

第33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)

10月4日(水)

特別講演会場(大講義室)

座長 岩田 志郎 (13:10~14:10)

特別講演1. 加速器質量分析と最近のガンマ線スペクトロスコーピー
(広島大) 吉沢康和

A会場 (105号講義室)

〔核反応〕

座長 藤原 一郎 (9:40~10:40)

- 1A01 ^{207}Pb の ^{12}C 誘起核分裂と ^{209}Bi の ^{16}O 誘起核分裂
(都立大理) ○西中一郎・小林貴之・塚田和明・大槻 勤・末木啓介・
中原弘道
- 1A02 重イオン核反応をプローブとした超鉛元素の核分裂(II)
(都立大理・原研) ○小林貴之・末木啓介・塚田和明・大槻 勤・西中
一郎・中原弘道・初川雄一
- 1A03 T-O-F法を用いた $p+^{232}\text{Th}$ の核分裂
(都立大理・原研) ○大槻 勤・永目諭一郎・池添 博・塚田和明・馬
場澄子・橋本和幸・末木啓介・中原弘道
- 座長 坂本 浩 (10:50~12:10)
- 1A04 アクチノイドの核分裂における希土類元素の質量収率
(都立大理・原研) ○塚田和明・末木啓介・大槻 勤・小林貴之・西中
一郎・中原弘道・篠原伸夫・市川進一・星三千男・永目諭一郎

- 1A05 低エネルギー核分裂片の運動エネルギー分布
(金沢大理・都立大理) ○浜島靖典・中原弘道
- 1A06 IGISOLによる核分裂片の電荷分布の測定 (IV)
(新潟大理・東北大サイクロ) ○工藤久昭・谷川勝至・丸山昌彦・橋本
哲夫・藤岡 学・篠塚 勉・和田道治・砂押 仁
- 1A07 ^{238}U の陽子誘起核分裂における核分裂片の核異性体生成比の測定 (II)
(新潟大理・東北大サイクロ) ○谷川勝至・工藤久昭・菅原重一・橋本
哲夫・藤岡 学・篠塚 勉・和田道治・砂押 仁

<昼休み・若手研究者の会総会> 12:10~13:10
(特別講演1) 13:10~14:10

座長 今村 峯 雄 (14:20~15:40)

- 1A08 $^{232}\text{Th} + \alpha$ 系における核分裂生成核種の角度分布
(阪大理) ○湯川直樹・小林 洋・高橋成人・斎藤 直・馬場 宏
- 1A09 光核反応における残留核収率の計算 (PICAコード) について I. 一般論
(金沢大理・追手門学院大・東大核研) ○浜島靖典・坂本 浩・藤原一
郎・柴田誠一
- 1A10 光核反応における残留核収率の計算 (PICAコード) について II. 実験と
の比較
(金沢大理・追手門学院大・東大核研) ○S.R.サーカー・浜島靖典・棚
瀬 彰・坂本 浩・藤原一郎・柴田誠一
- 1A11 (γ, γ') 反応による核励起の断面積: 励起関数におけるダブルピークの有無に
ついて
(東北大理・ハンガリー同位体研) ○吉原賢二・関根 勉・Zs.Nemeth・
L.Lakosi・A.Verés

座長 工藤 久 昭 (15:50~17:10)

- 1A12 高エネルギー光子によるフラグメンテーション生成核 ^{-7}Be , ^{10}Be
(東大核研・金沢大理・追手門学院大・名大理・日大文理・東大原セ)
○柴田誠一・今村峯雄・坂本 浩・沖崎昌平・藤原一郎・古川路明・永
井尚生・小林絃一
- 1A13 ニッケル・コバルトの陽子照射による ^{55}Fe , ^{59}Ni 及び ^{63}Ni の生成反応断面積の測定
(名大理・愛知医大) ○成田 緑・篠原 厚・古川路明・小島貞男
- 1A14 $^{37}\text{Cl} + ^{68}\text{Zn}$ 及び $^{16}\text{O} + ^{89}\text{Y}$ 重イオン核反応における重粒子放出
(原研・都立大理) ○永目論一郎・池添 博・大槻 勤・塚田和明・初
川雄一・馬場澄子・畑健太郎・関根俊明・井出野一実

- 1A15 高速準単色中性子による長寿命放射性核種 ^3H , ^{26}Al 生成断面積の測定
 (東大核研・東北大RIサイクロ・日大文理・東大RIセ・東大原セ)
 ○今村峯雄・柴田誠一・上義義朋・柴田徳思・杉田 裕・中村尚司・永
 井尚生・野川憲夫・森川尚威・小林絨一

〔核変遷〕

- 座長 中原 弘 道 (17:20~18:00)
- 1A16 カリウム40壊変定数の精密測定: 圧力依存の探索と λ_{EC} の精密測定
 (東大理・東大核研・東大物性研) 草場匡宏 ○今村峯雄・八木健彦・小
 嶋 稔・比屋根肇
- 1A17 熱イオン源によるLa, Ceの放出速度
 (原研) 市川進一○関根俊明・大島真澄・飯村秀紀

