

第 3 6 回放射化学討論会

講演発表

○印は連名の場合の口頭発表者
講演時間 20 分 (講演 15 分、討論 5 分)

1 0 月 2 6 日 (月)

特別講演会場 (理・工教室棟 204 講義室)

座長 梅沢 弘 一 (13:00-13:45)

1 I 01 Frontiers in Nuclear and Chemical Studies of the Uppermost
Elements in the Periodic Table
(LBL, USA) D.C. Hoffman

座長 中 原 弘 道 (13:45-14:30)

1 I 02 素粒子物理のフロンティア
(都立大理) 広瀬立成

A 会場 (国際交流会館中会議室)

[核壊変]

座長 斎 藤 直 (9:50-10:50)

- 1 A 01 $^{97, 98}\text{Tc}$ の半減期について (4)
(北里大衛生・都立大理・東大核研・電通大) ○小林貴之・
末木啓介・海老原充・中原弘道・今村峯雄・増田彰正
- 1 A 02 カリホルニウム-245の崩壊特性
(原研) ○間柄正明・篠原伸夫・塚田和明・大島真澄・市川進一
- 1 A 03 ^{186}Hg 、 ^{188}Hg 、 ^{190}Hg のアルファ壊変率
(オークリッチ国立研究所・原研・UNISORオークリッチ・
テネシー大学) K. S. Toth・○初川雄一・P. F. Mantica・
Y. A. Akovali・C.R. Bingham・H. K. Carter

[核反応Ⅰ]

座長 工藤久昭 (11:00-12:00)

- 1 A 04 アクチノイドの陽子誘起核分裂における分裂片の極端な質量分割(2)
(原研・都立大理・東北大核理研)○塚田和明・篠原伸夫・
間柄正明・市川進一・永目諭一郎・末木啓介・谷川勝至・
西中一朗・中原弘道・大槻勤
- 1 A 05 ^{235}U および ^{233}U の熱中性子誘起核分裂
(阪大理・京大炉)宮内貴宏・矢野大作・○斎藤直・高橋成人・
横山明彦・馬場宏・中込良廣・玉井忠治
- 1 A 06 $^{238}\text{U}+p$ 系の核分裂機構の研究(II)
(農工大工・阪大理)○森茂久・宮内貴宏・横山明彦・馬場宏

< 昼休み > (12:00-13:00)

< 特別講演 > (13:00-14:30)

[核反応Ⅱ]

座長 篠原厚 (14:40-15:40)

- 1 A 07 ^{252}Cf 自発核分裂におけるヨウ素同位体の核異性体生成比の測定
(新潟大工・新潟大理)○小田美奈子・工藤久昭・橋本哲夫
- 1 A 08 $^{232}\text{Th}+p$ における核分裂生成物の核異性体生成比の測定 I
(新潟大理・東北大サイクロ)○斎藤大輔・古越靖武・工藤久昭・
橋本哲夫・古川雅昭・山内道夫・砂押仁・篠塚勉・藤岡学
- 1 A 09 複合核 ^{210}Po の分裂機構におよぼす角運動量の影響
(都立大理・北里大衛生・原研・東大核研)○谷川勝至・
宮本真哉・西中一朗・末木啓介・中原弘道・小林貴之・
塚田和明・野村亨

[核反応Ⅲ]

座長 永目諭一郎 (15:40-16:40)

- 1 A 10 Ir-composite system における対称質量分割
(阪大理・理研・名大理)○渡辺誠也・竹迫和浩・斎藤直・
馬場宏・大久保嘉高・篠原厚・谷口勇仁・古川路明
- 1 A 11 7 MeV/u ^{58}Ni 入射粒子による $^{63,65}\text{Cu}$ 、 ^{103}Rh との核反応
(阪大理・名大理・理研)○桐生大・斎藤直・横山明彦・馬場宏・
谷口勇仁・大久保嘉高

- 1 A 12 金の中間エネルギー ^{14}N 、 ^{15}N 及び ^{40}Ar ビーム照射による核反応生成物
(名大理・愛知医大・理研・阪大理・東大核研)○倉知淳史・
谷口勇仁・篠原厚・古川路明・小島貞男・大久保嘉高・
安部文敏・竹迫和浩・斎藤直・柴田誠一

[核反応Ⅳ]

座 長 大 槻 勤 (16:50-18:10)

- 1 A 13 V、Cu、Nb及びIの中間エネルギー重イオン核反応-運動量移行の入射
粒子・エネルギー依存性-
(名大理・愛知医大・理研・阪大理・東大核研)○谷口勇仁・
倉知淳史・篠原厚・古川路明・小島貞男・大久保嘉高・
安部文敏・竹迫和浩・斎藤直・柴田誠一
- 1 A 14 ^{14}N 、 ^{15}N 、 ^{40}Ar 入射粒子による標的中重核の核破碎反応
(阪大理・理研・名大理)○竹迫和浩・斎藤直・舛分宏昌・
横山明彦・馬場宏・大久保嘉高・篠原厚・古川路明
- 1 A 15 高エネルギー重陽子の中重核に対する核破碎反応断面積
(高エネ研)○沼尻正晴・三浦太一・沖雄一・鈴木健訓・
近藤健次郎・家入正治・田中万博・高崎稔
- 1 A 16 軽核領域の π^{\pm} 放出光核反応
(金沢大理・東大核研・名大理・追手門学院大経)○大浦泰嗣・
川口浩一・坂本浩・S. R. サーカー・柴田誠一・古川路明・
藤原一郎

<核化学分科会 (19:00-)>

B 会 場 (国際交流会館大会議室)

[メスバウアー化学Ⅰ]

座 長 村 松 久 和 (9:50-10:50)

- 1 B 01 混合原子価三核鉄錯体のメスバウアー分光法による原子価状態の研究
(都立大理)○中本忠宏・川田知・北川進・片田元己・佐野博敏
- 1 B 02 二核鉄二価三価混合原子価錯体の合成と性質
(九大理)前田米蔵・○谷川裕一・高島良正
- 1 B 03 長鎖アルキル基をもつ二核フェロセン誘導体の混合原子価状態(Ⅱ)
(広島大理)中島覚・○上木裕・酒井宏

[メスbauer化学II]

座長 前田 米蔵 (11:00-12:00)

- 1 B 04 鉄(III)-トリメチレンジアミン四酢酸錯体の結晶構造とメスbauer
ースペクトル
(東邦大理)○北澤孝史・高橋正・竹田満洲雄
- 1 B 05 合成Fe置換フッ素雲母のメスbauerアスペクトル
(信州大教育・信州大工)○村松久和・山田清彦・北島囿夫
- 1 B 06 ゼオライト細孔中のo-フェナントロリン鉄(II)錯体のメスbauer-
分光法によるキャラクタリゼーション
(東大理)○梅村泰史・葉袋佳孝・富永健

< 昼休み > (12:00-13:00)

< 特別講演 > (13:00-14:30)

[メスbauer化学III]

座長 酒井 宏 (14:40-15:40)

- 1 B 07 赤外線を透過するアルミン酸塩ガラスおよびガリウム酸塩ガラスの結
晶化
(九大理)西田哲明・○久富木志郎・高島良正
- 1 B 08 タングステン酸塩ガラスの局所構造と放射線照射効果
(九大理・都立大RI)西田哲明・○新頭英俊・片田元己・
磯部敏幸・高島良正
- 1 B 09 代表的なイオンガラス - 硝酸塩ガラス - の局所構造と γ 線照射効果
(九大理)西田哲明・○大原雅和・高島良正

[メスbauer化学IV]

座長 松尾 基之 (15:40-16:40)

- 1 B 10 ^{57}Fe メスbauer研究からみたホスホネート配位子とカルボニル配位
子
(広島大理)○中沢浩・西原康師・三吉克彦・酒井宏
- 1 B 11 Hypervalentなヨウ素-酸素結合を持つ有機ヨウ素化合物の ^{127}I メスバ
ウアースペクトル
(東邦大理・東大原セ)○高橋正・竹田満洲雄・澤幡浩之・
伊藤泰男
- 1 B 12 五座配位子をもつスピネロスオーバー鉄(III)錯体のメスbauer-
ースペクトルと化学構造
(九大理・東北大理)○前田米蔵・野田陽介・大塩寛紀・
高島良正・松本尚英

[メスバウアー化学V]

座長 高橋 正 (16:50-18:10)

- 1 B 13 フェロセンを含む化合物のメスバウアー分光法による研究
(東理大理) ○楠戸伊緒里・杉山美紀・佐藤春雄
- 1 B 14 フェロセン誘導体における分子運動の温度依存性
(筑波大化) 荘司準
- 1 B 15 $[A_{1/2}n^{n+}(Me_3Sn)_3Fe(CN)_6]_{\infty}$ のメスバウアー分光法を用いた格子力学的研究
(都立大理) ○藤田道朝・片田元己・山田均・川田知・北川進・佐野博敏
- 1 B 16 幾つかのビスマス系超伝導体および半導体の ^{119}Sn -メスバウアー効果 - 超伝導発現温度付近におけるフォノンの異常挙動に関連して -
(九大理・都立大RI・福岡大工) ○西田哲明・片田元己・松本泰國・高島良正

<ホットアトム・原子核プローブの化学分科会 (19:00-)>

C 会場 (理・工教室棟204講義室)

[環境放射能I]

座長 三浦太一 (9:50-10:50)

- 1 C 01 ラジウム同位体測定による台湾産北投石の研究
(昭葉大薬・大妻女子大・都立大理) 國安聡・春田博司・
蛭沼利江子・本田智香子・○遠藤和豊・堀内公子・中原弘道
- 1 C 02 本邦放射能泉のラジウムの挙動
(青山学院大理工・原研) ○矢板毅・木村幹
- 1 C 03 地下水中のラドン含有量の変動
(静大理) ○長谷川罔彦・菅沼英夫・吉岡潤江・波多江一八郎

[環境放射能II]

座長 堀内公子 (11:00-12:00)

- 1 C 04 気相におけるラドン娘核種の中性化過程の研究
(高エネ研) ○三浦太一・沖雄一・沼尻正晴・鈴木健訓・
近藤健次郎
- 1 C 05 雲仙普賢岳周辺における降下ばいじん中の ^{210}Po の分析
(九環協) ○芦川信雄・仲島賢・平井英治・岡村正紀・松岡信明

- 1 C 06 松葉中における、 $^{210}\text{Pb} \rightarrow ^{210}\text{Bi} \rightarrow ^{210}\text{Po}$ 非平衡
(九大理・九大RIセ) ○千々岩崇仁・杉原真司・大崎進・高島良正

< 昼休み > (12:00-13:00)
< 特別講演 > (13:00-14:30)

[環境放射能Ⅲ]

座長 菅沼英夫 (14:40-15:40)

- 1 C 07 宇宙線生成核種 ^7Be の降下量と経年変化
(愛知医大・名大理) ○小島貞男・小田寛貴・古川路明
- 1 C 08 ^7Be 等の天然核種を用いた放射性降下物の分布と挙動の解析
(宮城県原子力セ・古川中学校・東大理) ○石川陽一・小川武・
村上弘・斉藤忠男・関根勉・吉原賢二
- 1 C 09 潮間帯堆積物へのNp, Pu, Amの沈積挙動
(金沢大LLRL) ○桑原潤・山本政儀・小村和久・上野馨

[環境放射能Ⅳ]

座長 小村和久 (15:40-16:40)

- 1 C 10 雨水中のトリチウム濃度と降雨時の大気中水蒸気状トリチウム濃度の
相関
(九大工・九大理・九環協) ○岡井富雄・百島則幸・高島良正・
田籠久也・平井英治・松岡信明
- 1 C 11 土岐地区における環境トリチウム
(九大理・九大工・核融合研) 百島則幸・岡井富雄・
○ポピー・インタンチャハヤ・川村秀久・高島良正・大林治夫・
佐久間洋一
- 1 C 12 トリチウム汚染物質からのトリチウムの脱離挙動
(原研) 平林孝圀・○佐伯正克・Peng Ji Zhao・Ki Woung Sung

[環境放射能Ⅴ]

座長 葉袋佳孝 (16:50-18:10)

