK, P.-J. OH (*Korea Res. Inst. of Standards and Sci., KOREA*)
- P212 **FISSION TRACK METHOD IN THE INVESTIGATION OF NATURAL RADIOACTIVITY OF SOME GEOLOGICAL SAMPLES**
B. S. BAJWA, H. S. VIRK (*Dept. of Phys., Guru Nanak Dev Univ., INDIA*)
- P213 **MICROANALYSIS OF URANIUM IN INDIAN WATER SAMPLES USING $\text{U}(n,f)$ REACTION**
P. SINGH, M. MUJAHID, A. H. NAQVI, D. S. SRIVASTAVA (*Dept. of App. Phys., Z. H. College of Engr. & Tech., Aligarh Muslim Univ., INDIA*)
- P214 **SETTLING VELOCITY OF PARTICLES BEARING PLUTONIUM IN THE PACIFIC WATER COLUMN**
M. A. HAQUE (*Grad. School of Nat. Sci. and Tech., Kanazawa Univ., JAPAN*)
T. NAKANISHI (*Dept. of Chem., Faculty of Sci. Kanazawa Univ., JAPAN*)
- P215 **SR ISOTOPE RATIOS AND REE ABUNDANCES IN SILICEOUS SEDIMENTARY ROCKS FROM SOUTHWEST JAPAN: TRACERS INDICATING CHANGE OF THEIR SOURCES AND DEPOSITIONAL ENVIRONMENTS FROM THE PERMIAN TO THE TRIASSIC**
T. KUNIMARU, H. SHIMIZU (*Dept. of Environ. Sci., Grad. School of Sci. and Tech., Kumamoto Univ., JAPAN*)
H. SHIMIZU (*Dept. of Environ. Sci., Faculty of Sci., Kumamoto Univ. JAPAN*)
T. KUNIMARU, K. TAKAHASHI, S. YABUKI (*Inst. of Phys. Chem. Res., JAPAN*)
- P216 **PROMPT GAMMA-RAY ANALYSIS OF METEORITE SAMPLES, WITH SPECIAL REFERENCE TO SI**

- Sk. A. LATIF, Y. OURA, M. EBIHARA, H. NAKAHARA (*Dept. of Chem., Faculty of Sci., Tokyo Metropolitan Univ., JAPAN*)
 C. YONEZAWA, T. MATSUE, H. SAWAHATA (*Dept. of Chem. and Fuel Res., Tokai Res. Estab., JAERI, JAPAN*)
- P217 **DETERMINATION OF IMPURITIES IN GRAPHITE BY NEUTRON GENERATOR ACTIVATION ANALYSIS**
 S. A. MAKAROV, A. V. ANDREEV (*State Inst. for Rare Metals, Nat. Sci. Center "GIREDMET", RUSSIA*)
- P218 **NEUTRON GENERATOR ACTIVATION ANALYSIS (NGAA) FOR HIGH-PRECISE AND HIGH-SENSITIVE ELEMENT DETERMINATION**
 A. V. ANDREEV, S. A. MAKAROV (*State Inst. for Rare Metals, Nat. Sci. Center "GIREDMET", RUSSIA*)
- P219 **EPITHERMAL NEUTRON ACTIVATION ANALYSIS AT IBR-2 PULSED FAST REACTOR AT DUBNA FOR STUDYING THE ENVIRONMENT**
 M. V. FRONTASYEVA (*Joint Inst. for Nucl. Res., Frank Lab. of Nucl. Phys., RUSSIA*)
- P220 **PROMPT GAMMA RAY ANALYSIS OF ARCHAEOLOGICAL BRONZE**
 Y. OURA, K. SUEKI, H. NAKAHARA (*Grad. School of Sci., Tokyo Metropolitan Univ., JAPAN*)
 T. TOMIZAWA (*Faculty of Literature, Keio Univ., JAPAN*)
 T. NISHIKAWA (*Osaka Board of Education, JAPAN*)
- P221 **VERTICAL DISTRIBUTION OF ELEMENTS IN NON-POLLUTED ESTUARINE SEDIMENTS DETERMINED BY NEUTRON INDUCED PROMPT GAMMA-RAY AND INSTRUMENTAL NEUTRON ACTIVATION ANALYSES**
 A. KUNO, K. SAMPEI, M. MATSUO (*Grad. School of Arts and Sci., Univ. of Tokyo, JAPAN*)
 C. YONEZAWA, H. MATSUE (*Japan Atomic Energy Res. Inst., JAPAN*)
 H. SAWAHATA (*Res. Centre for Nucl. Sci. and Tech., Univ. of Tokyo, JAPAN*)
- P222 **NEUTRON AND PHOTON ACTIVATION ANALYSES OF GEOCHEMICAL AND PLANT SAMPLES - EFFECTS OF INTERFERING NUCLEAR REACTIONS -**
 Y. MIYAMOTO, H. HABA (*Div. of Phys. Sci., Grad. School of Nat. Sci. and Tech., Kanazawa Univ., JAPAN*)
 A. KAJIKAWA, T. NAKANISHI, K. SAKAMOTO (*Dept. of Chem., Faculty of Sci., Kanazawa Univ., JAPAN*)
 K. MASUMOTO (*KEK(Tanashi), JAPAN*)
- P223 **LOSSES TO THE ELEMENTS IN PLANT SAMPLES UNDER THE DRY ASHING PROCESS**
 T. AOKI (*Radioiso. Res. Center, Kyoto Univ., JAPAN*)
 S. KOH, Y. KATAYAMA (*Grad. School of Agr., Kyoto Univ., JAPAN*)
- P224 **ACTIVATION ANALYSIS OF TRACE METALS IN THE SEVERAL KINDS OF TISSUES OF EVEN-TOED UNGULATES**
 M. FUKUSHIMA, H. TAMATE, S. SATO, S. TERUI (*Faculty of Sci. and Engr., Ishinomaki Senshu Univ., JAPAN*)
 S. MITSUGASHIRA (*Lab. of Nucl. Sci., Tohoku Univ., JAPAN*)
- P225 **ADSORPTION AND INTERFACE ACCUMULATION OF AQUASOL AND ORGANOSOL CARBON PARTICLES LABELLED WITH ^{99m}Tc**
 T. NOZAKI, A. SATOH, S. MURAOKA (*Purex Co., JAPAN*)
 J. ISHIGURO, K. YODA, K. OGAWA (*School of Allied Health Sci., Kitasato Univ., JAPAN*)
- P226 **SPECAnalSuite97 for Win95**
 Y. HAMAJIMA (*Dept. of Chem., Faculty of Sci., Kanazawa Univ., JAPAN*)
- P227 **SIMPLE MEASUREMENT OF ^{14}C IN THE ENVIRONMENT USING GEL SUSPENSION METHOD**
 G. WAKABAYASHI, H. OHURA, T. OKAI, M. MATOBA (*Dept. of Nucl. Engr., Faculty of Engr., Kyushu Univ., JAPAN*)
 A. NOHTOMI (*Proton Medical Res. Center, Tsukuba Univ., JAPAN*)
 H. KAKIUCHI, N. MOMOSHIMA (*Dept. of Chem., Faculty of Sci., Kyushu Univ., JAPAN*)
 H. KAWAMURA (*Kyushu Environ. Eval. Assn., JAPAN*)
- P228 **COMPARISON OF THE TEVA-SPEC RESIN AND LIQUID-LIQUID EXTRACTION METHODS FOR THE SEPARATION OF TECHNETIUM IN SOIL SAMPLES**

APSORC'97 ASIA-PACIFIC SYMPOSIUM ON RADIOCHEMISTRY-KUMAMOTO, JAPAN

- K. TAGAMI, S. UCHIDA (*Environ. and Toxicological Sci. Res. Group, Nat. Inst. of Radiological Sci., JAPAN*)
- P229 OPTIMIZATION OF LIQUID SCINTILLATION COUNTING TECHNIQUES FOR THE DETERMINATION OF CARBON-14 IN ENVIRONMENTAL SAMPLES**
H..J. WOO, S.K. CHUN, S.Y. KIM (*Korea Inst. of Geology, Mining and Materials, KOREA*)
D.W. KANG, C. HUH (*Korea Electric Power Res. Inst., KOREA*)
- P230 cancelled**
- P231 A REVIEW OF HIGH SENSITIVE NEW TL DOSIMETRY PHOSPHORS OF IONIZATION RADIATION**
S.J. DHOBLE (*Kamla Nehru College, INDIA*)
N.S. DHOBLE (*Sevadal Mahlia Sci. College, INDIA*)
- P232 APPLICATION OF A YAP SCINTILLATOR TO A PHOSWICH DETECTOR FOR SIMULTANEOUS COUNTING OF ALPHA AND GAMMA RAYS**
K.YASUDA, S. USUDA (*Dept. of Fuel Cycle Safety Res., Jopan Atomic Energy Res. Inst., JAPAN*)
- P233 OPTIMIZED DATA EVALUATION FOR k₀-BASED NAA**
R.van SLUIJS, D.A.W. BOSSUS (*DSM Res. B. V., Section IS-MVR/RAS, THE NETHERLANDS*)
- P234 IMPURITY CORRECTION FACTOR OF MnSO₄ COMPOUND FOR THE DETERMINATION OF NEUTRON EMISSION RATE ON THE MANGANESE BATH METHOD**
K.O. CHOI, Y. S. LEE (*Korea RES. Inst. of Standards and Sci., KOREA*)
K.S. PARK (*Kyungbuk Nat. Univ., KOREA*)
- P235 AN UNUSUAL CORRELATION BETWEEN RARE EARTH ELEMENTS AND CALCIUM CONTENTS IN FERN LEAVES**
J. TAKADA, T. SUMINO, Y. TANAKA, K.KAWAMOTO, M. AKABOSHI (*Res. Reactor Inst., Kyoto Univ., JAPAN*)
K. NISHIMURA (*Univ. Forest, Kyoto Univ., JAPAN*)
- P236 DETERMINATION OF BORON CONTENT IN VOLCANIC ROCKS BY NEUTRON-INDUCED PROMPT Γ -RAY ANALYSIS: CORRECTION OF ANALYTICAL SENSITIVITY VARIATION**
T. SANO (*Faculty of Integrated Human Studies, Kyoto Univ., JAPAN*)
T. FUKUOKA (*Dept. of Sci. Gakushuin Univ., Japan*)
T. HASENASKA (*Faculty of Sci., Tohoku Univ., JAPAN*)
C. YONEZAWA, H. MATSUE (*Tokai Estab., Japan Atomic Energy Res. Inst., JAPAN*)
H. SAWAHATA (*Tokai Estab., Res. Center for Nucl. Sci. and Tech., Univ. of Tokyo, JAPAN*)

Wednesday, 8 October 1997
morning

PARALLEL SESSIONS

Room A

Oral Session

09:00-10:15, Wednesday, 8 October

Chairmen: Dr. B.D. AMORO & Prof. Hs. KUDO

Contributed Paper

- A01 BREMSSTRAHLUNG EMISSION IN α -DECAY OF 244Cm AND 210Po**
T. OHTSUKI, J. KASAGI, H. YAMAZAKI, N. KASAJIMA, H. YUKI, M. YUKISHIMA (*Lab. of Nucl. Sci., Tohoku Univ.)*