B会場 (205号講義室)

〔ホットアトム化学〕

- 座長 佐伯 正 克 (9:40~10:40)
- 1B01 水溶性金属ポルフィリン錯体会合系固相における反跳に伴う錯生成素反応とその確率
 (筑波大化) 沼田 靖○荘司 準・池田長生
- 1B02 Rh(acac) $_3$ に対する ^{51}Cr の中心金属置換反応
 (東北大理) ○宮川 篤・関根 勉・吉原賢二
- 1B03 金属錯体における反跳インプランテーション反応の反応機構
 (東北大理) 関根 勉・宮川 篤・金子 勲・松江秀明○吉原賢二
- 座長 松浦 辰 男 (10:50~11:50)
- 1B04 ^{13}N /カルボン酸-dxターゲット系における ^{13}N の反応-酪酸-d $_7$ ターゲット系について-
 (立教大一般教育・立教大原研) ○泉水義大・戸村健児
- 1B05 HTTR雰囲気における放射性ヨウ素の挙動 -放射性有機ヨウ素の生成率に影響する因子-
 (原研) ○佐伯正克・佐川千明・正木信行・平林孝園・中島幹雄・荒殿
 保幸
- 1B06 トリチウム(メチル位)標識チミンの β 壊変の化学的効果
 (大放研) ○朝野武美・桐谷玲子・藤田慎一

<昼休み・若手研究者の会総会> 11:50~13:10
(特別講演1) 13:10~14:10

【メスバウアー効果】

座長 安部文敏 (14:20~15:40)

- 1B07 Ag単結晶中の ^{57}Co 不純物のInternal Oxidation
(信州大教育・Univ. of Groningen LAN) ○村松久和・W.Segeth・
L.Niesen・H.de Waard
- 1B08 γ -X同時計数法による硫酸鉄中での後遺効果の研究
(滋賀医大) ○小林隆幸・牧田知子・福村和子
- 1B09 三核鉄-コバルト錯体の発光メスバウアー分光法による研究
(都立大理) ○佐藤琢真・片田元己・中田正美・遠藤和豊・佐野博敏
- 1B10 メスバウアー分光法による不安定 ^{57}Fe 化学種の研究
(都立大理) ○中田正美・遠藤和豊・佐野博敏・為ヶ谷和美・中原弘道

座長 竹田満洲雄 (15:50~16:50)

- 1B11 メスバウアー効果による ^{119}Sb , $^{119\text{m}}\text{Te}$ のS,S_e,Te単体中における存在
状態の研究
(理研) ○安部静子・安部文敏
- 1B12 クロム化合物中に生成した ^{57}Mn の発光メスバウアースペクトル
(東大理・都立大理・理研) ○久保謙哉・三嶋謙二・富永 健・中田正
美・渡辺裕夫・遠藤和豊・中原弘道・小林義男・岩本正子・岡田卓也・
安部文敏
- 1B13 低温マトリックス中に捕捉したジメチルスタナンの紫外光分解生成物
(東大理) ○山田泰史・巻出義紘・富永 健

座長 山田康治 (17:00~18:00)

- 1B14 アンチモン(V)酸化物とその熱分解生成物の ^{121}Sb メスバウアースペクトル
(東邦大理・東工大理) ○梶谷良樹・高橋 正・竹田満洲雄・Ramesh
Chitrakar・阿部光雄
- 1B15 スズを含む超伝導セラミックスの構造と γ 線照射効果
(九大理・都立大理・近畿大九州工) ○西田哲明・片田元己・松本泰国
- 1B16 メスバウアー分光法によるリチウム・鉄複合酸化物の熱中性子照射効果の研究
(原研・都立大理) ○荒殿保幸・佐川千明・中島幹男・佐伯正克・佐藤
琢真

<ホットアトム化学分科会> (18:30~20:00)

C会場 (305号講義室)

〔放射化学分析〕

座長 木曾 義之 (9:40~10:40)

- 1C01 水溶液中の高酸化状態ルテニウムの吸着挙動
(放医研・原電) ○渡利一夫・今井靖子・竹下 洋・伊澤正實
- 1C02 放射性ニオブの分析
(筑波大化) ○吉田未知子・沼田 靖・関 李紀・池田長生
- 1C03 Redox SSE-IDA法によるテルルの定量
(静岡大理) ○宮木美典・吉岡潤江・長谷川園彦

〔放射化分析〕

座長 竹味 弘勝 (10:50~12:10)

- 1C04 標準添加内標準法による低合金鋼中の微量元素の光量子放射化分析
(東北大金研・東北大核理研) ○原 光雄・飯野栄一・榎本和義・八木益男
- 1C05 光量子放射化分析法による高純度ヒ素およびガリウム中の微量炭素の定量
(三菱金属・東北大核理研・東北大金研) ○吉岡 明・川上 紀・深谷忠廣・野村紘一・榎本和義・八木益男
- 1C06 高中性子束炉による放射化分析(1) ウラン, トリウムの高感度分析とタンタルの2重中性子吸収反応の影響
(東北大金研・武蔵工大原研) ○三頭聡明・駒 義和・八木益男・平井昭司・倉島 昇・桜井宏行
- 1C07 伊豆諸島北部火山噴出物中の微量元素の挙動
(青学大理工) ○新藤千恵子・斉藤裕子・木村 幹