- 1 C 13 メタノール液シン法による現代大気 ^{14}C 濃度変動の追跡(3)
(阪府大付研) ○柴田せつ子・川野瑛子
- 1 C 14 液体シンチレーション計測による環境試料中の ^{14}C 濃度測定法
(九大理) ○川村秀久・百島則幸・高島良正
- 1 C 15 地下室測定室建設を目的とするトンネル内での宇宙線寄与の測定と尾
小屋計画(金沢大LLRL) ○小村和久・渡口輝・山本政儀・上野馨

- 1 C 16 オクロ天然原子炉の地球化学的・同位体化学的特徴
(都立大理・フランス原子力庁・理研・電通大自然科学)
○日高洋・P. Holliger・高橋和也・増田彰正

<放射化分析分科会 (19:00-)>

1 0 月 2 7 日 (火)

特別講演会場 (理・工教室棟 2 0 4 講義室)

座 長 松 浦 辰 男 (13:40-14:25)

- 2 I 01 The Development of Radiochemistry in Europe
(Cambridge, U.K.) A. G. Maddock

座 長 佐 野 博 敏 (14:25-15:10)

- 2 I 02 Exponential Growth and Decay in Radiochemical Education
(Rutgers, The State Univ. of New Jersey, USA) R.H. Herber

A 会場 (国際交流会館中会議室)

[核反応V]

座 長 柴 田 誠 一 (9:20-10:40)

- 2 A 01 巨大共鳴領域での $^{238}\text{U} + \text{p}$ 系の核分裂
(阪大理・原研) 二谷訓子・山口貴行・矢野大作・○高橋成人・
横山明彦・斎藤直・馬場宏・篠原伸夫
- 2 A 02 ^{238}U の光核分裂
(阪大理・東北大核理研) ○山口貴行・高橋成人・横山明彦・
矢野大作・馬場宏・榎本和義・大槻勤
- 2 A 03 ^{233}U , ^{235}U , $^{238}\text{U} + ^{12}\text{C}$ 系における重イオン核分裂の質量分布
(阪大理・原研) ○横山明彦・杜明進・矢野大作・高橋成人・
斎藤直・馬場宏・二谷訓子・馬場澄子・畑健太郎
- 2 A 04 $^{209}\text{Bi} + ^{16}\text{O}$ 反応系における核分裂
(都立大理・原研・東北大核理研) ○西中一朗・谷川勝至・
宮本真哉・末木啓介・中原弘道・塚田和明・間柄正明・
篠原伸夫・永目諭一郎・池添博・工藤博司・大槻勤

[核反応VI]

座長 横山明彦 (10:40-12:00)

- 2 A 05 微分飛程法による $^{208}\text{Bi} + ^{16}\text{O}$ 反応系の核分裂生成物の運動エネルギー
(都立大理・原研) ○末木啓介・西中一朗・谷川勝至・塚田和明・
中原弘道
- 2 A 06 軽アクチノイド中性子欠損核の核分裂の同位体分布
(都立大理・原研・北里大) ○西中一朗・谷川勝至・末木啓介・
中原弘道・塚田和明・間柄正明・篠原伸夫・永目諭一郎・
工藤博司・小林貴之
- 2 A 07 scission point model による核分裂収率曲線の考察
(都立大理・ドレスデン工科大学) ○末木啓介・中原弘道・
H. Maerten
- 2 A 08 シンチレータを用いた軽粒子弁別とその応用
(東北大核理研・原研・都立大理) ○大槻勤・榊本和義・
笠木治郎太・菅原真澄・池添博・永目諭一郎・篠原伸夫・
間柄正明・塚田和明・西中一朗・谷川勝至・末木啓介

< 昼休み > (12:00-13:00)
研究連絡委員会 (理学部大会議室)
若手研究者の会総会 (理・工教室棟103講義室)
< ポスターセッション > (13:00-13:40)
< 特別講演 > (13:40-15:10)

[加速器利用I]

座長 今村峯雄 (15:20-16:20)

- 2 A 09 加速器放射化物中の ^{55}Fe 生成量の評価
(高エネ研) ○沖雄一・沼尻正晴・三浦太一・鈴木健訓・
近藤健次郎
- 2 A 10 放射化物の加工に伴う放射性エアロゾルの挙動(III)
(高エネ研) ○沖雄一・沼尻正晴・鈴木健訓・三浦太一・
神田征夫・近藤健次郎
- 2 A 11 粘土鉱物中の重元素の深度分布
(理研・島根大理・東北大理) ○荒谷美智・矢野倉実・田崎和江・
海保邦夫

[加速器利用II]

座長 沖雄一 (16:20-17:20)

- 2 A 12 自己支持型薄膜中の全元素キャラクタリゼーション
(東大核研・理研) ○菅井勲・小柳津満広・荒谷美智・矢野倉実
- 2 A 13 散乱および核反応併用による非破壊水素同位体比測定法
(理研) ○矢野倉実・荒谷美智・岡田照彦
- 2 A 14 電子リング真空チェンバー用材料表面の軽元素の定量
(理研・高工研) ○金澤健一、矢野倉実、荒谷美智

[核反応Ⅶ]

座 長 矢 野 倉 実 (17:20-18:00)

- 2 A 15 0.1 M-LiOD溶液の定電流電解における陽子測定及び熱測定
(都立大理) ○宮本真哉・末木啓介・藤井政俊・白川利昭・
中原弘道
- 2 A 16 重水素吸蔵チタン中d-d核反応及び後続核反応における反跳陽子スペクトル
(東北大大理・東北大サイクロ・東北大核理研) ○平賀正之・
吉原賢二・石井慶造・笠木治郎太

< 懇親会 (18:20-20:00) 国際交流会館1階レストラン >

B 会場 (国際交流会館大会議室)

[メスバウアー化学Ⅵ]

座 長 西 田 哲 明 (9:20-10:40)

- 2 B 01 メスバウアー分光法による鉄釉薬の研究
(昭葉大薬・都立大理・原研) 遠藤和豊・○春田博司・佐藤琢真・
片田元己・中田正美・荒殿保幸・佐伯正克
- 2 B 02 メスバウアー分光法による水田土壌中の鉄の状態分析とその垂直分布
(東大教養・東工大総合理工) ○松尾基之・小林孝彰・立川博一
- 2 B 03 $Fe_{3-x}Ru_xSi$ の磁性とメスバウアー効果
(理研・電通大) ○小林義男・浅井吉蔵・岡田卓也・安部文敏
- 2 B 04 ^{99}Rh を線源核種とする $YBa_2Cu_3O_{7-x}$ 中 ^{99}Ru のガンマ線摂動角相関と発光メスバウアー分光
(理研・東邦大・電通大・核研) ○大久保嘉高・小林義男・
安部静子・岡田卓也・安部文敏・原沢薫・竹田満州雄・
浅井吉蔵・柴田誠一

[メスバウアー化学Ⅶ・中間子化学]

座 長 佐 藤 春 雄 (10:40-12:00)

- 2 B 05 同時計数メスバウアー分光法のリストモード化
 (原研) ○中田正美・荒殿保幸・佐川千明・佐伯正克
- 2 B 06 2結晶型高分解能蛍光X線分析装置によるLX線の微細構造の検討
 (東北大理・静岡大理) ○飯原順次・大森巍・吉原賢二
- 2 B 07 重水素化ヘキサアンミンコバルト(III)臭化物中の正ミュオンの挙動の研究
 (東大理) ○荷月秀明・久保謙哉・塩保典子・富永健・西山樟生・永嶺謙忠
- 2 B 08 有機化合物におけるパイオニックX線の強度パターン
 (名大理・阪大理・京大工・高エ研) ○室山俊浩・篠原厚・谷口勇仁・新帯淳一郎・古川路明・斎藤直・竹迫和浩・今西信嗣・三浦太一・吉村善男

< 昼休み > (12:00-13:00)
 研究連絡委員会 (理学部大会議室)
 若手研究者の会総会 (理・工教室棟103講義室)

< ポスターセッション > (13:00-13:40)
 < 特別講演 > (13:40-15:10)

[ポジトロニウム化学・放射線損傷]

座長 遠藤和豊 (15:20-16:40)

- 2 B 09 エポキシ樹脂の吸水率と陽電子消滅
 (高エネ研・東大原総センター・住友筑波研) ○鈴木健訓・沖雄一・沼尻正晴・三浦太一・近藤健次郎・伊藤泰男・塩見浩
- 2 B 10 多孔質シリコンの陽電子消滅法による研究
 (理研・東京電機大・東京学芸大) ○井田勝之・伊東芳子・木下彬・村上英興
- 2 B 11 DNA放射線損傷に対する緑茶抽出物の防御効果(その2)
 (静大理・静岡県大環境) ○赤井五郎・吉岡潤江・吉永光一・吉岡寿・長谷川罔彦
- 2 B 12 化学気相析出法原料:タリウムとランタノイドを含む β -ジケトンキレート
 の合成とCVD利用
 (金沢大学医技短・東北大金研) ○天野良平・塩川佳伸

[熱蛍光]

座長 鈴木健訓 (16:40-18:00)

- 2 B 13 高感度二波長(青・赤色)域熱蛍光測定装置の開発
 (新潟大理) 橋本哲夫・○白井更知・坂上修栄

- 2 B 14 熱処理に伴う天然石英粒子中のTL関連の捕捉電子の励起エネルギー準位と発光スペクトル変化
(新潟大理) 橋本哲夫・〇市野正廣・坂上修栄・白井更知
- 2 B 15 天然石英粒子からの赤・青TLの繰り返し昇温法による速度論的パラメータ測定について
(新潟大理) 〇橋本哲夫・小嶋素志・尾島哲
- 2 B 16 中性子放射化アクチボグラフ観察におけるイメージングプレートの利用 - 花崗岩薄片中における元素分布といくつかの蛍光特性との関連について -
(新潟大理) 橋本哲夫・〇坂上修栄・市野正廣・白井更知

< 懇親会 (18:20-20:00) 国際交流会館 1階 レストラン >

C 会場 (理・工教室棟 204 講義室)

[地中挙動 I]

座 長 工 藤 博 司 (9:20-10:40)

- 2 C 01 土壌における放射性核種の移動の比較
(九大RIセ・九大理) 〇杉原真司・大崎進・高島良正
- 2 C 02 水酸化炭酸ネオジムの結晶合成及び溶解度の測定
(動燃東海) 〇澁谷早苗・吉川英樹・油井三和
- 2 C 03 混合溶媒 (水/DMSO) 中における Eu^{3+} と F^- および Cl^- との間の生成定数に関する研究
(静岡大理・東北大金研) 〇菅沼英夫・水野正樹・佐藤伊佐務・大森巍
- 2 C 04 フミン酸とアメリシウム (III)・ユーロピウム (III) との錯形成に対する pH およびイオン強度の影響
(東大理・原研東海) 〇高橋嘉夫・葉袋佳孝・目黒義弘・豊田栄・富永健

[地中挙動 II・放射性元素 I]

座 長 高 橋 成 人 (10:40-12:00)

- 2 C 05 テクネチウムとフミン酸の反応
(東北大理・ミュンヘン工科大学) 〇関根勉・渡辺晃・吉原賢二・J. I. Kim
- 2 C 06 ユーロピウム (III) ポリアクリル酸錯体の生成定数にみられる分子量・pH等に対する依存性
(東大理・原研東海) 〇葉袋佳孝・桑原孔一朗・目黒義弘・富永健

- 2 C 07 過テクネチウム酸イオンの陰イオン交換樹脂への吸着挙動
 (静大理) ○川崎幹生・大森巍・長谷川罔彦
- 2 C 08 過テクネチウム酸のTBPによる過塩素酸溶液からの抽出機構
 (静岡大理・東北大理) ○鈴木康之・田所瑞穂・吉原賢二・
 菅沼英夫・大森巍

< 昼休み > (12:00-13:00)
 研究連絡委員会 (理学部大会議室)
 若手研究者の会総会 (理・工教室棟103講義室)

< ポスターセッション > (13:00-13:40)
 < 特別講演 > (13:40-15:10)

[放射性元素Ⅱ]

座 長 木 村 幹 (15:20-16:20)