Invited Paper

- LL2 FORMATION AND SEPARATION OF CARRIER-FREE RADIONUCLIDES OF FIRST TRANSITION SERIES ELEMENTS**
N.R. DAS, S. BANERJEE (*Nucl. Chem. Div., Saha Inst. of Nucl. Phys., INDIA*)
S. LAHIRI (*Nucl. and Anal. Chem. Lab. Dept. of Chem., Burdwan Univ., INDIA*)

Contributed Papers

- A04 RECENT STUDIES OF UNSTABLE NUCLEI FAR FROM STABILITY WITH THE ON-LINE ISOTOPE SEPARATORS OF JAERI**

APSORC '97 ASIA-PACIFIC SYMPOSIUM ON RADIOCHEMISTRY-KUMAMOTO, JAPAN

T. SEKINE, A. OSA, M. KOIZUMI (*Dept. of Chem. and Fuel Res., Japan Atomic Energy Res. Inst. (JAERI), Takasaki, JAPAN*)

S. ICHIKAWA, H. IIMURA, K. TSUKADA, I. NISHINAKA, Y. HATSUKAWA, Y. NAGAM (*Dept. of Chem. and Fuel Res., JAERI, Tokai Estab., JAPAN*)

M. ASAI, Y. KOJIMA, T. HIROSE, M. SHIBATA, H. YAMAMOTO, K. KAWADE (*Dept. of Energy Engr. and Sci., Nagoya Univ., JAPAN*)

A05 SYSTEMATICS OF BIMODAL NATURE IN ACTINIDE FISSION

Y. NAGAME, I. NISHINAKA, Y. L. ZHAO, K. TSUKADA, S. ICHIKAWA, H. IKEZOE (*Japan Atomic Energy Res. Inst., Tokai Estab., JAPAN*)

M. TANIKAWA (*Dept. of Chem., Univ. of Tokyo, JAPAN*)

T. OHTSUKI (*Lab. of Nucl. Sci., Tohoku Univ., JAPAN*)

Y. L. ZHAO, Y. OURA, K. SUEKI, H. NAKAHARA (*Dept. of Chem., Tokyo Metropolitan Univ., JAPAN*)

H. KUDO (*Dept. of Chem., Niigata Univ., JAPAN*)

Y. HAMAJIMA (*Dept. of Chem., Kanazawa Univ., JAPAN*)

K. TAKAMIYA, K. NAKANISHI, H. BABA (*Dept. of Chem., Osaka Univ., JAPAN*)

Oral Session

10:30-12:00, Wednesday, 8 October

Chairmen: Dr. N.R. DAS & Dr. H. SHOJI

Contributed Papers

A06 RADIOCHEMICAL STUDY OF FAST FISSION MECHANISM

H. BABA, N. TAKAHASHI, A. YOKOYAMA, T. SAITO (*Dept. of Chem., Grad. School of Sci., Osaka Univ., JAPAN*)

A07 BEHAVIOR OF PIONIC HYDROGEN ATOMS IN GAS AND LIQUID PHASES

A. SHINOHARA (*Dept. of Chem., Grad. School of Sci., Nagoya Univ., JAPAN*)

T. MUROYAMA (*LLRL, Kanazawa Univ., JAPAN*)

T. MIURA (*Rad. Sci. Center, KEK, JAPAN*)

A. YOKOYAMA, K. TAKAMIYA, T. SAITO, J. SANADA, H. ARAKI, H. BABA (*Grad. School of Sci., Osaka Univ., JAPAN*)

T. KANEKO (*Faculty of Sci., Niigata Univ., JAPAN*)

S. KOJIMA (*Radioiso. Res. Center, Aichi Medical Univ., JAPAN*)

Y. HAMAJIMA (*Faculty of Sci., Kanazawa Univ., JAPAN*)

H. MURAMATSU (*Faculty of Education, Shinshu Univ., JAPAN*)

M. FURUKAWA (*Faculty of Environ. and Information Sci., Yokkaichi Univ., JAPAN*)

A08 GAS PHASE CHEMISTRY OF TRANSACTINOID ELEMENTS (104-106)

I. ZVARA, A. B. YAKUSHEV, S. N. TIMOKHIN (*Joint Inst. for Nucl. Res., Flerov Lab. of Nucl. Reactions, RUSSIAN FED.*)

A09 STABILITY OF RADIO-METALLO-FULLERENE AGAINST BETA-DECAY

K. SUEKI, K. KIKUCHI, H. NAKAHARA (*Dept. of Chem., Tokyo Metropolitan Univ., JAPAN*)

K. TOMURA (*Inst. of Atomic Energy, Rikkyo Univ., JAPAN*)

A10 REGIOSELECTIVE HYDROGEN ISOTOPE EXCHANGE REACTION IN BENZOIC ACID AND BENZAMIDE

K. OOHASHI, H. HASEGAWA (*Lab. of Radiopharm. Chem., Faculty of Pharm. Sci., Chiba Univ., JAPAN*)

H. SEKI (*Chem. Anal. Center, Chiba Univ., JAPAN*)

A11 RECOIL PROPERTIES OF RADIONUCLIDES FORMED IN THE PHOTONUCLEAR REACTIONS ON ²⁷Al, natCu, natAg, natTa, AND ¹⁹⁷Au AT INTERMEDIATE ENERGIES

H. HABA, H. MATSUMURA, Y. MIYAMOTO (*Div. of Phys. Sci., Grad. School of Nat. Sci. and Tech., Kanazawa Univ., JAPAN*)

K. SAKAMOTO (*Dept. of Chem., Faculty of Sci., Kanazawa Univ., JAPAN*)

Y. OURA (*Dept. of Chem., Faculty of Sci., Tokyo Metropolitan Univ., JAPAN*)

S. SHIBATA (*Res. Reactor Inst., Kyoto Univ., JAPAN*)

M. FURUKAWA (*Faculty of Environ. and Information Sci., Yokkaichi Univ., JAPAN*)

I. FUJIWARA (*School of Economics, Otemongakuin Univ., JAPAN*)

< 12:00-13:00 Cafeteria Lunch at the Student Union >

APSORC'97 ASIA-PACIFIC SYMPOSIUM ON RADIOCHEMISTRY-KUMAMOTO, JAPAN

PARALLEL SESSIONS

Room B

Oral Session

09:00-10:15, Wednesday, 8 October

Chairmen: Prof. P. GÜTLICH & Prof. M. TAKEDA

Contributed Papers

B01 A CORRELATION BETWEEN ISOMER SHIFTS OF ^{237}Np MÖSSBAUER SPECTRA AND COORDINATION NUMBERS OF Np ATOMS IN NEPTUNYL(V) COMPOUNDS

M. SAEKI, M. NAKADA, T. NAKAMOTO, N. M. MASAKI (*Adv. Sci. Res. Center, Japan Atomic Energy Res. Inst., JAPAN*)

T. YAMASHITA (*Dept. of Chem. and Fuel Res., Japan Atomic Energy Res. Inst., JAPAN*)

N. N. KROT (*Inst. of Phys. Chem., Russian Acad. of Sci., RUSSIA*)

B02 SYNTHESIS AND ^{151}Eu - AND ^{57}Fe -MÖSSBAUER SPECTROSCOPIC STUDIES OF NEW EUROPIUM-IRON COMPLEXES

M. KATADA, T. NAWA (*Radioiso. Res. Center, Tokyo Metropolitan Univ., JAPAN*)

H. KUMAGAI, S. KAWATA, S. KITAGAWA (*Dept. of Chem., Grad. School of Sci., Tokyo Metropolitan Univ., JAPAN*)

B03 POSITRONIUM AS ACTIVE PROBE OF VACANCIES IN INSULATING MATERIALS

Y. ITO (*Res. Center for Nucl. Sci. and Tech., Univ. of Tokyo, JAPAN*)

Invited Paper

LL3 FRONTIERS OF POSITRON AND POSITRONIUM CHEMISTRY IN CONDENSED MEDIA

A. V'ERTES, K. SIIVERGH, M. BOKOR, A. DOMJÁN, T. MARCK (*Dept. Nucl. Chem., Eötvös Lorand Univ., HUNGARY*)

M. KLAPPER (*Max-Planck Inst. for Polymer Res., GERMANY*)

C.U. CHISHOLM, M. EI-SHARIF (*Glasgow Caledonian Univ., UK*)

K. YOMPUS (*Res. Inst. for Solid State Phys., Hungarian Acad. Sci., HUNGARY*)

Oral Session

10:30-12:00, Wednesday, 8 October

Chairmen: Dr. A.E. PILLAY & Dr. Y. KOBAYASHI

Contributed Papers

B06 Sb-121 AND Fe-57 MÖSSBAUER SPECTRA OF ANTIMONY-CONTAINING IRON CARBONYL COMPLEXES: $[\text{HSb}\{\text{Fe}(\text{CO})_4\}_3]_2$ - AND $[\text{Sb}\{\text{Fe}(\text{CO})_4\}_4]_3$ -

M. MAEDA, M. TAKAHASHI, M. TAKEDA (*Dept. of Chem., Faculty of Sci., Toho Univ., JAPAN*)

B07 APPLICATION OF THE 'T_g-Δ RULE' TO THE LOCAL STRUCTURAL STUDY OF FERRATE GLASSES

T. NISHIDA, S. KUBUKI, Y. MAEDA (*Dept. of Chem., Faculty of Sci., Kyushu Univ., JAPAN*)

B08 MÖSSBAUER SPECTROSCOPY OF NANOCLUSTER SYSTEMS

I. P. SUZDALEV (*N. N. Semenov Inst. of Chem. Phys., Russian Acad. of Sci., RUSSIA*)

B09 MÖSSBAUER SPECTRA OF $(\text{Fe}_{0.5}\text{Zn}_{0.5})\text{PS}_3$ AND ITS INTERCALATION COMPOUNDS

H. SAKAI, T. YAMAZAKI, N. MACHIDA, T. SHIGEMATSU (*Dept. of Chem., Faculty of Sci., Konan Univ., JAPAN*)

S. NAKASHIMA (*Radioiso. Center, Hiroshima Univ., JAPAN*)

B10 MÖSSBAUER SPECTROSCOPIC STUDIES OF MOLECULEBASED MAGNETS:

$\text{NBu}_4[\text{Fe}(\text{II})_x\text{Mn}(\text{II})_{1-x}\text{Cr}(\text{III})(\text{ox})_3]$ AND $\text{NBu}_4[\text{Fe}(\text{II})_x\text{Ni}(\text{II})_{1-x}\text{Fe}(\text{III})(\text{ox})_3]$