<昼休み・若手研究者の会総会> 12:10~13:10
(特別講演1) 13:10~14:10

座長 榎本和義 (14:20~15:00)

- 1C08 中止
- 1C09 放射化分析による植物中の微量元素(続報)
(京大原子炉) (故) 小山睦夫○高田実弥・シャルシャル・タヘル
- 1C10 化合物半導体やその原料中の軽元素不純物の荷電粒子放射化分析
(住友鉱山・住友重機・北里大) ○戸田英二・佐々木公司・片岡昌治・垂水裕司・田沢修一・野崎 正

座長 重松俊男 (15:10~16:10)

- 1C11 放射化分析のための気送管制御システムの開発
(武蔵工大・原研) ○鈴木章悟・桂木夏子・平井昭司
- 1C12 中性子放射化分析における分析誤差の評価
(武蔵工大・原研) ○関典之・鈴木章悟・平井昭司
- 1C13 荷電粒子放射化分析による高純度希土類金属および酸化物中の不純物の定量
(東北大核理研・東北大金研) ○榎本和義・飯野栄一・八木益男

座長 野崎正 (16:20~17:40)

- 1C14 レアメタル中の軽元素の荷電粒子放射化分析 -高感度化-
(NTT光エ研) ○重松俊男・鹿野弘二
- 1C15 高純度化ニオブ中の軽元素の定量
(NTT光エ研) ○鹿野弘二・重松俊男
- 1C16 即発 γ 線中性子放射化分析によるホウ素の定量
(NTT光エ研・武蔵工大原研・NTT技術移転) ○米沢洋樹・鹿野弘二・加藤正明・松本哲夫・豊田洋・重松俊男
- 1C17 荷電粒子放射化分析によるGaAs結晶中酸素の定量方法の検討
(日本分析セ・理研・芝浦工大) ○桐田博史・福嶋浩人・小林裕・大石卓・越川昌義・三浦勉・伊東芳子・館弘樹

<放射化分析分科会>

18:30~20:00

10月5日(木)

特別講演会場 (大講義室)

座長 佐野博敏 (13:10~14:10)

特別講演2. Spin Transition in Iron Complexes Induced by Heat, Pressure, Light, and Nuclear Decay
(Johannes Gutenberg Univ.) P.Gutlich

A会場 (105号講義室)

[中間子化学・ポジトロニウム化学]

座長 篠原厚 (9:00~9:40)

- 2A01 ヘキサシアノ錯体中の正ミュオンの挙動
(東大理) ○久保謙哉・三嶋謙二・山田泰史・富永健・西山樟生・永嶺謙忠

- 2A02 高純度D₂/T₂ターゲットのミュオン照射挙動
 (原研・東大理・理研・山梨大工) ○工藤博司・永嶺謙忠・棚瀬 正和
 ・加藤孝生・梅澤弘一・松崎禎市郎・石田勝彦・西山樟生・三宅康博・
 坂元真一・渡辺 康・岩崎雅彦・島養映子

座長 富永 健 (9:40~10:20)

- 2A03 中間子原子の化学への応用Ⅱ -アセチルアセトナト錯体における中間子捕獲比-

(名大理・阪大理・高工研・京大工・追手門学院大) ○篠原 厚・古川
 路明・斎藤 直・三浦太一・吉村喜男・今西信嗣・藤原一郎

- 2A04 陽電子消滅によるゼオライト空孔のキャラクタリゼーション
 (東大原総セ) ○伊藤泰男

〔溶液化学〕

座長 佐々木 研一 (10:20~11:00)

- 2A05 テクネチウム(Ⅲ) -チオ尿素錯体とピリミジン誘導体との反応
 (原研・東北大理) ○橋本和幸・本石章司・松岡弘充・大森 鏡・吉原
 賢二

- 2A06 トリス(アセチルアセトナト) -テクネチウム(Ⅲ) およびルテニウム(Ⅲ)
 の塩基加水分解反応機構
 (東北大理) ○Abdul Mutalib・大森 鏡・吉原賢二

〔熱蛍光〕

座長 大森 鏡 (11:00~12:00)

- 2A07 極微弱光瞬間分光システムを使った天然および人工石英からの熱蛍光スペクトル
 の観測

(新潟大理) 橋本哲夫○坂井 正・小嶋素志・中田睦洋

- 2A08 放射線照射鉱物と水との反応によるH₂ガス発生の連続観測

(新潟大理) 橋本哲夫○高橋 敏・片桐秀明

- 2A09 水晶および大和隕石からの熱蛍光特性について

(新潟大理) ○橋本哲夫・中田睦洋・小嶋素志・坂井 正

<昼休み・研究連絡委員会> 12:00~13:00

<ポスターセッション(206号講義室)> 13:00~14:00

(特別講演2) 14:10~15:10

〔放射能測定〕

座長 荒谷 美智 (15:20~16:40)