- 2 C 09 ヨウ素及びアスタチンの溶媒抽出挙動について
 (阪大理) ○矢野大作・高橋成人・民谷由紀子・馬場宏
- 2 C 10 レーザー光音響分光法による微量テクネチウム等の測定法の開発
 (東北大理) ○藤田勉・平賀正之・関根勉・吉原賢二
- 2 C 11 チオ尿素誘導体のテクネチウム錯体と4,6-ジメチルピリミジン-2-チオンとの反応
 (原研・静岡大理・東北大理) ○橋本和幸・工藤博司・大森巍・
 吉原賢二

[放射化分析Ⅰ]

座 長 鈴 木 章 悟 (16:20-17:00)

- 2 C 12 JRR-3M即発ガンマ線分析装置による各種物質中のホウ素の定量
 (原研・東大原総セ) ○米沢伸四郎・Abdul Khalic HAJI WOOD・
 星三千男・伊藤泰男
- 2 C 13 古代ガラスの原子炉中性子即発ガンマ線分析
 (慶大文・原研東海・東大理・東大原総セ) ○富沢威・
 米沢伸四郎・葉袋佳孝・星三千男・伊藤泰男・富永健

[放射化分析Ⅱ]

座 長 榎 本 和 義 (17:00-18:00)

- 2 C 14 Geガンマ線スペクトロメトリ: エネルギー較正法の再構築
 (熊大工) ○西村一久・岸川俊明
- 2 C 15 ロボットによる放射化分析用試料交換システムの開発
 (武蔵工大原研) ○鈴木章悟・岡田往子・平井昭司

- 2 C 16 放射性トレーサを用いた表面分析用標準試料の作成
(NTT境界研) ○米沢洋樹・重松俊男・鹿野弘二

< 懇親会 (18:20-20:00) 国際交流会館 1階 レストラン >

P 会場 (理・工教室棟 204 講義室前)

[ポスターセッション] (13:00-13:40)

- 2 P 01 光誘起によりスピン状態転移する鉄(III)錯体の合成の試み
(九大理) 前田米蔵・○速水真也・高島良正
- 2 P 02 ^{112m}In のM3壊変のK conversion coefficient
(東北大理) ○鍛治東海・吉原賢二
- 2 P 03 Hypervalentな有機アンチモン(V)錯体における ^{121}Sb メスバウアー四極子結合定数の加減性について
(東邦大理・広島大理) ○竹田満洲雄・高橋正・柳田保雄・小島聡志・中田尚志・秋葉欣哉
- 2 P 04 アルコールにおける負パイ中間子転移過程
(名大理・阪大理・京大工・高工研) ○篠原厚・室山俊浩・谷口勇仁・倉知淳史・重兼史尚・新帯淳一朗・古川路明・斎藤直・横山明彦・竹迫和浩・渡辺誠也・今西信嗣・三浦太一・吉村善男
- 2 P 05 A Study of $^{51}\text{Cr(VI)}$ Reduction in Nitric Acid Solutions
(Univ. Autonoma de Zacatecas・Univ. Nacional Autonoma de Mexico・Univ. Estadual de Campinas) J.F.L. Rivera・C. Archundia・C.H. Collins・K.E. Collins
- 2 P 06 Radiation-Induced Isomerization of Thiourea into Ammonium Thiocyanate
(Univ. of Poona) H.J. Arnikar
- 2 P 07 Mixtures of reactive gases and ionic energy losses
(California State Univ.) T. Valencich
- 2 P 08 Tracer-Diffusion of Mn^{2+} ions in Gel Medium Containig Alkali Metal Chlorides
(Univ. of Poona) S.F. Patil

1 0 月 2 8 日 (水)

A 会場 (国際交流会館中会議室)

[マルチトレーサー I]

座 長 篠 原 信 夫 (9:20-10:20)

- 3 A 01 減圧加熱法によるマルチトレーサーの分離 - (2)
(理研) ○岩本正子・安部静子・大久保嘉高・小林義男・
矢野倉実・前田はるか・安部文敏
- 3 A 02 マルチトレーサーによる強酸性樹脂ナフィオンへの各種元素のイオン
交換吸着の研究II
(理研・放医研・原研・青学大理工) 安部静子・大久保嘉高・
岩本正子・小林義男・矢野倉実・前田はるか・安部文敏・
柴田貞夫・矢板毅・○番場文博・原川裕章・斎藤裕子・木村幹
- 3 A 03 マルチトレーサーを用いたフミン酸の錯生成能に関する研究
(東大理・理研・放医研) ○葉袋佳孝・高橋嘉夫・久保謙哉・
豊田栄・石橋美絵・安部静子・小林義男・大久保嘉高・
岩本正子・矢野倉実・前田はるか・柴田貞夫・竹松伸・
安部文敏・富永健

[マルチトレーサーII]

座 長 白 田 重 和 (10:20-11:20)

- 3 A 04 マルチトレーサーによる金属イオンの液体膜選択透過の研究 (1)
(理研) ○安部静子・田中茂男・小林義男・大久保嘉高・
岩本正子・前田はるか・矢野倉実・安部文敏
- 3 A 05 マルチトレーサーによる金属イオンの液体膜選択透過の研究 (2)
(理研) ○田中茂男・安部静子・小林義男・大久保嘉高・
岩本正子・前田はるか・矢野倉実・安部文敏
- 3 A 06 マルチトレーサーによるMR樹脂および繊維状活性炭への各種元素の塩
化物イオン溶液中での吸着挙動の研究
(放医研・理研) ○柴田貞夫・渡利一夫・野田豊・安部静子・
大久保嘉高・岩本正子・小林義男・矢野倉実・前田はるか・
安部文敏

[核宇宙化学]

座 長 日 高 洋 (11:30-12:10)

- 3 A 07 隕石中の宇宙線生成核種の生成率
(日大文理・東大核研・東大原セ) ○永井尚生・本田雅健・
今村峯雄・小林紘一
- 3 A 08 二次宇宙線による地表での核種生成と表面年代測定
(東大核研・日大文理) ○今村峯雄・柴田誠一・永井尚生

[放射線測定]

座長 末木啓介 (12:10-13:30)

- 3 A 09 シンチレータによる α 、 β (γ) 線及び中性子の同時測定
(原研) 白田重和
- 3 A 10 種々のシンチレータを用いた時間間隔解析法 (TIA法) による微量 α 放射
性核種検出特性の検討
(新潟大理) 橋本哲夫・○鷺尾秀樹・相原郁美
- 3 A 11 BG放射線評価: CsIサーベイメータの測定値の解析法
(熊大工) ○野口悟、岸川俊明
- 3 A 12 ポリアニリンフィルムを用いた放射線の測定
(高エネ研) ○近藤健次郎・沖雄一・沼尻正晴・三浦太一・
鈴木健訓

B 会場 (国際交流会館大会議室)

[ホットアトム化学 I]

座長 佐々木 研 一 (9:20-10:20)

- 3 B 01 テクネチウムニトリドコアを持つ β -ジケトン錯体の合成 (1) ^{99m}Tc
および $^{99}\text{Tc-acac}$ 錯体
(東北大理・静岡大理) A. Mutalib・関根勉・大森巍・○吉原賢二
- 3 B 02 テクネチウムニトリドコアを持つ β -ジケトン錯体の合成 (2) $^{99}\text{Tc-}$
dpm, bza, dbm錯体
(東北大理・静岡大理) ○A. Mutalib・関根勉・大森巍・吉原賢二
- 3 B 03 メタロセン反跳原子へのシクロデキストリンの包接効果-Tc等生成核反
応および核壊変におよぼす影響
(東北大理) ○松江秀明・関根勉・吉原賢二

[ホットアトム化学 II]

座長 関 根 勉 (10:20-11:40)

- 3 B 04 稀土錯体のホットアトム化学 (2) Yb(DPM)_3 におけるリテンションの
同位体効果
(立教大原研・立教大理・立教大一般) ○松浦辰男・石井織恵・
広田玲子・佐々木研一
- 3 B 05 無坦体 ^{125}Sb の還元挙動
(都立大理・静岡大理) ○篠塚一典・金山和義・吉岡潤江・大森巍・
長谷川閑彦
- 3 B 06 ベンズアニリドの位置選択的トリチウム化に対する置換基効果
(千葉大教養) ○大橋國雄・関高行

3 B 07 Diffusion of I^- Ions ($+I^{131}I$) in Near Surface Region of Molybdenum.

(University of Poona) ○ H. J. Arnikar, E. A. Daniels,
P. G. Reddi

[ホットアトム化学Ⅲ]

座長 酒井陽一 (11:40-13:20)

3 B 08 Oscillatory Annealing in Solid-State Hot-Atom Chemistry
- Does It Really Exist?

(Univ. of Freiburg) H. Muller

3 B 09 Influence of Medium on Stabilization of Recoil Atoms

(Hungarian Academy of Sciences) K. Berei

3 B 10 Competing processes and the collision spectrum

(California State Univ.) T. Valencich

3 B 11. Chemical Effects in X-ray Spectra following Electron Capture
or Internal Conversion: Comparison with X-ray Photoelectron
and X-ray Emission Spectra. Applications in Hot Atom Chemistry

(Univ. of London) D. S. Urch

3 B 12. Retention Studies following (n, γ) recoil in Alkali Metal
Antimonates

(Univ. of Poona) V. G. Dedgaonkar, A. H. Rashida

"Hot Atom Chemistry MINI-symposium" (14:00~16:00)

1. From Tracer Chemistry to Single Atom Chemistry

(Univ. Louis Pasteur, Strasbourg) J. P. Adloff

2. Hot Reactions in Space

(Research Center Juelich) K. Roessler

3. Pu-244, Supernova, and Hot Atom Chemistry

(Univ. of Nevada) P. K. Kuroda

C 会場 (理・工教室棟 204 講義室)

[放射化分析Ⅲ]

座長 戸村健児 (9:20-10:40)

3 C 01 荷電粒子放射化分析法によるホウ素が共存するシリコン単結晶中の極
微量炭素の定量

(NTT境界研) ○ 鹿野弘二・米沢洋樹・重松俊男

3 C 02 鉄鋼試料の陽子放射化分析

(東北大金研・東北大核理研) 長谷川大輔・○ 榎本和義・原光雄

- 3 C 03 光量子放射化による高純度材料中のフッ素の分析(2)
 (三菱マテリアル中研・東北大核理研) ○桜井宏行・竹谷実・
 佐山恭正・榊本和義・大槻勤
- 3 C 04 高純度ニオブ中の重元素の光量子放射化分析
 (阪府大付属研・阪大産研) ○朝野武美・佐藤祐二・福田久衛・
 北川通治・谷口良一・大熊重三・津守邦彦

[放射化分析Ⅳ]

座 長 海老原 充 (10:50-12:10)

- 3 C 05 原子炉速中性子を利用する放射化分析による鉄鋼標準試料中のけい素の定量
 (立教大原研・(株)ミクニ) ○戸村健児・戸室裕行
- 3 C 06 Determination of Aluminum by Chemical and Instrumental Neutron Activation Analysis in Biological Standard Reference Material and Human Brain Tissue.
 (Univ. of Nebraska-Lincoln) ○E.P. Rack, F. Roman
- 3 C 07 栃木県那須温泉を中心としたヒ素の存在度とその挙動
 (青学大理工) ○川見吏司・斎藤裕子・原川裕章・木村幹
- 3 C 08 ^{169}Yb 線源用 $^{168}\text{Yb}_2\text{O}_3$ 濃縮ターゲットの放射化分析
 (原研) ○渡辺智・上沖寛・石川勇・工藤博司

[放射化分析Ⅴ]

座 長 平 井 昭 司 (12:10-13:30)

- 3 C 09 中性子放射化分析および同位体希釈質量分析による岩石試料中のハロゲン元素の定量
 (都立大理・立教大原研・レーゲンスブルグ大) ○篠永妙子・
 海老原充・中原弘道・戸村健児・K.G. Heumann
- 3 C 10 海洋底岩石中の貴金属元素
 (青学大理工) ○石井俊一・斎藤裕子・原川裕章・木村幹
- 3 C 11 中性子放射化分析法による白金属元素の分析
 (都立大理) ○尾崎大真・海老原充・中原弘道
- 3 C 12 中性子放射化分析法による岩石試料中の微量Zr, Hfの定量
 (都立大理・原研) 箕輪はるか・○海老原充・中原弘道・
 米沢伸四郎