S. IJIMA, S. KONER, F. MIZUTANI (*Nat. Inst. of Biosci. and Human-Tech., JAPAN*)

B11 STRUCTURAL STUDIES OF THE LANTHANIDE(III) IONS IN THE AQUEOUS NITRATE AND CHLORIDE SOLUTIONS

T. YAITA, H. NARITA, S. SUZUKI, S. TACHIMORI (*Dept. of Chem. and Fuel Res., Japan Atomic Energy Res. Inst., JAPAN*)

< 12:00-13:00 Cafeteria Lunch at the Student Union >

APSORC'97 ASIA-PACIFIC SYMPOSIUM ON RADIOCHEMISTRY-KUMAMOTO, JAPAN

PARALLEL SESSIONS

Room C

Oral Session

09:00-10:15, Wednesday, 8 October

Chairmen: Dr. D.S. SURYA NARAYANA & Prof. K. KOMURA

Contributed Papers

- C01 UPTAKE KINETICS OF DEUTERIATED WATER VAPOR BY PLANTS: EXPERIMENTS OF D₂O RELEASE IN A VINYL HOUSE AS A SUBSTITUTE FOR TRITIATED WATER**
N. MOMOSHIMA, H. KAKIUCHI, Y. MAEDA (*Dep. of Chem., Fac. of Sci., Kyushu Univ., JAPAN*)
T. OKAI (*Dep. of Nucl. Eng., Fac. of Eng., Kyushu Univ., JAPAN*)
S. YOKOYAMA, H. NOGUCHI (*Dep. of Health Phy., JAERI, JAPAN*)
M. ATARASHI, H. AMANO (*Dep. of Environ. Safety Res., JAERI, JAPAN*)
S. HISAMATSU (*Dep. of Public Health, Akita Univ. School of Medicine, JAPAN*)
M. ICHIMASA, Y. ICHIMASA (*Fac. of Sci., Ibaraki Univ., JAPAN*)
- C02 VALIDATION OF PROGRAM SYSTEMS FOR INSTRUMENTAL NEUTRON ACTIVATION ANALYSIS**
K. HEYDORN (*Isotope Div. Risø Nat. Lab., DENMARK*)
- C03 EVALUATION OF ENVIRONMENTAL TRITIUM LEVEL IN PREOPERATIONAL PERIOD OF CERNAVODA CANDU NUCLEAR POWER PLANT**
N. PAUNESCU, M. COTARLEA, D. GALERIU, R. MARGINEANU, N. MOCANU (*Nat. Inst. of Res. and Dev. for Nucl. Phys. and Engr.-Horia Hulubei Bucharest-Magurele, ROMANIA*)

Invited Paper

- LL4 UNDERSTANDING OF BURNING RATE BEHAVIOUR BASED ON NEUTRON ACTIVATION ANALYSIS OF ROCKET PROPELLANT INGREDIENTS**
V.G. DEDGAONKAR (*Dept of Chem., Univ. OF Pune, INDIA*)
P.B. NAVLE, V.G. GHORPADE, V.S. WANI, P.G. SHROTRI (*High Energy Materials Res. Lab., INDIA*)

Oral Session

10:30-12:00, Wednesday, 8 October

Chairmen: Prof. V.G. DEDGAONKAR & Prof. S. HIRAI

Contributed Papers

- C06 DETERMINATION OF FALLOUT Pu IN THE VOLCANIC SOIL OF KOREA**
M. H. LEE, C. W. LEE, J. H. LEE (*Korea Atomic Energy Res. Inst., KOREA*)
- C07 FLUORINE DETERMINATION BY 2.5 MeV NEUTRON ACTIVATION ANALYSIS**
M. N. AL-HADDAD, A. AKSOY, F. Z. KHIARI (*Energy Res. Lab., King Fahd Univ. of Petroleum and Minerals, SAUDI ARABIA*)
- C08 DETERMINATION OF BORON IN JAPANESE GEOCHEMICAL REFERENCE SAMPLES BY NEUTRON-INDUCED PROMPT GAMMA-RAY ANALYSIS**
C. YONEZAWA, P.P. RUSKA, H. MATSUE, M. MAGARA, T. ADACHI (*Japan Atomic Energy Res. Inst., JAPAN*)
- C09 COMBINATION OF ACTIVATION ANALYSIS AND SOME OTHER MODERN ANALYTICAL TECHNIQUES - NEW POSSIBILITIES FOR STUDY OF ENVIRONMENT**
I. V. SHTANGEEVA (*Inst. of Earth Crust, St. Petersburg Univ., RUSSIA*)
- C10 APPLICATION OF RADIOCHEMICAL METHODS AND DISPERSION MODEL IN THE STUDY OF ENVIRONMENTAL POLLUTION IN BRAZIL**
I.I.L. CUNHA, R.C.L. FIGUEIRA, R. SAITO (*Radiochem. Div.-IPEN-CHEN-SP, BRAZIL*)
- C11 DEVELOPMENT OF PULSE TIME INTERVAL ANALYSIS (TIA) COMBINED WITH PSD-LIQUID SCINTILLATION COUNTING FOR THE DETERMINATION OF ENVIRONMENTAL α -NUCLIDES**
T. HASHIMOTO, Y. YONEYAMA, K. SATO, Y. KOMATSU (*Dcpt. of Chem., Faculty of Sci., Niigata Univ. JAPAN*)

< 12:00-13:00 Cafeteria Lunch at the Student Union >

APSORC'97 ASIA-PACIFIC SYMPOSIUM ON RADIOCHEMISTRY-KUMAMOTO, JAPAN

PARALLEL SESSIONS

Room D

Oral Session

09:00-10:15, Wednesday, 8 October

Chairmen: Prof. N.K. ARAS & Prof. S. SHIBATA

Contributed Papers

- D01 **NUCLEAR DATA LIBRARIES AND ONLINE SERVICES FOR RADIOCHEMISTRY**
P. OBLOZINSKY, O. SCHWERER, D.W. MUIR, R.M. IYER (*International Atomic Energy Agency, AUSTRIA*)
- D02 **DETAILED STUDY OF THE γ -RADIOLYSIS OF NTA IN A SIMULATED, MIXED NUCLEAR WASTE**
A.P. TOSTE (*Southwest Missouri State Univ. (SMS), Chem. Dept., USA*)
- D03 **SEPARATION OF CARRIER FREE ^{95m}Tc FROM NIOBIUM TARGETS IRRADIATED WITH ALPHA PARTICLES**
T. SEKINE, M. KONISHI, H. KUDO (*Dept. of Chem., Grad. School of Sci., Tohoku Univ., JAPAN*)
K. TAGAMI, S. UCHIDA (*Environ. and Toxicological Sci. Res. Group, Nat. Inst. of Radiological Sci., JAPAN*)
- D04 **PREPARATION AND EXPERIMENTAL STUDY OF ^{125}I -Tyr³-OCTREOTIDE**
F. WANG, X.H. JING, Y.S. WANG, L. XIAO (*China Inst. of Atomic Energy, P. R. CHINA*)
- D05 **PRELIMINARY STUDIES ON 1-(5-iodo-5-deoxy- β -D-arabinofuranosyl)-2-AMINOIMIDAZOLE (iodoaminoimidazole arabinoside : IAIA) AS A POTENTIAL SPECT BRAIN AND TUMOR IMAGING AGENT**
H.C. LEE, P. KUMAR, L.I. WIEBE, J.R. MERCER (*Faculty of Pharm. and Pharmaceut. Sci., Univ. of Alberta, CANADA*)
A.J. McEVAN, J.R. MERCER (*Dept. of Radiology and Diagnostic Imaging, Univ. of Alberta, CANADA*)

Oral Session

10:30-12:00, Wednesday, 8 October

Chairmen: Prof. K. KONDO & Dr. N. PAUNESCU

Invited Papers

- LL5 **IN-VIVO NEUTRON ACTIVATION ANALYSIS FOR MEDICAL APPLICATIONS**
S. KRISHNAN, W.C. STURTRIDGE (*Medical Phys. Lab., The Tronto Hosp., General Div., CANADA*)
- LL6 **TRACE ELEMENTS IN BONE DETERMINED BY NEUTRON ACTIVATION ANALYSIS: ITS ROLE IN OSTEOPOROSIS**
N.K. ARAS, G. YILMAZ, S. ALKAN, F. KORKUSUZ (*Dept. of Chem., Middle East Tech. Univ., TURKEY*)
- LL7 **NUCLEAR ACTIVATION AND RELATED TECHNIQUES FOR ANALYSIS OF HUMAN TISSURES AND DIETARY SAMPLES**
G.V. IYENGAR (*Biomineral Sci., USA; NIST/SRMP, UAS*)

< 12:00-13:00 Cafeteria Lunch at the Student Union >

Wednesday, 8 October 1997
afternoon

PLENARY SESSION

Room C

Invited Paper

13:00-13:50, Wednesday, 8 October

Chairmen: Prof. T. KISHIKAWA & Dr. N.M. SPYROU

- PL6 **NEW FRONTIERS OF DIAGNOSTIC RADIOLOGY**
M. TAKAHASHI, M.D. (*Dept. of Radiology, Kumamoto Univ. School of Medicine, JAPAN*)

APSORC'97 ASIA-PACIFIC SYMPOSIUM ON RADIOCHEMISTRY-KUMAMOTO, JAPAN

Invited Paper

13:50-14:20, Wednesday, 8 October

Chairmen: Ing. R. van SLUIJS & Prof. Hr. KUDO

LL8 CHARGE-INDUCED X-RAYS (CHIX) FROM INSULATED METAL TARGETS WITH 700 keV PROTONS

A.E. PILLAT, M. PEISACH (Dept. of Chem., Center for App. Chem., Univ. of Witwatersrand, SOUTH AFRICA)

J.J. KRITZIBGER, K. SPRINGHORN (Nat. Accelerator Center, SOUTH AFRICA)