- 2A10 長寿命核種 ^{138}La および ^{176}Lu の半減期測定
(金沢大理LLRL) ○小村和久・山本政儀・上野 馨
- 2A11 ニオブおよびモリブデン化合物におけるX線強度の化学的効果： $L\gamma_1$, $L\beta_{2,15}$ の比較
(東北大理・宇都宮文星短大) ○飯原順次・伊澤郡蔵・大森 颯・吉原賢二
- 2A12 Ge検出器の光電ピーク形状関数：ピーク形状のベース成分を形成する小角散乱波形関数
(熊大工) ○岸川俊明・広瀬 聡
- 2A13 TMAHを用いた液体シンチレーションカウンターによる放射性ヨウ素の測定法
(都立大理・多摩化学工業) ○堀内公子・長 俊連・清水駿平・赤羽勤子・村上悠紀雄

B会場 (205号講義室)

〔メスバウアー効果〕

座長 荘 司 準 (9:00~10:00)

- 2B01 ^{119}Sn メスバウアー効果によるマグネシウムフェライト中のカチオン分布
(広島大理) ○安藤 学・酒井 宏・山田康治・市坡純雄
- 2B02 $\text{Fe}_{3-x}\text{Sn}_x\text{O}_4$ の酸化における ^{119}Sn メスバウアー効果
(広島大理) ○鳥 嵩修治・山田康治・市坡純雄
- 2B03 トリヨードスズ(II)酸塩の電気伝導度と ^{119}Sn メスバウアー効果
(広島大理) ○松井 貴・山田康治・奥田 勉・市坡純雄

座長 前田 米 蔵 (10:00~11:00)

- 2B04 $(\text{C}_n\text{H}_{2n+1}\text{NH}_3)_2\text{SnBr}_6$ ($n=0,2,4$)のメスバウアー分光学的研究
(都立大理) 米山美景 ○片田元己・佐野博敏
- 2B05 メスバウアー分光法による酸素欠損ペロブスカイト $\text{Ba}_{1-x}\text{La}_x\text{FeO}_{3-y}$ の研究
(東工大総合理工・Univ. of Leeds) ○松尾基之・T.C.Gibb
- 2B06 有機金属錯体の機能開発に於けるメスバウアースペクトルの利用
(阪大理・広島大理) ○宮永清一・檜原昭男・安田 源・中村 晃・酒井 宏

座長 酒井 宏 (11:00~12:00)

- 2B07 Fe(III) 錯体高分子におけるスピントロニクス挙動
(九大理) 前田米蔵○宮本 誠・大塩寛紀・高島良正
- 2B08 "Ship-in-Bottle" 法を用いたゼオライト細孔中のフタロシアニン鉄(II)の反応と存在状態
(東大理・東水大水産) ○田中美穂・酒井陽一・栗袋佳孝・渡部徳子・富永 健
- 2B09 群馬県西部新第三紀火山岩のメスbauer分光学的研究
(都立大理・東邦大理) ○遠藤和豊・矢永誠人・為ヶ谷和美・高橋 正・竹田満洲雄・海老原充・中原弘道

<昼休み・研究連絡委員会> 12:00~13:00
<ポスターセッション(206号講義室)> 13:00~14:00
(特別講演2) 14:10~15:10

座長 片田 元己 (15:20~16:20)

- 2B10 Bi₂O₃-TeO₂系における¹²⁵Teメスbauer効果
(北大理・広島大理) 菊地 武○酒井 宏
- 2B11 機能性テルル酸塩ガラスの骨格構造とγ線照射効果
(九大理) 西田哲明○山田美保・高島良正
- 2B12 機能性ガリウム酸塩ガラス及びアルミン酸塩ガラスの局所構造とγ線照射効果
(九大理) 西田哲明○井手博史・高島良正

座長 佐藤 春雄 (16:20~17:00)

- 2B13 メスbauerスペクトルの測定及び分子軌道計算による¹²¹Sb核定数ΔR/Rの評価(2)
(都立大理・高工研・東邦大理) ○矢永誠人・生田 茂・遠藤和豊・中原弘道・三浦太一・高橋 正・竹田満洲雄
- 2B14 ⁹⁹Rhを親核とする⁹⁹Ruのγ線振動角相関の測定
(理研) ○大久保嘉高・柳田保雄・安部文敏

C会場 (305号講義室)

[環境放射能]

座長 小村 和久 (9:00~10:00)

- 2C01 メタノール液シン法による現代大気中¹⁴Cの観測
(大放研) ○柴田せつ子・川野瑛子・河村俊一・虎谷博一
- 2C02 気相におけるラドン娘核種の物理化学的挙動
(高工研) ○近藤健次郎・沖 雄一・三浦太一・鈴木健訓・野口正晴