LIST OF PAPERS

presented at

THE 36th SYMPOSIUM ON RADIOCHEMISTRY

Organizer

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OCTOBER 26-28, 1992
FACULTY OF SCIENCE
TOKYO METROPOLITAN UNIVERSITY
HACHIOJI, TOKYO

Monday, October 26

PLENARY LECTURE(13:00-14:30)

- 1101 FRONTIERS IN NUCLEAR AND CHEMICAL STUDIES OF THE UPPERMOST ELEMENTS IN THE PERIODIC TABLE.
Darleane C. HOFFMAN, *Chemistry Department, University of California and Nuclear Science Division, Lawrence Berkeley Laboratory.*
- 1102 FRONTIERS OF ELEMENTARY PARTICLE PHYSICS.
Tachishige HIROSE, *Department of Physics, Tokyo Metropolitan University.*

LECTURE SESSION

[Nuclear Decay] (9:50-10:50)

- 1A01 HALF-LIFE OF TECHNETIUM 97,98(4).
Takayuki KOBAYASHI, *School of Hygienic Science, Kitasato Univ.*,
Keisuke SUEKI, Mitsuru EBIHARA, Hiromichi NAKAHARA, *Faculty of Science, Tokyo Metropolitan Univ.*,
Mineo IMAMURA, *Institute of Nuclear Study, Univ. of Tokyo*,
Akimasa MASUDA, *Univ. of Electro-communication.*
- 1A02 DECAY PROPERTY OF ^{245}Cf .
Masaki MAGARA, Nobuo SHINOHARA, Kazuaki TSUKADA, Masumi OSHIMA,
Shinichi ICHKAWA, *Japan Atomic Energy Research Institute.*
- 1A03 ALPHA-DECAY BRANCHES OF ^{186}Hg , ^{188}Hg , ^{190}Hg .
K.S. TOTH, Y.A. AKOVALI, *Oak Ridge National Laboratory*,
Yuichi HATSUKAWA, *Japan Atomic Energy Research Institute*,
P.F. MANTICA, H.K. CARTER, *UNISOR*,
C.R. BINGHAM, *University of Tennessee.*

[Nuclear Reaction 1](11:00-12:00)

- 1A04 EXTREMELY ASYMMETRIC MASS DIVISION IN PROTON-INDUCED FISSION OF ACTINIDES(2).
Kazuaki TSUKADA, Nobuo SHINOHARA, Masaki MAGARA, Yuichiro NAGAME, *Japan Atomic Energy Research Institute*,
Keisuke SUEKI, Ichiro NISHINAKA, Masaru TANIKAWA, Hiromichi NAKAHARA, *Faculty of Science, Tokyo Metropolitan University*,
Tsutomu OTSUKI, *Laboratory of Nuclear Science, Tohoku University.*
- 1A05 THERMAL-NEUTRON-INDUCED FISSION OF ^{235}U AND ^{233}U .
Takahiro MIYAUCHI, Daisaku YANO, Tadashi SAITO, Naruto TAKAHASHI,
Akihiko YOKOYAMA, Hiroshi BABA, *Faculty of Science, Osaka University*,
Yoshihiro NAKAGOME, Tadaharu TAMAI, *Research Reactor Institute, Kyoto University.*

- 1A06 STUDY ON FISSION MECHANISM OF PROTON INDUCED FISSION OF U-238 (II).
Shigehisa MORI, *Tokyo University of Agriculture and Technology*,
Noriko NITANI, Takahiro MIYAUCHI, Akihiko YOKOYAMA, Hiroshi BABA,
Faculty of Science, Osaka University.

(Lunch 12:00-13:00)
(Plenary Lecture 13:00-14:30)

[Nuclear Reaction 2](14:40-15:40)

- 1A07 MEASUREMENT OF ISOMERIC YIELD RATIOS OF IODINE ISOTOPES IN SPONTANEOUS FISSION OF ^{252}Cf .
Minako ODA, *Faculty of Engineering, Niigata University*,
Hisaaki KUDO, Tetsuo HASHIMOTO, *Faculty of Science, Niigata University*.
- 1A08 ISOMERIC YIELD RATIOS OF FISSION PRODUCTS IN $^{232}\text{Th}+p$ SYSTEM.
Daisuke SAITO, Hisaaki KUDO, Yasutake FURUKOSHI, Tetsuo HASHIMOTO, *Faculty of Science, Niigata University*,
Manabu FUJIOKA, Tsutomu SHINOZUKA, Hitoshi SUNAOSHI, Masaaki FURUKAWA, Michio YAMAUCHI, *Cyclotron Radioisotope Center, Tohoku University*.
- 1A09 INFLUENCE OF THE ANGULAR MOMENTUM ON THE FISSION PROCESS OF THE COMPOUND NUCLEUS ^{210}Po .
Masashi TANIKAWA, Shinya MIYAMOTO, Ichiro NISHINAKA, Keisuke SUEKI, Hiromichi NAKAHARA, *Faculty of Science, Tokyo Metropolitan University*,
Takayuki KOBAYASHI, *School of Hygienic Science, Kitasato University*,
Kazuaki TSUKADA, *Japan Atomic Energy Research Institute*,
Toru NOMURA, *Institute for Nuclear Study, The University of Tokyo*.

[Nuclear Reaction 3](15:40-16:40)

- 1A10 SYMMETRIC MASS DIVISION IN THE Ir-COMPOSITE SYSTEM.
Seiya WATANABE, Kazuhiro TAKESAKO, Tadashi SAITO, Hiroshi BABA, *Faculty of Science, Osaka University*,
Yoshitake OHKUBO, *The Institute of Physical and Chemical Research (RIKEN)*,
Atsushi SHINOHARA, Eugene TANIGUCHI, Michiaki FURUKAWA, *Faculty of Science, Nagoya University*.
- 1A11 INVESTIGATION OF THE 7 MeV/u ^{58}Ni -INDUCED REACTION ON Cu AND Rh TARGETS.
Masaru KIRIU, Tadashi SAITO, Akihiko YOKOYAMA, Hiroshi BABA, *Faculty of Science, Osaka University*,
Eugene TANIGUCHI, *Faculty of Science, Nagoya University*,
Yoshitake OHKUBO, *The Institute of Physical and Chemical Research (RIKEN)*.
- 1A12 NUCLEAR REACTION PRODUCTS IN THE INTERACTION OF ^{197}Au AND INTERMEDIATE ENERGY HEAVY IONS ^{14}N , ^{15}N AND ^{40}Ar .
Junji KURACHI, Eugene TANIGUCHI, Atsushi SHINOHARA, Michiaki FURUKAWA, *Faculty of Science, Nagoya University*,
Sadao KOJIMA, *Aichi Medical University*,

Yoshitake OHKUBO, Fumitoshi AMBE, *The Institute of Physical and Chemical Research (RIKEN)*,
Kazuhiro TAKESAKO, Tadashi SAITO, *Faculty of Science, Osaka University*,
Seiichi SHIBATA, *Institute for Nuclear Study, The University of Tokyo*.

[Nuclear Reaction 4](16:50-18:10)

- 1A13 NUCLEAR REACTIONS WITH INTERMEDIATE ENERGY HEAVY IONS ON V, Cu, Nb AND I - THE DEPENDENCE ON PROJECTILE AND TARGET -.
Eugene TANIGUCHI, Junji KURACHI, Atsushi SHINOHARA, Michiaki FURUKAWA, *Faculty of Science, Nagoya University*,
Sadao KOJIMA, *Aichi Medical University*,
Yoshitake OHKUBO, Fumitoshi AMBE, *The Institute of Physical and Chemical Research (RIKEN)*,
Kazuhiro TAKESAKO, Tadashi SAITO, *Faculty of Science, Osaka University*,
Seiichi SHIBATA, *Institute for Nuclear Study, The University of Tokyo*.
- 1A14 TARGET FRAGMENTATION OF ^{141}Pr AND ^{165}Ho INDUCED BY HEAVY PROJECTILES.
Kazuhiro TAKESAKO, Tadashi SAITO, Hiroaki KUSAWAKE, Akihiko YOKOYAMA, Hiroshi BABA, *Faculty of Science, Osaka University*,
Yoshitake OHKUBO, *The Institute of Physical and Chemical Research (RIKEN)*,
Atsushi SHINOHARA, Michiaki FURUKAWA, *Faculty of Science, Nagoya University*.
- 1A15 NUCLEAR REACTIONS OF HIGH ENERGY DEUTERONS WITH MEDIUM MASS TARGETS.
Masaharu NUMAJIRI, Taichi MIURA, Yuichi OKI, Takenori SUZUKI, Kenjiro KONDO, Kazuhiro TANAKA, Masaharu IEIRI, Minoru TAKASAKI, *National Laboratory for High Energy Physics*.
- 1A16 SYSTEMATICS OF PHOTOPION REACTION - SPECIALLY OF LIGHT NUCLEI -.
Yasuji OURA, Koichi KAWAGUCHI, Samir Ranjan SARKAR, Koh SAKAMOTO, *Faculty of Science, Kanazawa University*,
Seiichi SHIBATA, *Institute for Nuclear Study, The University of Tokyo*,
Michiaki FURUKAWA, *Faculty of Science, Nagoya University*,
Ichiro FUJIWARA, *School of Economics, Otemongakuin University*.

(Nuclear Chemistry Group Meeting 19:00-20:30)

[Mössbauer Chemistry 1](9:50-10:50)

- 1B01 MÖSSBAUER SPECTROSCOPIC STUDY ON MIXED-VALENCE STATES OF TRINUCLEAR IRON CARBOXYLATE.
Tadahiro NAKAMOTO, Satoshi KAWATA, Susumu KITAGAWA, Motomi KATADA,* and Hirotoishi SANO, *Faculty of Science, Department of Chemistry, Tokyo Metropolitan University, +Radioisotope Research Center, Tokyo Metropolitan University*.
- 1B02 SYNTHESSES AND CHARACTERIZATION OF DINUCLEAR MIXED VALENCE IRON(II,III) COMPLEXES.

Yonezo MAEDA, Yuichi TANIGAWA, and Yoshimasa TAKASHIMA, *Department of Chemistry, Faculty of Science, Kyushu University.*

- 1B03 MIXED-VALANCE STATES OF BIFERROCENIUM TRIIODIDES HAVING LONG ALKYL CHAINS (II).
Satoru NAKASHIMA, Yutaka UEKI, Hiroshi SAKAI, *Faculty of science, Hiroshima University.*

[Mössbauer Chemistry 2](11:00-12:00)

- 1B04 CRYSTALLOGRAPHIC AND MÖSSBAUER SPECTROSCOPIC STUDY OF IRON(III)-TRIMETHYLENDIAMINETETRAACETATE COMPLEXS.
Takafumi KITAZAWA, Masashi TAKAHASHI, Masuo TAKEDA, *Faculty of Science, Toho University.*
- 1B05 MÖSSBAUER SPECTRA OF SYNTHETIC Fe-FLUOROMICAS.
Hisakazu MURAMATSU, Kiyohiko YAMADA and Kunio KITAJIMA*, *Department of Chemistry, Faculty of Education, Shinshu University, *Department of Material Science, Faculty of Engineering, Shinsyu University.*
- 1B06 MÖSSBAUER CHARACTERIZATION OF o-PHENANTHROLINE IRON(II) COMPLEX IN ZEOLITE SUPERCAGE.
Yasushi UMEMURA, Yoshitaka MINAI, and Takeshi TOMINAGA, *Faculty of Science, The University of Tokyo.*

(Lunch 12:00-13:00)
(Plenary Lecture 13:00-14:30)

[Mössbauer Chemistry 3](14:40-15:40)

- 1B07 CRYSTALLIZATION OF IR-TRANSMITTING ALUMINATE AND GALLATE GLASSES.
Tetsuaki NISHIDA, Shiro KUBUKI, and Yoshimasa TAKASHIMA, *Faculty of Science, Kyushu University.*
- 1B08 LOCAL STRUCTURE AND γ -RAY IRRADIATION EFFECT OF TUNGSTATE GLASSES.
Tetsuaki NISHIDA, Hidetoshi SHINDO, Motomi KATADA*, Toshiyuki ISOBE, and Yoshimasa TAKASHIMA, *Faculty of Science, Kyushu University, *Radioisotope Research Center, Tokyo Metropolitan University.*
- 1B09 LOCAL STRUCTURE AND γ -RAY IRRADIATION EFFECT OF TYPICAL IONIC GLASS: NITRATE GLASS.
Tetsuaki NISHIDA, Masakazu OHARA, and Yoshimasa TAKASHIMA, *Department of Chemistry, Faculty of Science, Kyushu University.*

[Mössbauer Chemistry 4](15:40-16:40)

- 1B10 PHOSPHONATE AND CARBONYL LIGANDS VIEWED FROM ^{57}Fe MÖSSBAUER STUDIES.