Invited Paper

14:40-15:40, Wednesday, 8 October

Chairmen: Prof. Y. MAEDA & Prof. A. VÉRTES

PL7 MÖSSBAUER SPECTROSCOPY - A POWERFUL NUCLEAR TOOL IN SOLID STATE RESEARCH

P. GÜTLICH (Inst für Anorg. u. Anal. Chem., Johannes Gutengerg Univ., GERMANY)

POSTER SESSIONS

Room P1

Poster Session

15:40-17:00, Wednesday, 8 October

Contributed Papers

- P301 DNA STRAND BREAKS INDUCED BY IRON COMPLEXES IN THE PRESENCE OF (-)- EPIGALLOCATECHIN GALLATE**
M. HIRASAWA, H. YOSHIOKA, T. OMORI (Radiochem. Res. Lab., Faculty of Sci., Shizuoka Univ., JAPAN)
H. YOSHIOKA (Inst. for Environ. Health Sci., Univ. of Shizuoka, JAPAN)
- P302 ISOTOPE EFFECT IN THE COURSE OF THIOPHENE HYDROGENOLYSIS UNDER HYDROGEN-3H FLOW**
V.M. KOGAN, A.A. GREISH, G.V. ISAGULYANTS (N.D. Zelinsky Inst. of Org. Chem., Russian Acad. of Sci., RUSSIAN FED.)
- P303 WET OXIDATION OF ION-EXCHANGE RESINS IN FENTON'S REACTION SYSTEM WITH A CATHODE**
D.W. KANG (Korea Electric Power Res. Inst., KOREA)
H. S. YANG (Dept. of Fine Chem. Eng. And Chem., Chungnam Nat. Univ., KOREA)
- P304 ENHANCED CELL-KILLING EFFECT OF POTASSIUM HEXACHLOROPLATINUM(IV) SOLUTION IRRADIATED BY 60Co- γ -RAY UNDER THE PRESENCE OF NH₄CL**
Y. TANAKA, T. SUMINO, K. KAWAI, J. TAKADA, K. KAWAMOTO, M. AKABOSHI (Res. Reactor Inst., Kyoto Univ., JAPAN)
- P305 DYNAMIC MOTION OF Ce@C₈₂ STUDIED BY PERTURBED ANGULAR CORRELATION**
W. SATO, K. SUEKI, K. KIKUCHI, K. KOBAYASHI, S. SUZUKI, Y. ACHIBA, H. NAKAHARA (Grad. School of Sci., Tokyo Metropolitan Univ., JAPAN)
Y. OHKUBO (Res. Reactor Inst., Kyoto Univ., JAPAN)
F. AMBE (Inst. Phys. Chem. Res. (RIKEN), JAPAN)
K. ASAI (Dept. of App. Phys. and Chem., Univ. of Electro-Communications, JAPAN)
- P306 THE CORRELATION OF SOME RECOIL FEATURES IN THE WATER-SOLUBLE METALLOPORPHYRIN ION ASSOCIATE SOLID SYSTEM WITH STRUCTURAL FACTORS**
H. SHOJI (Dept. of Chem., Univ. of Tsukuba, JAPAN)
- P307 STUDY OF MIXED-VALENCE DINUCLEAR IRON(II,III) COMPLEXES [Fe₂(bpmp)L₂](BF₄)₂: ASYMMETRICALLY DELOCALIZED VALENCE STATES**
T. MANAGO, S. HAYAMI, Y. MAEDA (Dept. of Chem., Faculty of Sci., Kyushu Univ., JAPAN)
- P308 SYNTHESSES AND STRUCTURE OF IRON(III) COMPLEXES CONTAINING A QUASI-CROWNETHER RING**
S. HAYAMI, S. NOMIYAMA, S. HIROSE, Y. YANO, Y. MAEDA (Dept. of Chem., Faculty of Sci., Kyushu Univ., JAPAN)
S. OSAKI (Radioiso. Center, Kyushu Univ., JAPAN)
- P309 APPLICATION OF THE MÖSSBAUER SPECTROSCOPY TO THE STUDY OF THE OXIDATION STATE OF AZAFERROCENE DERIVATIVES**

- S. NAKASHIMA (*Radioiso. Center, Hiroshima Univ., JAPAN*)
 T. KITAO, H. MATSUNAGA, I. KIMURA, H. INAMURA, T. OKUDA (*Dept. of Chem., Faculty of Sci., Hiroshima Univ., JAPAN*)
 H. SAKAI (*Dept. of Chem., Faculty of Sci., Konan Univ., JAPAN*)
- P310 **⁵⁷Fe MÖSSBAUER SPECTROSCOPIC AND MAGNETIC STUDY FOR SPIN-CROSSOVER POLYMER COMPLEX, Fe(3-Chloropyridine)₂Ni(CN)₄**
 T. KITAZAWA, Mi. TAKAHASHI, Ma. TAKAHASHI, M. TAKEDA (*Dept. of Chem., Faculty of Sci., Toho Univ., JAPAN*)
- P311 **THE MICROENVIRONMENT OF IRON IN (Ba,Ca) (Fe,Co)O_{3-δ} CATALYST SYSTEM: MÖSSBAUER STUDY**
 M. ENOMOTO, A. MIYAZAKI, T. ENOKI (*Dept. of Chem., Tokyo Inst. of Tech., JAPAN*)
 K. NOMURA (*Grad. School of Engr., Univ. of Tokyo, JAPAN*)
 Z. HOMONNAY, G. JUHASZ, A. VÉRTES (*Dept. of Nucl. Chem., Eötvös Univ., HUNGARY*)
 Y. UJIHIRA (*Res. Center for Adv. Sci. and Tech., Univ. of Tokyo, JAPAN*)
- P312 **SUPERPARAMAGNETIC BEHAVIOR OF IRON OXIDES SUPPORTED ON POROUS SILICA GELS**
 S. IJIMA, F. MIZUTANI (*Nat. Inst. of Biosci. and Human-Tech., JAPAN*)
 A. NOMURA, F. MIZUKAMI, S. SHIN (*Nat. Inst. of Materials and Chem. Res., JAPAN*)
- P313 **MÖSSBAUER STUDY ON THE CRYSTALLIZATION OF IR-TRANSMITTING ALUMINATE GLASSES**
 T. NISHIDA, S. KUBUKI, Y. MAEDA (*Dept. of Chem., Faculty of Sci., Kyushu Univ., JAPAN*)
- P314 **MÖSSBAUER STUDY OF JAPANESE ANCIENT IRON SLAG**
 A. NAKANISHI, T. KOBAYASHI (*Dept. of Phys., Shiga Univ. of Medical Sci., JAPAN*)
 S. MIONO (*Dept. of Phys., Osaka City Univ., JAPAN*)
- P315 **FORMATION OF IRON FINE-PARTICLES IN A CRYSTAL LATTICE BY THE COMPUTER SIMULATION**
 T. KOBAYASHI, A. NAKANISHI, K. FUKUMURA (*Dept. of Phys., Shiga Univ. of Medical Sci., JAPAN*)
- P316 **POSITRON AND POSITRONIUM LIFETIME STUDY OF SOME AQUEOUS SOLUTIONS OF CHIRAL MATERIALS**
 K. SÜVEGH, A. DOMJÁN, A. VÉRTES (*Dept. of Nucl. Chem., Eötvös Loránd Univ., HUNGARY*)
- P317 **POSITRONIUM IN A LAYERED-STRUCTURE MATERIAL: MONTMORILLONITE**
 M. SANO (*Dept. of Chem., Div. of Nat. Sci., Int. Christian Univ., JAPAN*)
 H. MURAKAMI (*Dept. of Phys., Faculty of Edu., Tokyo Gakugei Univ., JAPAN*)
 K. ICHIMURA (*Dept. of Chem., Faculty of Sci., Kumamoto Univ., JAPAN*)
- P318 **APPLICATION OF A PULSED SLOW POSITRON BEAM TO POLYMER**
 N. OSHIMA, E. HAMADA (*Dept. of Accelerator Sci., Grad. Univ. for Adv. Studies, JAPAN*)
 T. SUZUKI, K. KONDO (*Rad. Sci. Center, High Energy Accelerator Res. Organization (KEK), JAPAN*)
 I. KANAZAWA (*Dept. of Phys., Tokyo Gakugei Univ., JAPAN*)
 Y. ITO (*Res. Center for Nucl. Sci. and Tech., The Univ. of Tokyo, Tokai, JAPAN*)
- P319 **LASER-INDUCED FLUORESCENCE STUDY ON THE INTERACTION OF EU(III) WITH POLY CARBOXYLATES**
 Y. TAKAHASHI, Y. MAKIDE (*Radioiso. Center, Univ. of Tokyo, JAPAN*)
 T. KIMURA, Y. KATO (*Japan Atomic Energy Res. Inst., Tokai-mura, Ibaraki 319-11, JAPAN*)
 Y. MINAI (*Faculty of Humanities, Musashi Univ., JAPAN*)
 T. TOMINAGA (*Professor Emeri., Univ. of Tokyo, JAPAN*)
 Y. TAKAHASHI (*Res. Fellow, the Japan Society for the Promotion of Sci., JAPAN*)
- P320 **SOLVENT EXTRACTION OF TECHNETIUM(VII) BY CYCLIC AMIDES**
 S. SUZUKI, M. TAMURA, S. TACHIMORI (*Dept. of Chem. and Fuel Res., Japan Atomic Energy Res. Inst., JAPAN*)
 Y. USUI (*Grad. School of Sci. and Engr., Ibaraki Univ., JAPAN*)
- P321 **STUDY ON THE EXTRACTION OF TRIVALENT LANTHANIDE IONS WITH N,N'-DIMETHYL-N,N'-DIPHENYL-MALONAMIDE AND -DIGLYCOLAMIDE**

- H. NARITA, T. YAITA, K. TAMURA, S. TACHIMORI (*Dept. of Chem. and Fuel Res., Japan Atomic Energy Res. Inst., JAPAN*)
H. NARITA, S. TACHIMORI (*Grad. School of Sci. and Engr., Ibaraki Univ., JAPAN*)
- P323 **OBSERVATION OF RADIOACTIVE HETERO-FULLERENES USING RADIOCHEMICAL TECHNIQUES**
K. SUEKI (*Dept. of Chem., Tokyo Metropolitan Univ., JAPAN*)
K. SHIKANO (*NTT Photo-Electronics Lab., JAPAN*)
K. MASUMOTO, T. OHTSUKI (*Lab. of Nucl. Sci., Tohoku Univ., JAPAN*)
- P324 **MODEL EXPERIMENT OF GAS-PHASE RAPID CHEMISTRY FOR ACTINIDES AND TRANSACTINIDES**
T. KANEKO, K. TAMURA, S. KIMURA, H. KUDO (*Dept. of Chem., Faculty of Sci., Niigata Univ., JAPAN*)
- P325 **ANISOTROPY IN THE PHYSICAL PROPERTIES OF UNIGa UNDER HIGH PRESSURE**
F. HONDA, G. OOMI (*Faculty of Engr. Kumamoto Univ., JAPAN*)
A. V. ANDREEV, K. PROKES, L. HAVELA, V. SECHOVSKY (*Dept. of Metal Phys., Charles Univ., Czech Rep.*)
- P326 **TRANSPORT MECHANISM OF HYDROGEN THROUGH OXIDE FILM FORMED ON ZIRCALOY-4**
Y. HATANO, R. HITAKA, M. SUGISAKI (*Dept. of Nucl. Engr., Faculty of Engr., Kyushu Univ., JAPAN*)
M. HAYASHI (*Tech. Dev. Dept., Nucl. Fuel Ind., Ltd., JAPAN*)
- P327 **ION EXCHANGERS IN RADIOACTIVE WASTE MANAGEMENT INFLUENCE OF BENTONITE IN REMOVAL OF Zn (II) & Cd (II)**
S.P. MISHRA, D. TIWARI, V.K. SINGH (*Nucl. and Radiochem. Lab., Dept. of Chem., Faculty of Sci., Banaras Hindu Univ., INDIA*)
- P328 **ADSORPTION CHARACTERISTICS OF CARBON-14 ON ION EXCHANGE RESIN IN NUCLEAR POWER PLANT**
K.P. LEE, H.J. KIM, K.S. PARK (*Kyungpook Nat. Univ., Dept. of Chem., KOREA*)
D. W. KANG, C. HUH (*Korea Electric Power Res. Inst., Material and Corrosion Res. Lab., KOREA*)
- P329 **SORPTION BEHAVIOR OF Am(III) ONTO GRANITE**
A. KITAMURA, T. YAMAMOTO (*Dept. of Nucl. Engr., Faculty of Engr., Osaka Univ., JAPAN*)
H. MORIYAMA, S. NISHIKAWA (*Res. Reactor Inst., Kyoto Univ., JAPAN*)
- P330 **THERMAL NEUTRON CROSS SECTION AND RESONANCE INTEGRAL OF THE REACTION $^{135}\text{Cs} (n,\gamma)^{136}\text{Cs}$**
Y. HATSUKAWA, N. SHINOHARA, K. HATA, K. KOBAYASHI, S. MOTOISHI, M. TANASE (*Japan Atomic Energy Res. Inst., JAPAN*)
T. KATO, S. NAKAMURA, H. HARADA (*Power Reactor and Nucl. Fuel Dev. Corp., JAPAN*)
T. KATO (*Gifu College of Medical Tech., JAPAN*)
- P331 **cancelled**
- P332 **POSSIBILITIES OF SEPARATION AND PURIFICATION OF ACTINIDE AND TRANSACTINIDE ELEMENTS BY COMBINED ION EXCHANGE - SOLVENT EXTRACTION METHOD**
L.L. GUSEVA, G.S. TIKHOMIROVA (*Vernadsky Inst. of Geochem. and Anal. Chem., Russian Acad. of Sci., RUSSIA*)
N. SHINOHARA (*Dept. of Radioiso., Japan Atomic Energy Res. Inst., JAPAN*)
- P333 **SYNTHESIS OF ^{186}Re -DMSA AND ITS BIODISTRIBUTIONS IN MICE**
N. NOGAWA, Y. MAKIDE, N. MORIKAWA (*Radioiso. Center, Univ. of Tokyo, JAPAN*)
S. MOMOSE, K. MIYAZAKI, K. OOHASHI (*Faculty of Pharm. Sci., Chiba Univ., JAPAN*)
K. HASHIMOTO (*Dept. of Radioiso., Japan Atomic Energy Res. Inst., JAPAN*)
- P334 **cancelled**
- P335 **RESIDUAL NEUTRON-INDUCED RADIOACTIVITIES OF ^{60}Co AND ^{152}Eu IN ROCKS EXPOSED TO NAGASAKI ATOMIC BOMBING**
T. SHIMASAKI (*Radioiso. Center, Kumamoto Univ., JAPAN*)
T. SHIMASAKI, M. YOSHIDA, T. TAKAISUJI, Y. OKUMURA (*Dept. Rad. Biophys., Atomic Disease Inst., Nagasaki Univ. School of Medicine, JAPAN*)