2C03 ウラン鉱床周辺の地下水および地表水中のウラン同位体
(金沢大理) 中西 孝○浜 克宏

座長 百島 則幸 (10:00~11:00)

2C04 天然水中のU同位体比測定及び時間相関(TIA)法によるTh系列核種測定
での改良

(新潟大理) 橋本哲夫○久保田知明・野口雅美

2C05 温泉水の環境変化に伴ったウラン・トリウム壊変系列核種の分布

(青学大理工) ○矢板 毅・木村 幹

2C06 低温海水からのプルトニウム, アメリシウムの鉄共沈

(金沢大理) ○中西 孝・佐藤光吉

座長 中西 孝 (11:00~12:00)

2C07 Irish Seaの海岸および河口の堆積物における ^{237}Np , $^{239,240}\text{Pu}$, ^{241}Am の
分布

(筑波大化・楸丸文) ○金 昌奎・高久雄一・関 李紀・池田長生

2C08 Irish海沿岸堆積物中の ^{237}Np , Pu 同位体および ^{241}Am の分布と挙動

(金沢大理LLRL・福井衛研・North Wales Univ.) ○山内喜通・山本
政儀・小村和久・上野 馨・五十嵐修一・D.J.Assinder

2C09 桜島とその周辺地域の大气および火山灰中の ^{210}Pb , ^{210}Po

(金沢大理LLRL) ○内田賢吾・小村和久・山本政儀・上野 馨

<昼休み・研究連絡委員会>

12:00~13:00

<ポスターセッション(206号講義室)>

13:00~14:00

(特別講演2)

14:10~15:10

座長 橋本 哲夫 (15:20~16:00)

2C10 環境放射能の土壌中における分布と移動

(九大RIセ・九大理) ○杉原真司・大崎 進・野村元成・高島良正

2C11 ^{90}Sr と ^{137}Cs の樹木中での分布と森林生態系における元素サイクル

(九大理・ORNL) ○百島則幸・E.A.Bondietti

座長 吉原 賢二 (16:00~17:00)

2C12 表面障壁型Siを用いた低バックグラウンド β 線測定器の特性と環境試料への
適用

(金沢大理LLRL) ○小村和久・宮下文和・山本政儀・上野 馨

2C13 環境中の ^{99}Tc の分析

(九大理) 松岡信明○井上尚子・岡村正紀・百島則幸・高島良正

- 2C14 ICP-MSによる環境中の⁹⁹Tcの定量
(筑波大化) ○森田重光・高久雄一・金 昌奎・大辻真紀子・関 李紀
・池田長生

ポスターセッション (206号講義室, 13:00~14:00)

- P-01 波形弁別法による液体α放射能インラインモニターの開発
(原研) ○白田重和・三原 明・阿部 仁
- P-02 銅フタロシアニンにおける⁶⁴Cuと⁶⁶Cuのリテンションの同位体効果
(立教大原研・立教大一般・筑波大化) ○松浦辰男・佐々木研一・荘司
準
- P-03 大気中の人工放射性核種濃度の経時変化(1974年から現在まで)
(名大理・愛知医大) ○古川路明・小島貞男・松田正幸
- P-04 加速器質量分析による¹⁰Be・¹⁴C・²⁶Alの測定
(日大文理・東大核研・東大原子力セ・東大理・東大宇宙線研・共立薬
大) ○永井尚生・今村峯雄・小林絃一・吉田邦夫・大橋英雄・吉川英樹
・山下 博・本田雅健
- P-05 重イオン線型加速器の重元素多層膜評価への応用
(理研・東芝総研) ○荒谷美智・矢野倉実・南 正樹・斎藤和男
- P-06 PIXE法によるTb-Fe薄膜の分析
(広島大工) ○田中慎二・坂本浩基・広川 健・西山文隆・木曾義之

10月6日(金)

B会場 (205号講義室)

[メスbauer効果]

座長 遠藤和豊 (9:00~10:20)

- 3B01 金釘のさびの化学種と環境評価
(九大理) ○前田米蔵・松尾 豊・高島良正
- 3B02 生物起源磁性体のメスbauer効果
(京大原子炉・広島大理・マードック大) ○前田 豊・酒井 宏・
J. Webb
- 3B03 マイクロチャンネルプレートを使用したエネルギー選別内部転換電子メスbauer
分光器の改良とその応用
(東理大理) ○三橋正充・佐藤春雄
- 3B04 4.2K付近でのCEMSによる表面酸化物の磁性
(滋賀医大・京大RIセ・京大化研) ○小林隆幸・福村和子・五十橋泰
人・片野林太郎

〔低温核融合〕

座長 立川 圓造 (10:20~11:00)

3B05 電解電極中の水素重水素の定量と分布測定 (低温核融合に対する電極中水素の分析というアプローチ)