Hiroshi NAKAZAWA, Yasushi NISHIHARA, Katsuhiko MIYOSHI, and Hiroshi SAKAI,
Department of Chemistry, Faculty of Science, Hiroshima University.

1B11 ¹²⁷I MÖSSBAUER SPECTRA OF ORGANOIODINE(III) COMPOUNDS HAVING
HYPERVALENT IODINE-OXYGEN BONDS.

Masashi TAKAHASHI, Masuo TAKEDA, *Faculty of Science, Toho University* Hiroyuki
SAWAHATA, Yasuo ITO, *Research Center for Nuclear Science and Technology, The
University of Tokyo.*

1B12 MÖSSBAUER SPECTRA AND CHEMICAL STRUCTURES OF SPIN-CROSSOVER
IRON(III) COMPLEXES WITH A QUINQUEDENTATE LIGAND.

Yonezo MAEDA, Yosuke NODA, Hiroshi OSHIO, Yoshimasa TAKASHIMA, Naohide
MATSUMOTO, *Faculty of Science, Kyushu University.*

[Mössbauer Chemistry 5](16:50-18:10)

1B13 MÖSSBAUER SPECTROSCOPIC STUDY OF FERROCENE DERIVATIVES

Iori KUSUDO, Miki SUGIYAMA, Haruo SATO, *Faculty of Science, Science University of
Tokyo.*

1B14 TEMPERATURE DEPENDENCE OF MOLECULAR MOTION IN FERROCENE
DERIVATIVES.

Hitoshi SHOJI, *Department of Chemistry, University of Tsukuba.*

1B15 STUDIES OF THE LATTICE DYNAMICS OF $[A_{1h}^{n+}(Me_3Sn)_3Fe(CN)_6]_n$ BY MEANS OF
MÖSSBAUER SPECTROSCOPY.

Michitomo FUJITA, Motomi KATADA, Hitoshi YAMADA, Satoshi KAWATA, Susumu
KITAGAWA, Hirotoishi SANO, *Faculty of Science, Tokyo Metropolitan University.*

1B16 ¹¹⁹Sn-MÖSSBAUER EFFECT OF Bi-Sr-Ca-Cu-O SUPERCONDUCTORS AND
SEMICONDUCTOR.

Tetsuaki NISHIDA AND Yoshimasa TAKASHIMA, *Faculty of Science, Kyushu
University.*

Motomi KATADA, *RI Research Center, Tokyo Metropolitan University.*

Yasukuni MATSUMOTO, *Faculty of Engineering, Fukuoka University.*

(Hot Atom Chemistry Group Meeting 19:00-20:30)

[Environmental Radioactivity 1](9:50-10:50)

1C01 STUDIES ON HOKUTOLITE BY THE MEASUREMENT OF RADIUM ISOTOPES.

Satoshi KUNIYASU, Hiroshi HARUTA, Rieko HIRUNUMA, Kazutoyo ENDO, *Showa
College of Pharmaceutical Science,*
Kimiko HORIUCHI, *Ohtsuma Women's Univ.,*
Hiromichi NAKAHARA, *Tokyo Metropolitan Univ.*

1C02 THE BEHAVIOR OF RADIUM IN RADIOACTIVE SPRINGS FROM JAPAN.

Tsuyoshi YAITA¹⁾, Kan KIMURA²⁾, *Japan Atomic Energy Research Institute¹⁾, Aoyama
Gakuin University²⁾.*

- 1C03 FLUCTUATIONS OF RADON CONTENT IN THE GROUND WATERS.
Kunihiko HASEGAWA, Hideo SUGANUMA, Hioe YOSHIOKA, Itsuhachiro HATAYE,
Faculty of Science, Radiochemistry Research Laboratory, Shizuoka University.

[Environmental Radioactivity 2](11:00-12:00)

- 1C04 STUDY ON NEUTRALIZATION PROCESS FOR RADON-DAUGHTERS IN GAS PHASE.
Taichi MIURA, Yuichi OKI, Masaharu NUMAJIRI, Takenori SUZUKI, Kenjiro KONDO,
National Laboratory for High Energy Physics.
- 1C05 POLONIUM-210 EMMITED FROM MT. FUGEN.
Nobuo ASHIKAWA, Satoshi NAKASHIMA, Eiji HIRAI, Masaki OKAMURA, Nobuki MATSUOKA and Yoshimasa TAKASHIMA, *Kyushu Environmental Evaluation Association.*
- 1C06 NONEQUILIBRIUM BETWEEN ^{210}Pb - ^{210}Bi - ^{210}Po IN PINE NEEDLES.
Takahito CHIJIWA, Yoshimasa TAKASHIMA, *Faculty of Science, Kyushu University,*
Shinji SUGIHARA, Susumu OSAKI, *RI center, Kyushu University.*

(Lunch 12:00-13:00)
(Plenary Lecture 13:00-14:30)

[Environmental Radioactivity 3](14:40-15:40)

- 1C07 DEPOSITION OF ^7Be AND ITS TIME VARIATION.
Sadao KOJIMA, *Radioisotope Research Center, Aichi Medical University,*
Hirotaoka ODA, Michiaki FURUKAWA, *Faculty of Science, Nagoya University.*
- 1C08 ANALYSIS OF DISTRIBUTION AND BEHAVIOUR OF FALLOUT USING ^7Be AND OTHER NATURAL RADIONUCLIDES.
Yoichi ISHIKAWA, Takeshi OGAWA, Hiroshi MURAKAMI, *Environ. Rad. Res. Inst. Miyagi,*
Tadao SAITO, *Furukawa junior High School,*
Tutomu SEKINE, Kenji YOSHIHARA, *Faculty of Science, Tohoku University.*
- 1C09 SEDIMENTARY BEHAVIORS OF NEPTUNIUM, PLUTONIUM AND AMERICIUM ON AN ESTUARINE INTER-TIDAL BANK OF IRISH SEA.
June KUWABARA*, Masayoshi YAMAMOTO*, Kazuhisa KOMURA*, Kaoru UENO*, D. J. ASSINDER**, *Low Level Radioactivity Lab., Kanazawa Univ., **North Wales Univ., England*

[Environmental Radioactivity 4](15:40-16:40)

- 1C10 RELATIONSHIP BETWEEN TRITIUM CONCENTRATIONS IN RAIN WATER AND WATER VAPOR COLLECTED WHEN IT RAINED.
Tomio OKAI, Noriyuki MOMOSHIMA*, Yoshimasa TAKAHASHI*, Hisaya TAGOMORI**, Eiji HIRAI**, Nobuaki MATSUOKA**, *Faculty of Engineering, Kyushu University, *Faculty of Science, Kyushu University, **Kyushu Environmental Evaluation Association.*

1C11 ENVIRONMENTAL TRITIUM AT TOKI AREA.
Noriyuki MOMOSHIMA, Tomio OKAI*, Poppy Intan TJHAHAJA, Yoshimasa
TAKASHIMA, Hidehisa KAWAMURA, Haruo OBAYASHI**, Youichi SAKUMA**,
*Faculty of Science, Kyushu University, * Faculty of Engineering, Kyushu University,*
***National Institute for Fusion Science.*

1C12 DESORPTION BEHAVIOR OF TRITIUM FROM MATERIAL CONTAMINATED BY
TRITIUM.
Takakuni HIRABAYASHI, Masakatsu SAEKI, Peng Ji ZHAO, Ki Woung SUNG,
Department of Chemistry, Japan Atomic Energy Research Institute.

[Environmental Radioactivity 5](16:50-18:10)

1C13 OBSERVATION OF MODERN RADIOCARBON VARIATIONS IN ATMOSPHERIC CO₂
OVER JAPAN ISLAND BY USING METHANOL-LSC METHOD (III).
Setsuko SHIBATA, Eiko KAWANO, *Research Institute for Advanced Science and
Technology, University of Osaka Prefecture.*

1C14 THE METHOD FOR CARBON-14 ACTIVITY MEASUREMENT IN ENVIRONMENTAL
SAMPLES BY LIQUID SCINTILLATION COUNTING.
Hidehisa KAWAMURA, Noriyuki MOMOSHIMA, Yoshimasa TAKASHIMA, *Faculty of
Science, Kyushu University.*

1C15 EVALUATION OF COSMIC-RAY ATTENUATION IN THE UNDERGROUND
LABORATORY FOR LOW-LEVEL RADIOACTIVITY MEASUREMENTS AND "OGOYA
PROJECT".
Kazuhisa KOMURA, Akira TOGOUCHI, Masayoshi YAMAMOTO and Kaoru UENO,
LLRL, Kanazawa University.

1C16 GEOCHEMICAL AND ISOTOPIC CHARACTERIZATION OF THE OKLO NATURAL
REACTOR.
Hiroshi HIDAKA, *Faculty of Science, Tokyo Metropolitan University,*
Philippe HOLLIGER, *CEA-CEN. CADARACHE, France,*
Kazuya TAKAHASHI, *Institute of Physical and Chemical Research (RIKEN),*
Akimasa MASUDA, *University of Electro-communications.*

(Activation Analysis Group Meeting 19:00-20:30)

Tuesday, October 27

PLENARY LECTURE(13:40-15:10)

2101 THE DEVELOPMENT OF RADIOCHEMISTRY IN EUROPE.
A. G. MADDOCK, *Cambridge, U.K..*

2102 EXPONENTIAL GROWTH AND DECAY IN RADIOCHEMICAL EDUCATION.
R. H. HERBER, *Rutgers, The State University of New Jersey, USA.*

LECTURE SESSION

[Nuclear Reaction 5](9:20-10:40)

- 2A01 FISSON OF THE $^{238}\text{U}+p$ SYSTEM IN THE GIANT DIPOLE RESONANCE REGION.
Noriko NITANI and Nobuo SHINOHARA, *Japan Atomic Energy Research Institute*
Takayuki YAMAGUCHI, Daisaku YANO, Naruto TAKAHASHI, Akihiko YOKOYAMA,
Tadashi SAITO and Hiroshi BABA, *Faculty of Science, Osaka University*
- 2A02 PHOTOFISSION OF ^{238}U .
Takayuki YAMAGUCHI, Naruto TAKAHASHI, Akihiko YOKOYAMA, Daisaku YANO
and Hiroshi BABA, *Faculty of Science, Osaka University*,
Kazuyoshi MASUMOTO and Tsutomu OHTSUKI, *Laboratory of Nuclear Science,*
Tohoku University.
- 2A03 MASS CHARACTERISTICS OF THE FRAGMENTS IN THE FISSION OF URANIUM
ISOTOPES INDUCED BY ^{12}C ION.
Akihiko YOKOYAMA, Ming-Chin DUH, Daisaku YANO, Naruto TAKAHASHI, and
Hiroshi BABA, *Faculty of Science, Osaka University*,
Noriko NITANI, Sumiko BABA, Kentaro HATA, *Japan Atomic Energy Research Institute.*
- 2A04 NUCLEAR FISSION IN $^{18}\text{O}+^{209}\text{Bi}$ REACTION.
Ichiro NISHINAKA, Masashi TANIKAWA, Shinya MIYAMOTO, Keisuke SUEKI,
Hiromichi NAKAHARA, *Faculty of Science, Tokyo Metropolitan University*,
Kazuaki TSUKADA, Masaaki MAGARA, Nobuo SHINOHARA, Yuichiro NAGAME,
Hiroshi IKEZOE, Hiroshi KUDO, *Japan Atomic Energy Research Institute*,
Tsutomu OHTSUKI, *Laboratory of Nuclear Science, Tohoku University.*