- P336 cancelled
 P337 cancelled
 P338 **QUALITATIVE MONITORING OF THE QUALITY BY NUCLEAR TECHNIQUES**
 P.A. de SOUZA Jr. (*Depart. de Física, Centro de Ciências Exatas, Univ. de Federal do Espírito Santo, BRAZIL*)
 A.D. CHEQUER (*Enfermaria "São Francisco" de Pneumario, Escola de Medicina da Santa Casa de Misericórdia, BRAZIL*)
 T. MORIMOTO (*IDC, Companhia Siderúrgica de Tubarão, BRAZIL*)
 K. NOMURA (*Grad. School of Engr., Univ. of Tokyo, JAPAN*)

Room P2

Poster Session

15:40-17:00, Wednesday, 8 October

Contributed Papers

- P401 **SAMPLE TREATMENT TECHNIQUES FOR THE DETERMINATION OF ENVIRONMENTAL RADIO-CARBON IN THE NUCLEAR POWER STATION AREA**
 H.J. WOO, S.Y. CHO, S.K. CHUN, Y.S. KIM (*Korea Inst. of geol. Mining and Materials, KOREA*)
 D.W. KANG, K.B. SUBG (*Korea Electric Power Res. Inst., KOREA*)
- P402 **ANOMALOUS 90Sr DEPOSITION DURING FALL, 1995 AT MRI, TSUKUBA, JAPAN**
 Y. IGARASHI, M. AOYAMA, T. MIYAO, K. HIROSE (*Geochem. Res. Dept., Meteorological Res. Inst., JAPAN*)
 M. TOMITA (*Kansai Environ. Engr. Center, JAPAN*)
- P403 **ATMOSPHERIC DEPOSITION OF S-35**
 S. OSAKI, S. SUGIHARA (*Radioiso. Center, Kyushu Univ. 16, JAPAN*)
 Y. TAGAWA, T. CHIJIWA, Y. MAEDA (*Faculty of Sci., Kyushu Univ. 33, JAPAN*)
- P404 **CHARACTERISATION OF LOW LEVEL RADIOACTIVE SOLID WASTE INCINERATION PRODUCTS**
 V. SUBRAMANIAN, D.S. SURYA NARAYANA, A.R. SUNDARARAJAN (*Health and Safety Div., Indira Gandhi Centre for Atomic Res., INDIA*)
 P. M. SATYASAI, J. AHMED (*Centralised Waste Manag. Facility, Bhabha Atomic Res. Centre, INDIA*)
- P405 **MACRO, MICRO NUTRIENTS AND TRACE METAL CONCENTRATIONS IN AYURVEDIC INDIAN MEDICINAL AND VEGETABLE LEAVES**
 R. NAIDU, T. BALAJI (*Dept. of Chem., S. V. Univ., INDIA*)
 J. DENSCHLAG, E. MAUERHOFER, N. PORTE (*Inst. fur Kernchemie, Johannes Guttenberg Universitat, GERMANY*)
- P406 **DISTRIBUTION AND MEAN RESIDENCE TIME OF NATURAL RADIONUCLIDES IN THE FOREST ECOSYSTEM**
 S. SUGIHARA, S. OSAKI (*Radioiso. Center, Kyushu Univ., JAPAN*)
 T. BABA, Y. MAEDA (*Dept. of Chem., Faculty of Sci., Kyushu Univ., JAPAN*)
 Y. INOKURA (*Univ. Forests, Faculty of Agr., Kyushu Univ., sasaguri 811-24, JAPAN*)
- P407 **SORPTION AND DESORPTION OF RADIOACTIVE Cs, Sr, Zn, Se AND I ON CALCAREOUS SOIL FROM GANSU PROVINCE**
 Z. Y. TAO, J. Z. DU, W. M. DONG, X. K. WANG, Z. J. GUO, L. Y. ZHENG (*Dept. of Modern Phys., Lanzhou Univ., P. R. CHINA*)
- P408 **GEOCHEMICAL ASSOCIATION OF CS-137 AND PU-239,240 IN THE OLIGO- AND MESOTROPHIC LAKE SEDIMENTS**
 S. NAGAO, T. MATSUNAGA, S. MURAOKA (*Dept. of Environ. Safety Res., Japan Atomic Energy Res. Inst., JAPAN*)
- P409 **A WET METHOD OF CARBON EXTRACTION FROM IRON ARTIFACTS FOR 14C AGE MEASUREMENT WITH AMS**
 H. ODA, T. NAKAMURA (*Dating and Materials Res. Center, Nagoya Univ., JAPAN*)
 M. FURUKAWA (*Faculty of Environ. and Information Sci., Yokkaichi Univ., JAPAN*)
- P410 **HOST PHASE OF PLUTONIUM-239,240 AND AMERICIUM-241 IN DEEP-SEA SEDIMENT**

- M. A. HAQUE (*Grad. School of Nat. Sci. and Tech., Kanazawa Univ., JAPAN*)
 T. NAKANISHI (*Dept. of Chem., Faculty of Sci., Kanazawa Univ., JAPAN*)
- P411 **REE GEOCHEMISTRY ON SEDIMENTARY ROCKS AND BASEMENT WEATHERED GRANITE AT TONO URANIUM DEPOSIT, CENTRAL JAPAN**
 H. SHIMIZU, N. SATO (*Dept. of Environ. Sci., Faculty of Sci., Kumamoto Univ., JAPAN*)
 H. SHIMIZU, T. KUNIMARU (*Dept. of Environ. Sci., Grad. School of Sci. and Tech., Kumamoto Univ., JAPAN*)
 H. YOSHIDA (*Tono Geoscience Center, Power Reactor and Nucl. Fuel Dev. Corp., JAPAN*)
- P412 **MEASUREMENTS OF Ra-226 IN SCALE SAMPLES USING GAMMA-RAY SPECTROSCOPY**
 A. AKSOY, M. N. AL-HADDAD, F. Z. KHIARI (*Energy Res. Lab., King Fahd Univ. of Petroleum and Minerals, SAUDI ARABIA*)
- P413 **A COMPARISON OF NAA AND ICP-MS FOR THE DETERMINATION OF TRACE ELEMENTS IN OMBROTROPHIC PEAT BOG**
 M. V. FRONTASYEVA (*Joint Inst. for Nucl. Res., Frank Lab. of Nucl. Phys., RUSSIA*)
 E. STEINNES (*Dept. of Chem., Norwegian Univ. of Sci. and Tech., NORWAY*)
- P414 **ELEMENTAL CHARACTERIZATION OF INDUSTRIAL SLUDGES AND DOMESTIC WASTES FOR HEAVY METAL POLLUTANTS BY INAA**
 A.N. GARG (*Dept. of Chem., Univ. of Roorkee, Roorkee-247667, (U. P.), INDIA*)
 V.V.S. RAMAKRISHNA (*Dept. of Chem., Nagpur Univ., Nagpur-440010, INDIA*)
- P415 **cancelled**
- P416 **SOLVENT EXTRACTION BEHAVIOR OF HEXACHLOROTECNETATE(IV) ION IN THE HCl-TBP SYSTEM**
 S. WATANABE (*Dept. of Radioiso., Japan Atomic Energy Res. Inst., Takasaki, JAPAN*)
 K. HASHIMATO (*Dept. of Radioiso.s, Japan Atomic Energy Res. Inst., Tokai, JAPAN*)
- P417 **STRUCTURES OF NITRIDOTECNETIUM(V) AMINE OXIME COMPLEXES WITH DEFERENT LENGTH OF CARBON CHAINS**
 Y. KANI, T. TAKAYAMA, T. SEKINE, H. KUDO (*Dept. of Chem., Grad. School of Sci., Tohoku Univ., JAPAN*)
- P418 **SELECTIVE FORMATION OF CIS ISOMER OF NITRIDOTECNETIUM(V) COMPLEX WITH 2,2':6',2"-TERPYRIDINE**
 T. TAKAYAMA, S. OSHIKIRI, T. SEKINE, H. KUDO (*Dept. of Chem., Grad. School of Sci., Tohoku Univ., JAPAN*)
- P419 **ANIMAL EXPERIMENTS ON ¹¹¹In-DTPA-D-Phe¹-Octreotide**
 F. CHEN, F. LI, C. CHOU, S. C. WANG (*Dept. of Nucl. Medicine, PUMC and CAMS, P. R. CHINA*)
 F. WANG, L. XIAO (*China Inst. of Atomic Energy, P. R. CHINA*)
- P420 **POSSIBLE DIETARY PROPHYLACTIC INTERVENTION WITH ALLIUM SATIVUM (GARLIC) BULB EXTRACTS AGAINST RADIATION-INDUCED TISSUE DAMAGE AND APOPTOSIS IN MOUSE THYMOCYTES AND CRYPTS IN VITRO AND IN VIVO**
 C. C. DEOCARIS, A. L. ALEJANDRINO (*Biomedical Res. Unit/Atomic Res. Div., Philippine Nucl. Res. Inst., The Philippines*)
 C. C. DEOCARIS, M. A. ENDRIGA (*Molecular Biology and Biotech. Program, Univ. of Philippines, The Philippines*)
 J. P. BUNAGAM, K. C. PEREY (*Dept. of Bio. Sci., Pamantasan ng Lungsod ng Maynila (PLM) Intramuras, The Philippines*)
- P421 **SIMULTANEOUS BIOBEHAVIOR OF Sc, Mn, Fe, Co, Zn, Se, Rb AND Zr TRACE ELEMENTS IN C57BL/6N MICE**
 S. OISHI, R. AMANO, A. ANDO (*School of Health Sci., Faculty of Medicine, Kanazawa Univ., JAPAN*)
 S. ENOMOTO, F. AMBE (*Inst. of Phys. Chem. Res. (RIKEN), JAPAN*)
- P422 **PRODUCTION OF POSITRON EMITTERS AND APPLICATION OF THEIR LABELED COMPOUNDS TO STUDIES ON PLANTS**
 N. S. ISHIOKA, H. MATSUOKA, S. WATANABE (*Dept. of Radioiso.s, Japan Atomic Energy Res. Inst. (JAERI), Takasaki, Gunma 370-12, JAPAN*)
 A. OSA, M. KOIZUMI, T. SEKINE (*Dept. of Chem. and Fuel Res., JAERI, Takasaki, JAPAN*)