(理研) ○矢野倉実・谷畑勇夫・荒谷美智・南 正樹・吉良 爽・中林誠一郎・山形 定

3B06 チタン-重水素系からの速中性子放出

(東北大金研・東北大核理研) ○八木益男・塩川佳伸・原 光雄・佐藤伊佐務・三頭聡明・榊本和義・鈴木伸介

〔加速器とその応用〕

座長 八木 益男 (11:00~12:20)

3B07 ^{95m}Tc の製造

(原研) ○松岡弘充・出雲三四六・反田孝美・永目諭一郎・関根俊明・馬場澄子

3B08 ラザフォード散乱分析によるガラス中の陽イオン交換の測定

(北里大衛生・理研) ○新沢和裕・荒谷美智・矢野倉実・野崎 正

3B09 RBS法によるTbFe薄膜の分析

(広島大工) ○坂本浩基・田中慎二・広川 健・西山文隆・木曾義之

3B10 IP-PIXE法によるAl中の微量元素の分析

(広島大工) ○池田浩美・広川 健・西山文隆・木曾義之

C会場 (305号講義室)

〔環境放射能〕

座長 近藤 健次郎 (9:00~9:40)

3C01 近年の降水・河川水のトリチウム濃度

(新潟大災害研・新潟大理) ○仲川隆夫・佐藤 修・橋本哲夫

3C02 酸素プラズマ法を用いた大量試料燃焼装置の開発

(九大工・九環協・九大理) ○岡井富雄・松岡信明・高島良正

座長 木村 幹 (9:40~10:40)

3C03 海洋環境におけるトリチウムの挙動

(九大RIセ・九大理) ○加治俊夫・百島則幸・高島良正

- 3C04 環境試料の ^{129}I のTMAH-アルカリ分解法による定量法 I 酸化・還元サイクルにおけるヨウ素のロスに関するトレーサー実験について
(多摩化学工業・北里環境科学セ) ○清水駿平・赤羽勤子・長 俊連・長 連英・村上悠紀雄
- 3C05 リン灰石に濃集したウラン核種の挙動
(地質調査所) ○金井 豊・坂巻幸雄

〔アクチノイド化学〕

座長 菅 沼 英 夫 (10:40~11:20)

- 3C06 β -ジケトンキレートを用いた化学気相析出法によるアクチナイド酸化物の合成
(東北大金研・金沢大医技短) ○塩川佳伸・天野良平・野村 晃・八木益男
- 3C07 β -ジケトンキレートを用いた化学気相析出法によるアクチナイド硫化物の合成
(金沢大医技短・東北大金研) ○天野良平・塩川佳伸・八木益男

座長 三 頭 聡 明 (11:20~12:20)

- 3C08 $^{247,248}\text{Es}$ のアルファ壊変の部分半減期
(原研・都立大理・Univ. of California, Berkeley) ○初川雄一・中原弘道・H.L.Hall・K.E.Gregorich・D.C.Hoffman
- 3C09 水生フミン質のキャラクタリゼーション並びにアメリカシウム(III)との錯形成
(フロリダ州立大) ○薬袋佳孝・G.R.Choppin
- 3C10 混合溶媒(水-メタノール)中における Eu^{3+} と F^- の相互作用の研究
(静岡大理・フロリダ州立大) ○菅沼英夫・G.R.Choppin

LIST OF PAPERS

Presented at

THE 33rd SYMPOSIUM ON RADIOCHEMISTRY

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OCTOBER 4-6, 1989
HIGASHISENDA CAMPUS
HIROSHIMA UNIVERSITY
HIROSHIMA

Wednesday, October 4

PLENARY LECTURE 13:10-14:10

PL01 ACCELERATOR MASS SPECTROSCOPY AND RECENT GAMMA-RAY SPECTROSCOPY
Department of Physics, Faculty of Science, Hiroshima University
Yasukazu YOSHIZAWA

Lecture Session

[Nuclear Reaction]

(9:40-10:40)

1A01 ^{12}C INDUCED FISSION OF ^{207}Pb AND ^{16}O INDUCED FISSION OF ^{209}Bi
Faculty of Science, Tokyo Metropolitan University, Ichiro NISHINAKA, Takayuki
KOBAYASHI, Kazuaki TSUKADA, Tsutomu OHTSUKI, Keisuke SUEKI and Hiromichi
NAKAHARA

1A02 STUDIES OF THE MODE OF MASS DIVISION IN THE FISSION OF TRANS-LEAD ELEMENTS(II)
Faculty of Science, Tokyo Metropolitan University, Takayuki KOBAYASHI, Keisuke
SUEKI, Kazuaki TSUKADA, Tsutomu OHUTSUKI, Ichiro NISHINAKA, Hiromichi NAKAHARA
Japan Atomic Energy Research Institute, Yuichi HATSUKAWA

1A03 PROTON-INDUCED FISSION OF ^{232}Th BY MEANS OF A TIME-FLIGHT METHOD
Faculty of Science, Tokyo Metropolitan University, Tsutomu OHTSUKI, Kazuyuki
TSUKADA, Keisuke SUEKI, and Hiromichi NAKAHARA
Tokai Research Establishment, Japan Atomic Energy Research Institute, Yuichi
NAGAME, Hiroshi IKEZOE, Sumiko BABA, Kazuyuki HASHIMOTO