[Nuclear Reaction 6](10:40-12:00)

- 2A05 KINETIC ENERGIES OF FISSION PRODUCTS IN NUCLEAR REACTION $^{209}\text{Bi}+^{16}\text{O}$ BY
DIFFERENTIAL RANGE METHOD.
Keisuke SUEKI, Ichirou NISHINAKA, Masashi TANIKAWA and Hiromichi
NAKAHARA, *Faculty of Science, Tokyo Metropolitan University*,
Kazuaki TSUKADA, *Japan Atomic Energy Research Institute.*
- 2A06 ISOTOPIC DISTRIBUTION OF FISSION PRODUCTS FROM NEUTRON-DEFFICIENT
NUCLEI IN LIGHT ACTINIDE REGION.
Ichiro NISHINAKA, Masashi TANIKAWA, Keisuke SUEKI, Hiromichi NAKAHARA,
Faculty of Science, Tokyo Metropolitan University,
Kazuaki TSUKADA, Masaaki MAGARA, Nobuo SHINOHARA, Yuichiro NAGAME,
Hiroshi KUDO, *Japan Atomic Energy Research Institute*,
Takayuki KOBAYASHI, *School of Hygienic Science, Kitasato Univ..*
- 2A07 THE STUDY ON MASS YIELD CURVE OF NUCLEAR FISSION BY SCISSION POINT
MODEL.
Keisuke SUEKI, Hiromichi NAKAHARA, *Faculty of Science, Tokyo Metropolitan*
University,
Horst MAERTEN, *Institute for Nuclear and Atomic-Physics, Dresden University of*
Technology.

- 2A08 LIGHT CHARGED PARTICLES IDENTIFICATION WITH SCINTILLATORS AND APPLICATION.
 Tsutomu OHTSUKI, Jirota KASAGI, Masumi SUGAWARA, *Laboratory of Nuclear Science, Tohoku University*,
 Hiroshi IKEZOE, Yuichiro NAGAME, Nobuo SHINOHARA, Masa-aki MAGARA, Kazuaki TSUKADA, *Japan Atomic Energy Research Institute*,
 Ichiro NISHINAKA, Masashi TANIKAWA, Keisuke SUEKI, *Faculty of Science, Tokyo Metropolitan University*.

(Lunch 12:00-13:00)

(Poster Session 13:00-13:40)

(Plenary Lecture 13:40-15:10)

[Accelerators and their applications 1](15:20-16:20)

- 2A09 EVALUATION OF ^{55}Fe RADIOACTIVITY IN ACCELERATOR HARDWARE ACTIVATED AT HIGH ENERGY ACCELERATOR FACILITIES.
 Yuichi OKI, Masaharu NUMAJIRI, Taichi MIURA, Takenori SUZUKI, Kenjiro KONDO, *National Laboratory for High Energy Physics*.
- 2A10 BEHAVIOR OF RADIOACTIVE AEROSOLS FORMED IN WELDING AND MACHINING OF ACTIVATED MATERIALS (III).
 Yuichi OKI, Masaharu NUMAJIRI, Takenori SUZUKI, Taichi MIURA, Yukio KANDA, Kenjiro KONDO, *National Laboratory for High Energy Physics*.
- 2A11 PROFILING OF HEAVY ELEMENTS IN CLAY MINERAL SAMPLES.
 Michi ARATANI, Minoru YANOKURA, *The Institute of Physical and Chemical Research (RIKEN)*,
 Kazue TAZAKI, *Faculty of Science, Shimane University*,
 Kunio KAIHO, *Faculty of Science, Tohoku University*.

[Accelerators and their applications 2](16:20-17:20)

- 2A12 TOTAL CHARACTERIZATION OF SELF-SUPPORTING FOILS.
 Isao SUGAI, Mitsuhiro OYAIZU, *Institute for Nuclear Study, The University of Tokyo*,
 Michi ARATANI, Minoru YANOKURA, *The Institute of Physical and Chemical Research (RIKEN)*.
- 2A13 NONDESTRUCTIVE ANALYSIS FOR HYDROGEN/DEUTERIUM RATIO USING ERD AND NR METHODS.
 Minoru YANOKURA, Michi ARATANI and Akihiko OKADA, *The Institute of Physical and Chemical Research (RIKEN)*.
- 2A14 QUANTITATIVE MEASUREMENT OF LIGHT ELEMENTS ON THE SURFACE OF VACUUM CHAMBER MATERIALS FOR ELECTRON STORAGE RINGS.
 Ken-ichi KANAZAWA, *National Laboratory for High Energy Physics*,
 Minoru YANOKURA and Michi ARATANI, *The Institute of Physical and Chemical Research (RIKEN)*.

[Nuclear Reaction 7](17:20-18:00)

- 2A15 MEASUREMENT OF PROTON AND HEAT IN THE GALVANOSTATIC ELECTROLYSIS OF THE 0.1M-LiOD/D₂O SOLUTION.
Shinya MIYAMOTO, Keisuke SUEKI, Masatoshi FUJII, Toshiaki SHIRAKAWA, and Hiromichi NAKAHARA, *Faculty of Science, Tokyo Metropolitan University.*
- 2A16 RECOIL PROTON ENERGY SPECTRA AFTER d-d AND SEQUENTIAL NUCLEAR REACTIONS IN DEUTERIATED TITANIUM.
Masayuki HIRATA and Kenji YOSHIHARA, *Department of Chemistry, Tohoku University,* Keizou ISHII, *Cyclotron and RI Center, Tohoku University,* Jirouta KASAGI, *Laboratory of Nuclear Science, Tohoku University.*

[Mössbauer Chemistry 6](9:20-10:40)

- 2B01 STUDIES ON GLAZE OF POTTERY BY MEANS OF MÖSSBAUER SPECTROSCOPY AND ELECTRON PROBE MICRO ANALYZER.
Kazutoyo ENDO¹⁾, Hiroshi HARUTA¹⁾, Takuma SATO²⁾, Motomi KATADA²⁾, Masami NAKADA³⁾, Yasuyuki ARATONO³⁾, Masa-katsu SAEKI³⁾, 1) *Showa College of Pharmaceutical Sciences,* 2) *Faculty of Sciences, Tokyo Metropolitan University,* 3) *Department of Chemistry, Japan Atomic Energy Research Institute.*
- 2B02 MÖSSBAUER SPECTROSCOPIC STUDY ON THE DEPTH PROFILE OF IRON COMPOUNDS IN PADDY SOIL.
Motoyuki MATSUO, *College of Arts & Sciences, The University of Tokyo,* Takaaki KOBAYASHI and Hirokazu TACHIKAWA, *Interdisciplinary Graduate School of Science and Engineering, Tokyo Institute of Technology.*
- 2B03 MAGNETIZATION AND MÖSSBAUER EFFECT STUDIES OF Fe_{3-x}Ru_xSi.
Yoshio KOBAYASHI, Takuya ODA, Fumitoshi ANBE, *The Institute of Physical and Chemical Research (RIKEN),* Kichizo ASAI, *Department of Applied Physics and Chemistry, The University of Electro-Communications.*
- 2B04 TDPAC AND EMISSION MÖSSBAUER STUDIES ON ⁹⁹Ru ARISING FROM ⁹⁹Rh IN YBa₂Cu₃O_{7-x}.
Yoshitaka OHKUBO, Yoshio KOBAYASHI, Shizuko AMBE, Takuya OKADA, Fumitoshi AMBE, *The Institute of physical and Chemical Research (RIKEN).*

[Mössbauer Chemistry 7 and Mesic Chemistry](10:40-12:00)

- 2B05 DEVELOPMENT OF A NEW SYSTEM FOR COINCIDENCE MÖSSBAUER SPECTROSCOPY.
Masami NAKADA, Yasuyuki ARATONO, Chiaki SAGAWA, Masakatsu SAEKI, *Department of chemistry, Japan Atomic Energy Research Institute.*
- 2B06 FINE STRUCTURES OF LX-RAYS WITH A HIGH RESOLUTION DOUBLE-CRYSTAL SPECTROMETER.
Junji IIHARA, Takashi OMORI*, Kenji YOSHIHARA, *Department of Chemistry, Faculty*

*of Science, Tohoku University, *Faculty of Science, Shizuoka University.*

2B07 A μ SR STUDY OF TOTALLY DEUTER HEXAAMMINECOBALT(III)BROMIDE.
Hideaki KAGETSU, M.Kenya KUBO, Noriko SHIOYASU, Takeshi TOMINAGA, Kusuo NISHIYAMA, Kanetada NAGAMINE, *Faculty of Science, The University of Tokyo.*

2B08 INTENSITY PATTERNS OF PIONIC X-RAYS EMITTED FROM ORGANIC COMPOUNDS.
Toshiharu MUROYAMA, Atsushi SHINOHARA, Eugene TANIGUCHI, Junichirou SHINTAI, Tadashi SAITO, Kazuhiro TAKESAKO, *Faculty of Science, Osaka University,*
Nobutsugu IMANISHI, *Faculty of Technology, Kyoto University,*
Taichi MIURA, Yoshio YOSHIMURA, *National Laboratory for High Energy Physics.*

(Lunch 12:00-13:00)

(Poster Session 13:00-13:40)

(Plenary Lecture 13:40-15:10)

[Positronium Chemistry and Radiation](15:20-16:40)

2B09 ABSORPTION COEFFICIENT AND POSITRON ANNIHILATION IN EPOXY RESINS.
Takenori SUZUKI, Yuichi OKI, Masaharu NUMAJIRI, Taichi MIURA, Kenjiro KONDO, *National Laboratory for High Energy Physics,*
Yasuo ITO, *RCNST, The Univ. of Tokyo,*
Yutaka SHIOMI, *Tsukuba Research Lab., Sumitomo Chem. Co. LTD.*

2B10 THE STUDY ON POROUS Si BY MEANS OF POSITRON ANNIHILATION.
Akira KINOSITA, *Tokyo Denki University,*
Hideoki MURAKAMI, *Tokyo Gakugei University.*

2B11 PROTECTION EFFECT OF GREEN TEA EXTRACT ON γ -DAMAGE OF DNA.
Goro AKAI, Hiroe YOSHIOKA, Kouichi YOSHINAGA, Hisashi YOSHIOKA*, Kunihiko HASEGAWA, *Shizuoka University, University of Shizuoka*.*

2B12 A SOURCE CHELATE FOR CHEMICAL VAPOR DEPOSITION METHOD :
PREPARATION AND CVD PROPERTIES OF SOME LANTHANIDE β -DIKETONE CHELATES CONTAINING THALLIUM.
Ryohei AMANO, *School of Allied Medical Professions, Kanazawa University,* Yoshinobu SHIOKAWA, *Institute for Materials Research, Tohoku University.*

[Thermoluminescence](16:40-18:00)

2B13 DEVELOPMENT OF HIGHLY SENSITIVE SYSTEM FOR SIMULTANEOUS MEASUREMENT OF BLUE AND RED THERMOLUMINESCENCE FROM NATURAL QUARTZES.
Retsuo HASHIMOTO, Nobutoshi SHIRAI, Shuei SAKAUE, *Faculty of Science, Niigata University.*

2B14 CHANGES OF ACTIVATION ENERGIES AND TL-SPECTRA OF NATURAL QUARTZ GRAINS ASSOCIATED WITH THERMAL TREATMENT.

Tetsuo HASHIMOTO, Masahiro ICHINO, Shuei SAKAUE, Nobutoshi SHIRAI, *Faculty of Science, Niigata University.*

2B15 MEASUREMENTS OF KINETIC PARAMETERS FOR RED AND BLUE THERMOLUMINESCENCE FROM NATURAL QUARTZ GRAINS USING REPEATED INITIAL RISE METHOD.