- S. MATSUHASHI, T. KUME (*Dept. of Rad. Res. for Environ. and Resources, JAERI, Takasaki, JAPAN*)
 A. TSUJI, H. UCHIDA (*Central Res. Lab., Hamamatsu Photonics Co., JAPAN*)
- P423 **STUDY OF OPTIMUM CONDITION FOR SYNTHESIS OF [γ - ^{32}P] ATP WITH HIGH SPECIFIC RADIOACTIVITY**
 F. SAKAMOTO, M. IZUNO, K. HASHIMOTO (*Dept. of Radioiso., Japan Atomic Energy Res. Inst., JAPAN*)
 F. SAKAMOTO, Y. FUJII (*Grad. School of Sci. and Engr., Ibaraki Univ., JAPAN*)
- P424 **INSTRUMENTAL NEUTRON ACTIVATION ANALYSIS (INAA) OF TRACE ELEMENTS IN ORGANS AND TISSUES OF MICE-EFFECTS OF ZINC-DEFICIENT DIET**
 M.IWAMA, K. TAKIGUCHI, K. SHINOTSUKA, M. YANAGA, M. NOGUCHI, T. OMORI (*Faculty of Sci., Shizuoka Univ., JAPAN*)
- P425 **CELL-KILLING EFFICIENCY AND NUMBER OF PLATINUM ATOMS BINDING TODNA, RNA AND PROTEIN MOLECULES OF HeLa CELLS TREATED WITH COMBINATIONS OF HYPERTHERMIA AND CARBOPLATIN**
 M. AKABOSHI, K. KAWAI, Y. TANAKA, J. TAKADA, T. SUMINO (*Res. Reactor Inst., Kyoto Univ., JAPAN*)
- P426 **DYNAMICS OF TRACE ELEMENTS IN LIVER DISEASE RAT AND MICE**
 S. ENOMOTO, R.HIRUNUMA, S. AMBE, F. AMBE (*Inst. Phys. Chem. Res.(RIKEN), JAPAN*)
- P427 **PRODUCTION OF CARRIER-FREE MULTITRACERS CONTAINING MG-28 AND CA-47 BY HIGH-ENERGY HEAVY-ION IRRADIATION**
 S.AMBE, T. OZAKI, R. G. WEGINWAR, S. ENOMOTO, F. AMBE (*Inst. Phys. Chem. Res.(RIKEN), JAPAN*)
- P428 **METABOLISM OF TRACE ELEMENTS IN MARINE EUGLENA&A F STUDY USING THE MULTITRACER**
 R.G. WEIGINWAR, S. AMBE, S. ENOMOTO, T. OZAKI, F. AMBE (*Inst. Phys. Chem. Res.(RIKEN), JAPAN*)
 M. KATAYAMA (*Osaka Prefecture Univ., JAPAN*)
- P429 **APPLICATION OF THE MULTITRACER TECHNIQUE: TIME DEPENDENCE OF DISTRIBUTION OF TRACE ELEMENTS IN SE-DEFICIENT RATS**
 R. HIRUNUMA, S. ENOMOTO, S. AMBE, F. AMBE (*Inst. Phys. Chem. Res. (RIKEN), JAPAN*)
 N. SOTOGAKU (*Showa College of Pharm. Sci., JAPAN*)
- P430 **ISOTOPIC MOLECULAR EXCHANGE STUDY OF CARBONS FROM DIFFERENT POLYMER PRECURSORS**
 K.L.ÁSZLÓ, A. BÓTA, M. TAKÁCS, L. G. NAGY (*Dept. of Phys.Chem., Tech. Univ. Budapest, HUNGARY*)
- P431 **MULTITRACER STUDY ON COORDINATING OF THE RARE EARTH ELEMENT WITH METALLOTHIONEIN**
 J. CHOU, S. ENOMOTO, S. AMBE, F. AMBE (*Inst. Phys. Chem. Res. (RIKEN), JAPAN*)
- P432 **RARE EARTH BROMATES : RETENTION STUDIES FOLLOWING (n, γ) ACTIVATION**
 V.G. DEDGAONKAR, R.G. APTE, D.A. BHAGWAT (*Dept. of Chem., Univ. of Pune, INDIA*)
- P433 **DIRECT PREPARATION OF RADIOACTIVE CARBON LABELED FULLERENES USING NUCLEAR REACTION**
 K. MASUMOTO, T. OHTSUKI (*Lab. of Nucl. Sci., Faculty of Sci., Tohoku Univ., JAPAN*)
 K. SUEKI, K. KIKUCHI (*Faculty of Sci., Tokyo Metropolitan Univ., JAPAN*)
- P434 **FACTORS DETERMINING THE DAMAGE COEFFICIENTS AND THE LOW-FREQUENCY NOISE IN MeV PROTON IRRADIATED SILICON DIODES**
 E. SIMOEN, C. CLAEYS (*IMEC, BELGIUM*)
 H. OHYAMA, (*KNCT, JAPAN*)
 Y. TAKAMI (*Rikkyo Univ., JAPAN*)
 H. SUNAGA (*Takasaki JAERI, JAPAN*)

Wednesday, 8 October 1997
afternoon

PLENARY SESSION

Room C

Invited Paper

17:10-17:40, Wednesday, 8 October

Chairmen: Prof. D.C. HOFFMAN & Prof. T. OMORI

**LL9 MULTITRACER - A TRACER TECHNIQUE DEVELOPED BY USING RIKEN RING
CYCROTRON**

F. AMBE (*Inst. Phys. Chem. Res. (RIKEN), JAPAN*)

17:40-17:50, Wednesday, 8 October

Chairman: Prof. I. TANIGUCHI

CLS Closing Ceremony

Closing Summary

Prof. Y. MAEDA, Dep. Symposium Chairman

Intern'l Advisory Board's Remarks

Prof. A. VÉRTES

Closing Remarks

Prof. T. KISHIKAWA, Symposium Chairman

END OF TECHNICAL SESSIONS

Thursday, 9 October 1997

ONE DAY EXCURSION
(applicants only)

SORC-41 PROGRAM

Contributed Paper : 20 min. (15-min. presentation plus 5-min. discussion)

Lead Lecture : 40 min. (35-min. lecture plus 5-min. discussion)

Speaker in underline

Invited Paper

Lead Lecture

13:00-13:40, Monday, 6 October

LLJ **ROLE OF RADIOCHEMISTRY IN DEVELOPMENT OF THERMONUCLEAR FUSION REACTORS**

K. OKUNO (*Radiochem. Res. Lab., Shizuoka Univ., JAPAN*)

Monday, 6 October 1997
morning (in Japanese)

PLENARY SESSIONS

Room A

Contributed Papers

Isotope chemistry

09:20-10:40, Monday, 6 October

JA01 **SOLVENT EXTRACTION STUDY OF AM³⁺-CL⁻ INTERACTION IN MIXED SYSTEMS OF METHANOL/WATER AND DMSO/WATER**

H. SUGANUMA, M. NAKAMURA, T. OMORI (*Faculty of Sci., Shizuoka Univ.*)

I. SATOH (*Inst. Mat. Res., Tohoku Univ.*)

JA02 **STUDY ON INTERACTIONS OF Eu³⁺-F⁻ AND Eu³⁺-Cl⁻ IN MIXED SYSTEM OF METHANOL/WATER USING SOLVENT EXTRACTION TECHNIQUE**

M. ARISAKA, M. NAKAMURA, H. SUGANUMA, T. OMORI (*Facul. Sci., Shizuoka Univ.*)

I. SATOH (*Inst. Mat. Res., Tohoku Univ.*)

JA03 **EFFECT OF 3,5-DICHLOROPHENOL ON THE ION-PAIR EXTRACTION OF TECHNETIUM COMPLEXES WITH TPAC**

T. OMORI, M. MIYAIRI, H. SUGANUMA (*Faculty of Sci., Shizuoka Univ.*)

JA04 **HYDROLYSIS REACTION OF HEXAKIS (THIOUREA)RHENIUM(III) ION (2)**

M. YUASA, H. SUGANUMA, T. OMORI (*Faculty of Sci., Shizuoka Univ.*)

Labelling; Activation analysis

10:40-12:00, Monday, 6 October

JA05 **DETERMINATION OF TRACE ELEMENTS IN LIVER OF ZINC DEFICIENT MICE BY PIXE ANALYSIS**

M. YANAGA, M. IWAMA, M. NOGUCHI, T. OMORI (*Faculty of Sci., Shizuoka Univ.*)

S. FUTATSUGAWA (*Nishina Mem. Cyclotron Center, Japan Radioisot. Assn.*)

K. SERA (*Cyclotron Res. Center, Iwate Medecal Univ.*)

JA06 **BIOCHEMICAL STUDIES OF BLOOD COMPONENTS AND TRANSPORT PROTEIN BINDING WITH VARIOUS TRACE ELEMENTS**

N. SOTOGAKU, K. ENDO (*Showa College of Pharm. Sci.*)

R. HIRUNUMA, S. ENOMOTO, S. AMBE, F. AMBE (*Inst. Phys. Chem. Res. (RIKEN)*)

JA07 **DETERMINATION OF MULTIELEMENTS IN ENVIRONMENTAL REFERENCE MATERIAL "HUMAN URINE" BY INAA**

S. SAKAMOTO, S. SUZUKI, Y. OKADA, S. HIRAI (*Atomic Energy Res. Lab., Musashi Inst.*

Tech.)