(10:50-12:10)

1A04 MASS YIELD OF RARE EARTH ELEMENTS IN FISSION OF ACTINIDES
Faculty of Science, Tokyo Metropolitan University, Kazuaki TSUKADA, Keisuke
SUEKI, Tsutomu OHTSUKI, Takayuki KOBAYASHI, Ichiro NISHINAKA, Hiromichi
NAKAHARA
Tokai Research Establishment, Japan Atomic Energy Research Institute, Nobuo
SHINOHARA, Sin-ichi ICHIKAWA, Michio HOSHI, Yuichiro NAGAME

- 1A05 KINETIC ENERGY DISTRIBUTIONS IN LOW-ENERGY NUCLEAR FISSION
Faculty of Science, Kanazawa University, Yasunori HAMAJIMA
Faculty of Science, Tokyo Metropolitan University, Hironichi NAKAHARA
- 1A06 STUDY ON CHARGE DISPERSION OF FISSION PRODUCTS BY USE OF IGISOL(IV)
Faculty of Science, Niigata University, Hisaaki KUDO, Masashi TANIKAWA,
Masahiko MARUYAMA, Tetsuo HASHIMOTO
Tohoku University, Cyclotron Radioisotope Center, Manabu FUJIOKA, Tsutomu
SHINOZUKA, Michiharu WADA, Hitoshi SUNAOSHI
- 1A07 ISOMERIC YIELD RATIO OF FISSION PRODUCTS IN PROTON-INDUCED FISSION OF $^{238}\text{U}(2)$
Faculty of Science, Niigata University, Masashi TANIKAWA, Hisaaki KUDO,
Shigekazu SUGAWARA, Tetsuo HASHIMOTO
Tohoku University, Cyclotron Radioisotope Center, Manabu FUJIOKA, Tsutomu
SHINOZUKA, Michiharu WADA, Hitoshi SUNAOSHI

(Lunch Time 12:10-13:10)

(PLENARY LECTURE PL01 13:10-14:10)

[Nuclear Reaction] (Continued)

(14:20-15:40)

- 1A08 ANGULAR DISTRIBUTION OF FISSION PRODUCTS IN THE $^{232}\text{Th}+\alpha$ SYSTEM
Faculty of Science, Osaka University, Naoki YUKAWA, Hiroshi KOBAYASHI, Naruto
TAKAHASHI, Tadashi SAITO, Hiroshi BABA
- 1A09 YIELD CALCULATION OF PHOTONUCLEAR REACTION PRODUCTS BY PICA CODE.I. GENERAL
Faculty of Science, Kanazawa University, Yasunori HAMAJIMA, Koh SAKAMOTO
School of Economics, Ottemongakuin University, Ichiroh FUJIWARA,
Institute for Nuclear Science, University of Tokyo, Seiichi SHIBATA
- 1A10 YIELD CALCULATION OF PHOTONUCLEAR REACTION PRODUCTS BY PICA CODE.II-COMPARISON
OF PICA RESULTS WITH EXPERIMENTAL OBSERVATIONS
Faculty of Science, Kanazawa University, Samir Ranjan SARKAR, Yasunori
HAMAJIMA, Akira KUNUGISE, Koh SAKAMOTO
School of Economics, Ottemongakuin University, Ichiro FUJIWARA,
Institute for Nuclear Study, University of Tokyo, Seiichi SHIBATA

1A11 CROSS SECTION OF (γ , γ') NUCLEAR EXCITATION REACTION: EXISTENCE OF DOUBLE PEAKS IN ITS EXCITATION FUNCTION

Faculty of Science, Tohoku University, Kenji YOSHIHARA, Tsutomu SEKINE
Institute of Isotopes, Zs. Nemeth, L. Lakosi, A. Veres

(15:50-17:10)

1A12 ^7Be AND ^{10}Be PRODUCTIONS IN FRAGMENTATION PROCESS WITH HIGH ENERGY PHOTONS

Inst. for Nucl. Study, Univ. of Tokyo¹, Fac. of Sci., Kanazawa Univ.², Ottemongakuin Univ.³, Fac. of Sci., Nagoya Univ.⁴, Coll. of Humanities and Sci., Nihon Univ.⁵, Res. Center for Nucl. Sci. and Tech., Univ. of Tokyo⁶, Seiichi SHIBATA¹, Mineo IMAMURA¹, Koh SAKAMOTO², Shohei OKIZAKI², Ichiro FUJIWARA³, Michiaki FURUKAWA⁴, Hisao NAGAI⁵ and Kohichi KOBAYASHI⁶

1A13 PRODUCTION OF ^{55}Fe , ^{59}Ni AND ^{63}Ni FROM COBALT AND NICKEL IRRADIATED WITH PROTONS

Faculty of Science, Nagoya University, Midori NARITA, Atsushi SHINOHARA, Michiaki FURUKAWA
Radioisotope Research Center, Aichi Medical University, Sadao KOJIMA