Tetsuo HASHIMOTO, Motoshi KOJIMA, Tetsu OJIMA, *Faculty of Science, Niigata University.*

2B16 APPLICATION OF IMAGING PLATE TO ACTIVOGRAPHY COMBINED WITH NEUTRON IRRADIATION -RELATIONSHIP OF LUMINESCENCE PROPERTY AND DISTRIBUTION OF SOME ELEMENTS IN GRANITE SLICE-

Tetsuo HASHIMOTO, Shuei SAKAUE, Masahiro ICHINO, Nobutoshi SHIRAI, *Faculty of Science, Niigata University.*

[Migration 1](9:20-10:40)

2C01 COMPARISON OF MIGRATIONS OF RADIONUCLIDES IN SOILS.

Shinji SUGIURA, Susumu OSAKI, *Radioisotope Center, Kyushu University,*
Yoshimasa TAKASHIMA, *Faculty of Science, Kyushu University.*

2C02 SYNTHESIS AND MEASUREMENTS OF SOLUBILITY OF CRYSTALLINE NEODIMIUM HYDROXYCARBONATE.

Sanae SHIBUTANI, Hideki YOSHIKAWA, Mikazu YUI, *Power Reactor and Nuclear Fuel Development Corporation.*

2C03 STUDIES ON THE STABILITY CONSTANTS Eu^{3+} AND F OR Cl IN $\text{H}_2\text{O}/\text{DMSO}$ SOLVENT.

Hideo SUGANUMA, Masaki MIZUNO, Takashi OMORI, *Faculty of science, Shizuoka University,*
Isamu SAITO, *Institute for Materials Research, Tohoku University.*

2C04 IONIC STRENGTH AND pH DEPENDENCE OF FORMATION CONSTANTS OF AMERICIUM(III)- AND EUROPIUM(III)- HUMATES.

Yoshio TAKAHASHI, Yoshitaka MINAI, Yoshihiro MEGURO*, Sakae TOYODA and Takeshi TOMINAGA, *Faculty of Science, The University of Tokyo, *Japan Atomic Energy Research Institute.*

[Migration 2 and Radioactive Element 1](10:40-12:00)

2C05 COMPLEXATION OF Tc WITH HUMIC ACID.

Tsutomu SEKINE, Akira WATANABE, Kenji YOSHIHARA, *Faculty of Science, Tohoku University,*
J.I.KIM, *University of Munich.*

2C06 DEPENDENCE OF FORMATION CONSTANT OF EUROPIUM(III)- POLYCRYLATE ON MOLECULAR WEIGHT AND pH.

Yoshitaka MINAI, Koichiro KUWAHARA, Yoshihiro MEGURO*, and Takeshi TOMINAGA, *The University of Tokyo, Japan Atomic Energy Research Institute**

2C07 ADSORPTION BEHAVIOR OF PERTECHNETATE ON ANION EXCHANGE RESIN.
Mikio KAWASAKI, Takashi OMORI, Kunihiko HASEGAWA, *Faculty of Science, Shizuoka University.*

2C08 MECHANISM OF THE SOLVENT EXTRACTION OF PERTECHNETIC ACID WITH TBP FROM PERCHLORIC ACID SOLVENTS.
Yasuyuki SUZUKI, Mizoho TADOKORO*, Kenji YOSHIHARA*, Hideo SUGANUMA, and Takashi OMORI, *Faculty of Science, Shizuoka University, *Faculty of Science, Tohoku University.*

(Lunch 12:00-13:00)

(Poster Session 13:00-13:40)

(Plenary Lecture 13:40-15:10)

[Radioactive Element 2](15:20-16:20)

2C09 SOLVENT EXTRACTION BEHAVIOR OF IODINE AND ASTATINE.
Daisaku YANO, Naruto TAKAHASHI, Yukio TAMIYA, Hiroshi BABA, *Faculty of Science, Osaka University.*

2C10 APPLICATION TO THE DETERMINATION OF TRACE AMOUNT OF Tc BY LASER INDUCED PHOTOACOUSTIC SPECTROSCOPY.
Tsutomu FUJITA, Masayuki HIRAGA, Tsutomu SEKINE, Kenji YOSHIHARA, *Faculty of Science, Tohoku University.*

2C11 REACTIONS OF TECHNETIUM(III)-THIOURA DERIVATIVE COMPLEXES WITH 4,6-DIMETHYLPYRIMIDINE-2-THINE.
Kazuyuki HASHIMOTO, Hiroshi KUDO, *Japan Atomic Energy Research Institute,* Takashi OMORI, *Faculty of Science, Shizuoka University,* Kenji YOSHIHARA, *Faculty of Science, Tohoku University.*

[Activation Analysis 1](16:20-17:00)

2C12 DETERMINATION OF BORON IN SEVERAL KINDS OF MATERIAL BY JRR-3M NEUTRON INDUCED PROMPT GAMMA-RAY ANALYZING SYSTEM.
Chushiro YONEZAWA, Abdul Khalic WOOD, Michio HOSHI, Yasuo ITO*, *Department of Chemistry, Japan Atomic Energy Research Institute, *Research Center for Nuclear Science and Technology, The University of Tokyo.*

2C13 REACTOR NEUTRON INDUCED PROMPT GAMMA-RAY ANALYSIS OF ANCIENT GLASSES.
Takeshi TOMIZAWA, *Faculty of Literature, Keio University,* Chushiro YONEZAWA, Michio HOSHI, *Department of Chemistry, Japan Atomic Energy Research Institute,* Yoshitaka MINAI, Takeshi TOMINAGA, *Faculty of Science, The University of Tokyo,* Yasuo ITO, *Research Center for Nuclear Science and Technology, The University of Tokyo.*

[Activation Analysis 2](17:00-18:00)

2C14 GERMANIUM GAMMA-RAY SPECTROMETRY : RE-EVALUATION OF AN ENERGY

CALIBRATION.

Kazuhisa NISHIMURA, Toshiaki KISHIKAWA, *Kumamoto University*.

- 2C15 DEVELOPMENT OF A ROBOTIZED SAMPLE CHANGING SYSTEM FOR ACTIVATION ANALYSIS.
Shogo SUZUKI, Yukiko OKADA and Shoji HIRAI, *Atomic Energy research Laboratory, Musashi Institute of Technology*.
- 2C16 PREPARATION OF STANDARD SAMPLE FOR ANALYSIS OF SURFACE METALS BY USING RADIOACTIVE TRACER.
Hiroki YONEZAWA, Toshio SHIGEMATSU, Koji SHIKANO, *NTT Interdisciplinary Research Laboratories*.

[Poster Session](13:00-13:40)

- 2P01 APPROACH TO THE SYNTHESIS OF IRON(III) COMPLEXES WITH LIGHT-INDUCED EXCITED-SPIN-STATE.
Yonezo MAEDA, Shinya HAYAMI, Yoshimasa TAKASHIMA, *Kyushu University*.
- 2P02 K-CONVERSION COEFFICIENT OF THE M3 TRANSITION IN ^{124}mIn .
Harumi KAJI, Kenji YOSHIHARA, *Faculty of Science, Tohoku University*.
- 2P03 ADDITIVE MODEL FOR ^{121}Sb MÖSSBAUER QUADRUPOLE COUPLING CONSTANT IN HYPERVALENT TRIGONAL-BIPYRAMIDAL ORGANOANTIMONY(V) COMPLEXES.
Masuo TAKEDA, Masashi TAKAHASHI, Yasuo YANAGIDA, *Faculty of Science, Toho University*,
Satoshi KOJIMA, Hisashi NAKATA Kin-ya AKIBA, *Faculty of Science, Hiroshima University*.
- 2P04 TRANSFER PROCESS IN NEGATIVE PION CAPTURE BY ALCOHOLS.
Atsushi SHINOHARA, Toshiharu MUROYAMA, Eugene TANIGUCHI, Junji KURACHI, Fumihisa SHIGEKANE, Junichirou SHINTAI, Michiaki FURUKAWA, *Faculty of Science, Nagoya University*,
Tadashi SAITO, Akihiko YOKOYAMA, Kazuhiro TAKESAKO, Seiya WATANABE, *Faculty of Science, Osaka University*,
Nobutsugu IMANISHI, *Faculty of Engineering, Kyoto University*,
Taichi MIURA, Yoshio YOSHIMURA, *The National Laboratory for High Energy Physics*.
- 2P05 A STUDY OF $^{51}\text{Cr(VI)}$ REDUCTION IN NITRIC ACID SOLUTIONS.
Jose Francisco LUGO RIVERA¹, Cielita ARCHUNDIA², Carol H. COLLINS³ and Kenneth E. COLLINS, 1. *Cento Regional de Estudios Nucleares, Universidad Autonoma de Zacatecas*, 2. *Instituto de Ciencias Nucleares, Universidad Nacional Autonoma de Mexico*, 3. *Instituto de Quimica, Universidade Estadual de Campinas*.
- 2P06 RADIATION-INDUCED ISOMERIZATION OF THIOUREA INTO AMMONIUM THIOCYANATE.
H.J. ARNIKAR,² A.H. KAPADI¹, D.G. NAIK¹, and J.G. CHANDWADKAR², 1. *M.A.C.S. Research Institute*, 2. *University of Poona*.

- 2P07 MIXTURES OF REACTIVE GASES AND IONIC ENERGY LOSSES.
T. VALENCICH, *California State University*.
- 2P08 TRACER-DIFFUSION OF Mn^{2+} IONS IN GEL MEDIUM CONTAINING ALKALI METAL CHLORIDES.
S. F. PATIL, *University of Poona*.

Wednesday, October 28

LECTURE SESSION

[Multi-Tracer Chemistry 1](9:20-10:20)

- 3A01 SEPARATION OF MULTITRACER BY HEATING UNDER REDUCED PRESSURE (2).
Masako IWAMOTO, Shizuko AMBE, Yoshitake OHKUBO, Yoshio KOBAYASHI, Minoru YANOKURA, Haruka MAEDA, and Fumitoshi AMBE, *The Institute of Physical and Chemical Research (RIKEN)*.
- 3A02 STUDY ON THE ION EXCHANGE ADSORPTION OF VARIOUS ELEMENTS ON SUPERACID RESIN NAFION USING A MULTITRACER.
Shizuko AMBE, Yoshitake OHKUBO, Masako IWAMOTO, Yoshio KOBAYASHI, Minoru YANOKURA, Haruka MAEDA, and Fumitoshi AMBE, *The Institute of Physical and Chemical Research (RIKEN)*,
Sadao SHIBATA, *National Institute of Radiological Sciences*,
Tsuyoshi YAITA, *Japan Atomic Energy Research Institute*,
Takehiro BAMBA, Hiroaki HARAKAWA, Yuko SAITO, Kan KIMURA, *College of Science and Engineering, Aoyama Gakuin University*.
- 3A03 MULTITRACER STUDY ON COMPLEX FORMATION OF HUMIC ACID.
Yoshitaka MINAI, Yoshio TAKAHASHI, M. Kenya KUBO, Sakae TOYODA, Mie ISHIBASHI, Shizuko AMBE,* Yoshio KOBAYASHI,* Yoshitake OHKUBO,* Masako IWAMOTO,* Minoru YANOKURA,* Haruka MAEDA,* Sadao SHIBATA,** Noburu TAKEMATSU,* Fumitoshi AMBE,* Takeshi TOMINAGA, *Department of Chemistry, The University of Tokyo*, **The Institute of Physical and Chemical Research*, ***National Institute of Radiological Sciences*.

[Multi-Tracer Chemistry 2](10:20-11:20)

- 3A04 STUDY OF SELECTIVE TRANSPORT OF METAL-IONS BY MEANS OF A SUPPORTED LIQUID MEMBRANE USING A MULTITRACER (I).
Shizuko AMBE, Shigeo TANAKA, Yoshio KOBAYASHI, Yoshitake OHKUBO, Masako IWAMOTO, Haruka MAEDA, Minoru YANOKURA, and Fumitoshi AMBE, *The Institute of Physical and Chemical Research (RIKEN)*.
- 3A05 STUDY OF SELECTIVE TRANSPORT OF METAL-IONS BY MEANS OF A SUPPORTED LIQUID MEMBRANE USING A MULTITRACER (II).
Shigeo TANAKA, Shizuko AMBE, Yoshio KOBAYASHI, Yoshitake OHKUBO, Masako IWAMOTO, Haruka MAEDA, Minoru YANOKURA, and Fumitoshi AMBE, *The Institute of Physical and Chemical Research (RIKEN)*.