JA08 **DETERMINATION OF THE TRACE ELEMENT IN URINE AND RICE SAMPLE BY NEUTRON ACTIVATION ANALYSIS**

K. TAKIGUCHI, H. YOSHIOKA, K. HASEGAWA, (*Faculty of Sci., Shizuoka Univ.*)

C. W. HUANG (*Dept. Chem., Chung Yuan University, Taiwan*)

K. TOMURA (*Institute for Atomic Energy, Rikkyo University*)

<12:00-13:30 Cafeteria Lunch at the Student Union>

<Joung Members' General Meeting >

**Monday, 6 October 1997
afternoon (in Japanese)**

< 13:00-13:40 Lead Lecture in Room C >

PARALLEL SESSIONS

ROOM A

Contributed Papers

Activation analysis

13:50-14:50, Monday, 6 October

- JA09 PRODUCTION AND PURIFICATION OF ORGANIC REAGENTS LABELED WITH RADIOISOTOPES PRODUCED BY AN ACCELERATOR**
K. SHIKANO (*NTT Opto-electronics Labs.*)
K. MASUMOTO (*Radiation Sci. Center, High Energy Accelerator Res. Org.*)
T. OHTSUKI (*Lab. Nucl. Sci., Tohoku Univ.*)
- JA10 EFFECT OF MATRICES BY NEUTRON SCATTERING ON NEUTRON INDUCED PROMPT GAMMA-RAY ANALYSIS**
H. MATUE, C. YONEZAWA (*Janan Atomic Energy Res. Inst.*)
- JA11 BASIC EXAMINATION ON THE K₀-BASED NEUTRON ACTIVATION ANALYSIS**
C. YONEZAWA, R. P. PUTRA, H. MATSUE (*Japan Atomic Energy Res. Inst.*)
T. KUROSAWA (*Radiation Application Development Association*)

**Monday, 6 October 1997
morning (in Japanese)**

PARALLEL SESSIONS

ROOM B

Contributed Papers

Nuclear reaction

09:20-10:40, Monday, 6 October

- JB01 TWO-DIMENSIONAL ANALYSIS OF MASS-TKE DISTRIBUTION FOR 252Cf(sf), 233U(nth,f) AND 235U(nth,f)**
A. YOKOYAMA, T. INOUE, K. TAKAMIYA, T. SAITO, H. BABA (*Grad. School of Sci., Osaka Univ.*)
- JB02 TARGET FRAGMENTATION AND LINEAR MOMENTUM TRANSFER IN THE REACTION OF 197AU WITH HIGH-ENERGY 12C AND 40Ar BEAM**
S. MORIMOTO, H. ARAKI, J. SANADA, A. YOKOYAMA, T. SAITO, H. BABA (*Grad. School Sci., Osaka Univ.*)
Y. KIHARA, T. MUROYAMA, A. SHINOHARA (*Faculty of Sci., Nagoya Univ.*)
Y. OHKUBO (*Kyoto Univ. Res. Reactor Inst.*)
S. SHIBATA (*Nat. Inst. Radiological Sci.*)
- JB03 HEAVY-ION INDUCED FISSION IN THE MEDIUM ENERGY REGION**
H. ARAKI, J. SANADA, S. MORIMOTO, A. YOKOYAMA, T. SAITO, H. BABA (*Grad. School Sci., Osaka Univ.*)
Y. OHKUBO (*Res. Reactor Inst., Kyoto Univ.*)
Y. KOBAYASHI (*Inst. Phys. Chem. Res. (RIKEN)*)
- JB04 A STUDY ON THE NEUTRON-INDUCED FISSION OF ACTINIDES AROUND 14-MEV EXCITATION**
J. SANADA, H. ARAKI, S. MORIMOTO, T. INOUE, K. TAKAMIYA, A. YOKOYAMA, N. TAKAHASHI, H. BABA (*Grad. School Sci., Osaka Univ.*)
- JB05 cancelled**

Mössbauer chemistry; muonic atom chemistry

11:00-12:00, Monday, 6 October

- JB06 MÖSSBAUER SPECTRA OF (FeXZn1-X)PS3 AND ITS AMINE INTERCALATES**
H. SAKAI, T. YAMAZAKI, N. MACHIDA, T. SHIGEMATSU (*Faculty of Sci., Konan Univ.*)
S. NAKASHIMA (*Radioisotope Center, Hiroshima Univ.*)

- JB07 SYNTHESIS OF NEPTUNYL (VI) COMPOUNDS AND THEIR ^{237}Np MÖSBAUER SPECTRA
T. SAITO, J. WANG, T. KITAZAWA, M. TAKAHASHI, M. TAKEDA (*Faculty of Sci., Toho Univ.*)
M. NAKADA, T. NAKAMOTO, N. M. MASAKI, T. YAMASHITA, M. SAEKI (*Japan Atomic Energy Res. Inst.*)
- JB08 ^{166}Er MÖSBAUER SPECTRA OF SOME Er(III)- β -DIKETONATO COMPLEXES
J. WANG, M. TAKAHASHI, M. TAKEDA (*Faculty of Sci., Toho Univ.*)

Monday, 6 October 1997
afternoon (in Japanese)

< 13:00-13:40 Lead Lecture in Room C >

PARALLEL SESSIONS

ROOM B

Contributed Papers

Solution chemistry

13:50-14:50, Monday, 6 October

- JB09 ELUTION BEHAVIOR OF METALLOFULLERENES IN VARIOUS HPLC COLUMNS USING RADIOCHEMICAL METHOD
K. AKIYAMA, K. SUEKI, K. KIKUCHI, H. NAKAHARA (*Faculty of Sci., Tokyo Metro. Univ.*)
T. AKASAKA (*Grad. School Sci. and Tech., Niigata Univ.*)
- JB10 EFFECTS OF THE H_2O_2 AND H^+ CONCENTRATIONS ON THE SOLVENT EXTRACTION OF RADIOIODINE AND THE BACK EXTRACTION BEHAVIOR
M. S. SULTANA, A. MITO, N. TAKAHASHI, H. BABA (*Grad. School Sci., Osaka Univ.*)
- JB11 KINETICS OF THE REACTION BETWEEN HYDROXYL RADICAL FORMED BY β -RAY IN TRITIATED WATER AND TEA CATECHIN - APPLICATION OF SOLID STATE SPIN TRAPPING METHOD -
H. YOSHIOKA, H. KUROSAKI (*Faculty of Sci., Shizuoka Univ.*)
H. YOSHIOKA (*Inst. for Environ. Sci., Univ. of Shizuoka*)

Monday, 6 October 1997
morning (in Japanese)

< 13:00-13:40 Lead Lecture in Room C >

PARALLEL SESSIONS

ROOM C

Contributed Papers

Environmental radioactivity

09:20-10:40, Monday, 6 October

- JC01 NEUTRON INDUCED FISSION TRACK DISTRIBUTION FROM FISSION PARTICULATE MATERIALS IN FALLOUT
K. SATO, M. NOGUCHI, T. SANADA, S. SATO (*Japan Chem. Anal. Center*)
T. HASHIMOTO, T. OKADA (*Dept. Chem., Faculty of Sci., Niigata Univ.*)
- JC02 PRODUCTION RATES AND DEPOSITION RATES OF ^{10}Be AND ^7Be IN THE ATMOSPHERE
H. NAGAI, T. KOBAYASHI (*College of Humanities and Sci., Nihon Univ.*)
- JC03 INDUCED RADIOACTIVITY IN THE EARTH SHIELDING AROUND HIGH ENERGY PROTON ACCELERATORS
M. NUMAJIRI, T. SUZUKI, Y. OKI, T. MIURA, K. KONDO (*Radiation Sci. Center High Energy Accelerator Res. Org. (KEK)*)
- JC04 MEASUREMENT OF ^{10}Be CONTENT IN SOME SEDIMENTAL SAMPLES WITH ACCELERATOR MASS SPECTROMETRY
T. KOBAYASHI, H. NAGAI (*College of Humanities and Sci., Nihon Univ.*)
M. MURAYAMA (*Grad. School of Environmental Earth Sci., Hokkaido Univ.*)
K. YOSHIDA (*University Museum, Univ. of Tokyo*)
M. IMAMURA (*National Museum of Japan History*)
S. HATORI, K. KOBAYASHI (*Res. Center for Nucl. Sci. and Tech., Univ. of Tokyo*)

Contributed Papers

Environmental radioactivity

10:40-11:40, Monday, 6 October

- JC05 **NON-DESTRUCTIVE DATING OF STALAGMITE BY GAMMA SPECTROMETRY**
K. KOMURA, M. INOUE, Y. MURATA, M. YAMAMOTO (*Low Level Radioactivity Lab., Kanazawa Univ.*)
- JC06 **RADIOACTIVITY CONTENTS OF PAPERS**
A. KOBASHI (*School of Sci., Univ. of Tokyo*)
- JC07 **MEASUREMENT OF Tc AND Pu BY LASER RESONANCE IONIZATION MASS SPECTROMETRY**
N. TAKAHASHI (*Grad. School of Sci., Osaka Univ.*)
N. ERDMANN, H. U. HASSE, N. TRAUTMANN, A. M. WALDEK (*Inst. fuer Kernchemie, Universitaet Mainz*)

Monday, 6 October 1997
afternoon (in Japanese)

PLENARY SESSION

Room C

Invited Paper

Lead Lecture

13:00-13:40, Monday, 6 October

- LLJ **RADIOCHEMISTRY IN NUCLEAR FUSION TECHNOLOGY**
K. OKUNO (*Faculty of Sci., Shizuoka Univ.*)

PARALLEL SESSION

Room C

Contributed Papers

Luminescence; Education

13:50-15:10, Monday, 6 October

- JC09 **SUNLIGHT BLEACHING EFFECTS OF NATURALLY ACCUMULATED THERMOLUMINESCENCE**
N. SUGAI, N. SUGIYAMA, T. HASHIMOTO (*Dept. Chem., Faculty of Sci., Niigata Univ.*)
- JC10 **HYDROGEN RADICAL AND ALUMINUM CENTER IN QUARTZ INDUCED BY γ -RAY IRRADIATION AT LIQUID-N₂ TEMPERATURE**
H. KATAYAMA, T. HASHIMOTO, N. SUGAI, E. NISHIYAMA (*Faculty of Sci., Niigata Univ.*)
H. HASE (*Res. Reactor Inst., Kyoto Univ.*)
- JC11 **SEVERAL RADIATION-INDUCED LUMINESCENCE PROPERTIES FROM SOME FELDSPARS**
H. SAKAUE, H. FUJITA, T. HASHIMOTO (*Dept. Chem., Faculty of Sci., Niigata Univ.*)
- JC12 **LIQUID SCINTILLATION MEASUREMENT OF 40K FOR THE EDUCATION ON RADIOACTIVITY**
K. OGAWA, J. SAITO (*School of Allied Health Sci., Kitasato Univ.*)
T. NOZAKI (*School of Hygienic Sci., Kitasato Univ.*)

Monday, 6 October 1997
afternoon (in Japanese)

Group Meetings

15:20-17:10, Monday, 6 October

- Room A Nuclear Chemistry Group Meeting**
- Room B Nuclear Probe Chemistry Group Meeting**
- Room D Activation Analysis Group Meeting**

Monday, 6 October 1997
evening

17:30-19:00, Monday, 6 October

Joint Welcome Reception at the Symposium Site

第41回放射化学討論会 (SORC-41)

基調講演・特別講演

—合同開催—

国際放射化学シンポジウム'97 (APSORC '87)

基調講演 (合同)

10月7日 (火)

- | | | |
|-----|---|----------------|
| PL1 | Dr. N.M. SPIROU (<i>Dept. Phys., Univ. of Surrey, UK</i>) | C会場09:30-10:20 |
| PL2 | Dr. J.W. Müller (<i>Bureau Int'l des Poids et Mesures, FRANCE</i>) | C会場10:40-11:30 |
| PL3 | Prof. D.C. HOFFMAN (<i>Dept. Chem. Univ. of California, Berkeley &
Heavy Element Nucl. & Radiochem. Grp. Nucl. Sci. Div., LBL, USA</i>) | C会場13:30-14:20 |
| PL4 | Prof. H. HIDAKA (<i>Dept. Earth and Planetary System Sci., Hiroshima Univ.,
JAPAN</i>) | C会場14:20-15:10 |
| PL5 | Dr. B.D. AMIRO (<i>Canadian Forestry Service, Northern Forestry Centre,
CANADA</i>) | C会場15:30-16:20 |