- 3A06 STUDY ON THE ADSORPTION BEHAVIOR OF VARIOUS ELEMENTS IN CHLORIDE SOLUTIONS ON A MR TYPE RESIN AND AN ACTIVATED CARBON FIBER USING A MULTITRACER.
Sadao SHIBATA, Kazuo WATARI, Yutaka NODA, *National Institute of Radiological Sciences*,
Shizuko AMBE, Yoshitake OHKUBO, Masako IWAMOTO, Yoshio KOBAYASHI, Haruka MAEDA, Fumitoshi AMBE, *The Institute of Physical and Chemical Research (RIKEN)*.

[Nuclear Cosmochemistry](11:30-12:10)

- 3A07 PRODUCTION RATES OF COSMOGENIC NUCLIDES IN METEORITES.
Hisao NAGAI and Masatake HONDA, *College of Humanities and Sciences, Nihon University*,
Mineo IMAMURA, *Institute for Nuclear Study, University of Tokyo*,
Koichi KOBAYASHI, *Research Center for Nuclear Science and Technology, The University of Tokyo*.
- 3A08 NUCLIDE PRODUCTION IN THE EARTH'S SURFACE BY COSMIC-RAY SECONDARIES AND ITS APPLICATIONS TO SURFACE AGE DETERMINATIONS.
Minco IMAMURA, Sei-ichi SHIBATA, *Institute for Nuclear Study, University of Tokyo*,
Hisao NAGAI, *College of Humanities and Sciences, Nihon University*.

[Radioactivity Measurement](12:10-13:30)

- 3A09 SIMULTANEOUS COUNTING OF α , $\beta(\gamma)$ RAYS AND NEUTRONS WITH SCINTILLATORS.
Shigekazu USUDA, *Japan Atomic Energy Research Institute*.
- 3A10 DETERMINATION OF LOW LEVEL α -EMITTING NUCLIDES WITH MILLISECONDS HALF-LIVES IN SOME SCINTILLATORS USING TIME INTERVAL ANALYSIS.
Tetsuo HASHIMOTO, Hideki WASHIO, Ikumi AIHARA, *Faculty of Science, Niigata University*.
- 3A11 EVALUATION OF BG RADIATION: DATA REDUCTION METHOD OF A CsI SURVEY METER.
Satoru NOGUCHI, Toshiaki KISHIKAWA, *Faculty of Engineering, Kumamoto University*.
- 3A12 DEVELOPMENT OF AN POLYANILINE FILM DOSIMETER.
Kenjiro KONDO, Yuichi OKI, Masaharu NUMAJIRI, Takenori SUZUKI, Taichi MIURA, *National Laboratory for High Energy Physics*.

[Hot Atom Chemistry 1](9:20-10:20)

- 3B01 PREPARATION OF ^{99m}Tc AND ^{99}Tc NITRIDO ACETYLACETONE COMPLEX.
Abdul MUTALIB, Tsutomu SEKINE, Kenji YOSHIHARA, *Faculty of Science, Tohoku Univ.*,
Takashi OMORI, *Faculty of Science, Shizuoka Univ.*.

- 3B02 SYNTHESIS AND CHARACTERIZATION OF ^{99}Tc NITRIDO β - DIKETONE (ACAC,DPM,BZA,DBM) COMPLEX.
Abdul MUTALIB, Tsutomu SEKINE, Kenji YOSHIHARA, *Faculty of Science, Tohoku Univ.*,
Takashi OMORI, *Faculty of Science, Shizuoka Univ.*
- 3B03 EFFECT OF CYCLODEXTRIN INCLUSION ON THE CHEMICAL BEHAVIOR OF RECOIL ATOMS PRODUCED IN METALLOCENE-THE Tc-CP COMPLEX FORMATION.
Hideaki MATSUE, Tutomu SEKINE, Kenji YOSHIHARA, *Department of Chemistry, Faculty of Science, Tohoku University.*

[Hot Atom Chemistry 2](10:20-11:40)

- 3B04 HOT ATOM CHEMISTRY OF RARE EARTH COMPLEXES (2). ISOTOPE EFFECT OF RETENTION IN $\text{Yb}(\text{dpm})_3$,
Tatsuo MATSUURA, Orié ISHII^{*1}, Reiko HIROTA^{*1}, and Ken-ichi SASAKI^{*2}, *Institute for Atomic Energy, Rikkyo University, *1Faculty of Science, *2Faculty of General Education, Rikkyo University.*
- 3B05 THE REDUCTION BEHAVIOR OF CARRIER-FREE ^{125}Sb IN HYDROCHLORIC ACID SOLUTIONS.
Kazunori SHINOTSUKA, *Faculty of Science, Tokyo Metropolitan University*,
Kazuyoshi KANAYAMA, Hiroe YOSHIOKA, Takashi OMORI, Kunihiko HASEGAWA, *Faculty of Science, Shizuoka University.*
- 3B06 SUBSTITUENT EFFECTS ON REGIOSELECTIVE TRITIATION OF BENZANILIDES.
Kunio OOHASHI, Takayuki SEKI, *College of Arts and Science, Chiba University.*
- 3B07 DIFFUSION OF IONS ($+\text{H}^{131}\text{I}$) IN NEAR SURFACE REGION OF MOLYBDENUM.
H.J.ARNİKAR, E.A.DANIELS and P.G.REDDI, *Chemistry Department, University of Poona.*

[Hot Atom Chemistry 3](11:40-13:20)

- 3B08 OSCILLATORY ANNEALING IN SOLID-STATE HOT-ATOM CHEMISTRY -DOES IT REALLY EXIST ?
Horst MÜLLER, *Institute of Inorganic and Analytical Chemistry, Section Radiochemistry, University of Freiburg.*
- 3B09 INFLUENCE OF MEDIUM ON STABILIZATION OF RECOIL ATOMS.
K. BEREI, *Hungarian Academy of Sciences.*
- 3B10 COMPETING PROCESSES AND THE COLLISION SPECTRUM.
T. VALENCICH, *California State University.*
- 3B11 CHEMICAL EFFECTS IN X-RAY SPECTRA FOLLOWING ELECTRON CAPTURE OR INTERNAL CONVERSION: COMPARISON WITH X-RAY PHOTOELECTRON AND X-RAY EMISSION SPECTRA. APPLICATIONS IN HOT ATOM CHEMISTRY.

D. S. URCH, *University of London*.

3B12 RETENTION STUDIES FOLLOWING (n, γ) RECOIL IN ALKALI METAL ANTIMONATE.

V.G. DODGAONKAR and A.H.RASHIDA, *University of Poona*.

[Hot Atom Chemistry MINI-symposium](14:00-16:00)

1. FROM TRACER CHEMISTRY TO SINGLE ATOM CHEMISTRY.

J. P. ADLOFF, *University Louis Pasteur, Strasbourg*.

2. HOT REACTIONS IN SPACE.

K. ROESSLER, *Research Center Jülich*.

3. Pu-244, SUPERNOVA, AND HOT ATOM CHEMISTRY.

P. K. KURODA, *University of Nevada*.

[Activation Analysis 3](9:20-10:40)

3C01 DETERMINATION OF ULTRA TRACE CARBON IN BORON-DOPED SILICON BY CHARGED PARTICLE ACTIVATION ANALYSIS.

Koji SHIKANO, Hiroki YONEZAWA, Toshio SHIGEMATSU, *NTT Interdisciplinary Research Laboratories*.

3C02 PROTON ACTIVATION ANALYSIS OF STEEL SAMPLES.

Daisuke HASEGAWA, Mitsuo HARA, *Institute for Materials Research, Tohoku University*, Kazuyoshi MASUMOTO, *Laboratory of Nuclear Science, Faculty of Science, Tohoku University*.

3C03 DETERMINATION OF FLUORINE IN HIGH PURITY MATERIALS BY PHOTON ACTIVATION ANALYSIS(2).

Hiroyuki SAKURAI, Minoru TAKEYA, Yasumasa SAYAMA, *Mitsubishi Materials Co.*, Kazuyoshi MASUMOTO, Tsutomu OHTSUKI, *Faculty of Science, Tohoku Univ.*

3C04 STUDIES ON DETERMINATION OF TRACE HEAVY ELEMENTS IN HIGH-PURITY NIOBIUM WITH THE TECHNIQUES OF PHOTON ACTIVATION AND SOLVENT EXTRACTION.

Takeyoshi ASANO, Yuji SATOH, Kyue FUKUDA, Michiharu KITAGAWA, Ryoichi TANIGUCHI, *Research Institute for Advanced Science and Technology, University of Osaka Prefecture*, Juzo OHKUMA, Kunihiko TSUMORI, *Radiat. lab., The Institute of Scientific and Industrial research, Osaka University*.

[Activation Analysis 4](10:50-12:10)

3C05 DETERMINATION OF SILICON IN JAPANESE STANDARDS OF IRON AND STEEL BY PILE-FAST-NEUTRON ACTIVATION ANALYSIS.

Keiji TOMURA and Hiroyuki TOMURO, *Institute for Atomic Energy, Rikkyo University and Corporation MIKUNI*

- 3C06 DETERMINATION OF ALUMINUM BY CHEMICAL AND INSTRUMENTAL NEUTRON ACTIVATION ANALYSIS IN BIOLOGICAL STANDARD REFERENCE MATERIAL AND HUMAN BRAIN TISSUE.
Edward P. RACK, Alan J. BLOTCKY, John P. CLASSEN, and Felix R. ROMAN, *Department of Chemistry, University of Nebraska-Lincoln and Medical Research, Department of Veterans Affairs Medical Center.*
- 3C07 DISTRIBUTION OF ARSENIC IN HOT SPRING WATERS FROM NASU AND OTHER AREAS.
Satoshi KAWAMI, Yuko SAITO, Hiroaki HARAKAWA, and Kan KIMURA, *College of Science and Engineering, Aoyama Gakuin University.*
- 3C08 NEUTRON ACTIVATION ANALYSIS OF ENRICHED $^{168}\text{Yb}_2\text{O}_3$ TARGET FOR ^{169}Yb GAMMA SOURCES.
Satoshi WATANABE, Hiroshi KAMIOKI, Isamu ISHIKAWA, Hiroshi KUDO, *Japan Atomic Energy Research Institute.*

[Activation Analysis 5](12:10-13:30)

- 3C09 DETERMINATION OF TRACE HALOGENES IN GEOLOGICAL SAMPLES WITH RADIOCHEMICAL NEUTRON ACTIVATION ANALYSIS AND ISOTOPE DILUTION MASS SPECTROMETRY.
Taeko SINONAGA, Mitsuru EBIHARA, Hiromichi NAKAHARA, *Faculty of Science, Tokyo Metropolitan University,*
Kenji TOMURA, *Institute for Atomic Energy, Rikkyo University,*
Klaus G. HEUMANN, *Institute für Anorganische Chemie, Universität Regensburg.*
- 3C10 NOBLE METALS IN OCEAN FLOOR ROCK SAMPLES.
Shunichi ISHII, Yuko SAITO, Hiroaki HARAKAWA, Kan KIMURA, *College of Science and Engineering, Aoyama Gakuin University.*
- 3C11 DETERMINATION OF PLATINUM GROUP ELEMENTS BY NEUTRON ACTIVATION ANALYSIS.
Hiromasa OZAKI, Mitsuru EBIHARA, Hiromichi NAKAHARA, *Tokyo Metropolitan University.*
- 3C12 DETERMINATION OF Zr AND Hf IN ROCK SAMPLES BY RADIOCHEMICAL NEUTRON ACTIVATION ANALYSIS.
Haruka MINOWA¹, Mitsuru EBIHARA¹, Hiromichi NAKAHARA¹, and Chushiro YONEZAWA, *1 Tokyo Metropolitan University, 2 Japan Atomic Energy Research Institute.*