10月8日 (水)

- | | | |
|-----|---|----------------|
| PL6 | Prof. M. TAKAHASHI, M.D.
(<i>Dept. of Radiology, Kumamoto Univ. School of Medicine, JAPAN</i>) | C会場13:00-13:50 |
| PL7 | Prof. Dr. P. GÜTLICH (<i>Inst für Anorg. u. Anal. Chem., Johannes Gutengerg Univ.,
GERMANY</i>) | C会場14:40-15:40 |

特別講演

10月6日 (月)

- | | | |
|-----|-------------|----------------|
| LLJ | 奥野健二 (静岡大理) | C会場13:00-13:40 |
|-----|-------------|----------------|

特別講演 (合同)

10月7日 (火)

- | | | |
|-----|---|----------------|
| LL1 | R.E. JERVIS (<i>Dept. Chem. Eng. & App. Chem., Univ. of Tronto, CANADA</i>) | C会場11:30-12:00 |
|-----|---|----------------|

10月8日 (水)

- | | | |
|-----|--|----------------|
| LL2 | N.R. DAS (<i>Nucl. Chem. Div., Saha Inst. of Nucl. Phys., INDIA</i>) | A会場09:15-09:45 |
| LL3 | A. VÉRTES (<i>Dept. Nucl. Chem., Eötvös Lorand Univ., HUNGARY</i>) | B会場09:45-10:15 |
| LL4 | V.G. DEDGAONKAR (<i>Dept of Chem., Univ. OF Pune, INDIA</i>) | C会場09:45-10:15 |
| LL5 | S. KRISHNAN (<i>Medical Phys. Lab., The Tronto Hosp., General Div.,
CANADA</i>) | D会場10:30-11:00 |
| LL6 | N.K. ARAS, (<i>Dept. of Chem., Middle East Tech. Univ., TURKEY</i>) | D会場11:00-11:30 |
| LL7 | G.V. IYENGAR (<i>Biomineral Sci., USA; NIST/SRMP, UAS</i>) | D会場10:30-11:00 |
| LL8 | A.E. PILLAT (<i>Dept. of Chem., Center for App. Chem., Univ. of Witwatersrand,
SOUTH AFRICA</i>) | C会場13:50-14:20 |
| LL9 | F. AMBE (<i>Inst. Phys. Chem. Rres. (RIKEN), JAPAN</i>) | C会場17:10-17:40 |

プログラム

一般講演 20 分 (講演 15 分 / 討論 5 分)

特別講演 40 分 (講演 35 分 / 討論 5 分)

○印は連名の場合の登壇者

10月6日(月)

一般講演

A会場

<アイソトープ化学>

座長 葉袋佳孝 (09:20~10:40)

JA01 溶媒抽出法による混合溶媒(メタノール/水およびDMSO/水)中のAm³⁺-Cl⁻の相互作用の研究

○菅沼英夫・中村光弘・大森 巍(静岡大理)

佐藤伊佐務(東北大金研)

JA02 溶媒抽出法による混合溶媒(メタノール/水)中のEu³⁺-FおよびEu³⁺-Clの相互作用の研究

○有坂 真・中村光弘・菅沼英夫・大森 巍(静岡大理)

佐藤伊佐務(東北大金研)

JA03 テクネチウム錯体のTPACによるイオン対抽出に及ぼす3,5-ジクロロフェノールの影響

○大森 巍・宮入美和・菅沼英夫(静岡大理)

JA04 ヘキサキス(チオウレア)レニウム(Ⅲ)イオンの加水分解反応(2)

○湯浅真彦・菅沼英夫・大森 巍(静岡大理)

<標識・放射化分析>

座長 大崎 進 (10:40~12:00)

JA05 PIXE分析法によるマウス肝臓中の微量元素の定量

○矢永誠人・岩間基訓・野口基子・大森 巍(静岡大理)

二ツ川章二(RI協会NMCC)

世良耕一朗(岩手医大サイクロ)

JA06 生体微量元素の各種血漿蛋白質への結合に関する研究

○外角直樹・遠藤和豊(昭和薬大)

蛭沼利江子・榎本秀一・安部静子・安部文敏(理研)

JA07 機器中性子放射化分析法による環境標準試料「ヒト尿」の多元素同時定量

○坂本征士郎・鈴木章悟・岡田往子・平井昭司(武蔵工大)

JA08 中性子放射化分析法による玄米および尿試料中の微量元素の定量

○滝口幸次・吉岡潤江・長谷川紈彦(静岡大理)

黄金旺(台湾中原大化)

戸村健児(立教大原研)

<昼 休 み> (12:00~13:00)

<若手の会総会:学生会館(熊大生協北地区食堂)> (12:00~13:00)

<特別講演:C会場> (13:00~13:40)

<放射化分析>

座長 佐藤兼章 (13:50~14:50)

JA09 加速器利用によるRI標識有機試薬の合成と分離精製

○鹿野弘二(NTT光エレ研)

榎本和義(高エネルギー加速器研究機構)

大槻 勤(東北大核理研)

JA10 中性子即発γ線分析における中性子散乱等によるマトリックス効果

○松江秀明・米沢伸四郎(原研東海)

JA11 k0法による中性子放射化分析の基礎検討

○米沢伸四郎・Ruska Prima Putra・松江秀明(原研東海)

黒沢達也(放振協)

B会場

<核反応>

座長 今村嶺雄 (09:20~10:40)

- JB01 252Cf自発核分裂及び233,235U熱中性子核分裂の質量-運動エネルギーの2次元解析
○横山明彦・井上貴和・高宮幸一・斎藤 直・馬場 宏(阪大院理)
- JB02 高エネルギー重イオンビームによる197Auの破碎反応と運動量移行
○森本真哉・荒木宏一・真田 潤・横山昭彦・斎藤 直・馬場 宏(阪大理)
木原洋子・室山俊浩・篠原 厚(名大理)
大久保嘉高(理研)
柴田貞夫(放医研)
- JB03 中高エネルギー領域における重イオン誘起核分裂の様相
○荒木宏一・真田 潤・森本真哉・横山昭彦・斎藤 直・馬場 宏(阪大院理)
大久保嘉高(京大炉)
小林義男(理研)
- JB04 14MeV 中性子によるアクチニド元素の核分裂の研究
○真田 潤・荒木宏一・森本真哉・井上貴和・高宮幸一・横山昭彦・高橋成人・馬場 宏
(阪大院理)
- JB05 (欠番)

<メスbauer・ミュオン化学>

座長 松尾基之 (11:00~12:00)

- JB06 (FexZn1-x)PS3-アミン類層間化合物のメスbauerアースペクトル
酒井 宏・○山崎隆志・町田信也・重松利彦(甲南大理)
中島 覚(広島大RI)
- JB07 ネプツニル(VI)化合物の合成と237Npメスbauerアースペクトル
○斎藤貴史・王 軍虎・北沢孝史・高橋 正・竹田満洲雄(東邦大理)
中田正美・中本忠宏・正木信行・山下利之・佐伯正克(原研)
- JB08 エルビウム(III)-β-ジケトン錯体の166Erメスbauerアースペクトル
○王 軍虎・高橋 正・竹田満洲雄(東邦大理)

<昼 休 み> (12:00~13:00)

<若手の会総会:学生会館(熊大生協北地区食堂)> (12:00~13:00)

<特別講演:C会場> (13:00~13:40)

<溶液化学>

座長 遠藤和豊 (13:50~14:50)

- JB09 放射化学的手法を用いた金属フラーレンにおける各種カラムでの溶離挙動
○秋山和彦・末木啓介・菊池耕一・中原弘道(都立大理)
赤坂 健(新潟大院自然)
- JB10 EFFECTS OF THE H₂O₂ AND H⁺ CONCENTRATIONS ON THE SOLVENT EXTRACTION OF
RADIOIODINE AND THE BACK EXTRACTION BEHAVIOR
○M. S. SULTANA, A. MITO, N. TAKAHASHI, H. BABA (Grad. School of Sci., Osaka Unive.)
- JB11 トリチウム水中でβ線によって生成するヒドロキシルラジカルの茶カテキンによる消去反応に
ついてー固相スピントラッピング法の適用ー
○吉岡潤江・黒寄 拓(静岡大理)
吉岡 寿(静岡県立大環境)

C会場

<環境放射能>

座長 小橋浅哉 (09:20~10:40)

- JC01 降下じん埃中の粒子状核分裂性物質の中性子誘導フィッシュントラック
○佐藤兼章・野口正安・真田哲也・佐藤昭二(日本分析センター)
橋本哲夫・岡田建紀(新潟大学理)
- JC02 大気中の10Be・7Beの生成速度と降下速度
○永井尚生・小林貴之(日大文理)
- JC03 主リング盛土中の環境放射能の測定
○沼尻正晴・鈴木健訓・沖 雄一・三浦太一・近藤健次郎(高エネ研)

JC04 加速器質量分析法を用いた堆積物中の ^{10}Be 濃度測定

○小林貴之・永井尚生（日大文理）
村山雅史（北大院地環研）
吉田邦夫（東大博物）
今村峯雄（歴博）
羽鳥 聡・小林紘一（東大原セ）

<環境放射能>

座長 永井尚生 (10:40~11:40)

JC05 極低レベル γ 線測定による石筍の非破壊年代測定の試み

○小村和久・井上睦夫・村田祥全・山本政儀（金沢大理LLRL）

JC06 紙類に含まれる放射能

小橋浅哉（東大院理）

JC07 レーザー光による共鳴イオン化質量分析法を用いたTcとPuの測定

○高橋成人（阪大院理）

Nicole Erdmann, Hans-Ulrich Hasse, Nobert Trautmann, Achim-Marcus Waldek (Universitaet Mainz)

JC08 (欠番)

<昼 休 み> (12:00~13:00)

<若手の会総会：工学研究機器センター2階セミナー室> (12:00~13:00)

C会場

特別講演

座長 的場 優 (13:00~13:40)

LLJ 核融合炉開発における放射化学の役割

奥野健二（静岡大理付属放射化学研究施設）

一般講演

<ルミネッセンス・教育>

座長 菅沼英夫 (13:50~15:10)

JC09 石英粒子の天然蓄積熱ルミネッセンスに対する光の影響

○須貝紀之・杉山直弥・橋本哲夫（新潟大理）

JC10 低温照射で石英中に生成する水素ラジカルとアルミセンター

片山 肇・橋本哲夫・須貝紀之・西山笑子（新潟大理）
長谷博友（京大炉）

JC11 長石からの幾つかの放射線誘起ルミネッセンス特性

○坂上央存・藤田博喜・橋本哲夫（新潟大理）

JC12 放射化学教育を目的とした液体シンチレーションカウンタによるカリウム-40の測定

○小川幸次・斎藤充平（北里大医療衛生）
野崎 正（北里大衛生）

<分 科 会> (15:20~17:10)

A会場 核化学分科会

B会場 原子核プローブの化学分科会

D会場 放射化分析分科会

<合同歓迎会> (17:30~19:00)

討論会会場周辺

若手の会シンポジウム 10月5日（日）(13:00~17:00) A会場

α 放射体・環境放射能研究懇談会 10月5日（日）(16:00~20:00) B会場