1A14 COMPLEX FRAGMENT EMISSION IN THE REACTIONS $^{37}\text{Cl}+^{68}\text{Zn}$ AND $^{16}\text{O} + ^{89}\text{Y}$

Tokai Research Establishment, Japan Atomic Energy Research Institute, Yuichiro NAGAME, Hiroshi IKEZOE, Yuichi HATSUKAWA, Sumiko BABA, Kentaro HATA and Kazumi IDENO
Faculty of Science, Tokyo Metropolitan University, Tsutomu OHTSUKI, Kazuaki TSUKADA

1A15 NEUTRON-INDUCED PRODUCTION CROSS SECTIONS OF LONG-LIVED RADIONUCLIDE, ^3H AND ^{26}Al - MEASUREMENT WITH SEMI-MONOENERGETIC FAST NEUTRONS

Inst. for Nucl. Study, Univ. of Tokyo¹, CYRIC, Tohoku Univ.², Coll. of Humanities and Sci., Nihon Univ.³, RI Centre, Univ. of Tokyo⁴, Res. Center for Nucl. Sci. and Tech., Univ. of Tokyo⁵
Mineo IMAMURA¹, Seiichi SHIBATA¹, Yoshitomo UWAMINO¹, Tokushi SHIBATA¹, Hiroshi SUGITA², Takashi NAKAMURA², Hisao NAGAI³, Norio NOGAWA⁴, Naotake MORIKAWA⁴ and Kohichi KOBAYASHI⁵

[Nuclear Decay]

(17:20-18:00)

- 1A16 DETAILED MEASUREMENT OF POTASSIUM 40 ELECTRON CAPTURE DECAY, AND THE
COMPRESSIONAL AND CHEMICAL EFFECT TO ITS DECAY CONSTANT
Faculty of Science, Tokyo University, Masahiro KUSABA, Minoru OZIMA, Hajime
HIYAGON, Satoshi WATANABE
Institute for Nuclear Study, Mineo IMAMURA
Institute for Solid State Physics, Takehiko YAGI
- 1A17 RELEASE SPEEDS OF La AND Ce FROM A THERMAL ION SOURCE
Japan Atomic Energy Research Institute, Shin-ichi ICHIKAWA, Toshiaki SEKINE,
Hideki IIMURA, Masumi OSHIMA

[Hot Atom Chemistry]

(9:40-10:40)

- 1B01 THE REACTION PROBABILITY IN ELEMENTARY PROCESSES OF COMPLEX FORMATION
ACCOMPANYING RECOILS IN SOLID WATER-SOLUBLE METALLOPORPHYRIN ASSOCIATES
Department of Chemistry, University of Tsukuba, Yasushi NUMATA, Hitoshi SHOJI,
Nagao IKEDA
- 1B02 SUBSTITUTION REACTION OF CENTRAL METAL ATOM OF ^{51}Cr IMPLANTED INTO $\text{Rh}(\text{acac})_3$
Faculty of Science, Tohoku Univ., Atsushi MIYAKAWA, Tsutomu SEKINE, Kenji
YOSHIHARA
- 1B03 MECHANISM OF RECOIL IMPLANTATION REACTIONS IN METAL COMPLEXES
Faculty of Science, Tohoku University, Tsutomu SEKINE, Atsushi MIYAKAWA, Isao
KANEKO, Hideaki MATSUE, Kenji YOSHIHARA

(10:50-11:50)

- 1B04 REACTION OF ^{13}N FORMED IN PILE-IRRADIATED CARBOXYLIC ACID- d_x (II) - ^{13}N /BUTYRIC
- d_7 ACID SYSTEM
Faculty of General Education, Rikkyo University, Yoshihiro SENSUI
Institute for Atomic Energy, Rikkyo University, Kenji TOMURA

1B05 BEHAVIOR OF RADIOACTIVE IODINE IN HTTR ATMOSPHERE -FACTORS INFLUENCING ON YIELD OF RADIOACTIVE ORGANICIODIDE-
Department of Chemistry, Japan Atomic Energy Research Institute, Masakatsu SAEKI, Chiaki SAGAWA, Nobuyuki MASAKI, Takakuni HIRABAYASHI, Mikio NAKASHIMA, Yasuyuki ARATONO

1B06 CHEMICAL EFFECTS OF β -DECAY IN [METHYL- ^3H] THYMINE IN OXYGENATED AQUEOUS SOLUTION
Osaka Prefectural Radiation Research Institute, Takeyoshi ASANO, Reiko KIRITANI, Shinichi FUJITA

(Lunch Time 11:50-13:10)

(Plenary Lecture PL01 13:10-14:10)

[Mossbauer Effect]

(14:20-15:40)

1B07 INTERNAL OXIDATION OF Co IMPURITY IN SILVER SINGLE CRYSTAL
Faculty of Education, Shinshu University, Hisakazu MURAMATSU
Laboratorium voor Algemene Natuurkunde, Rijksuniversiteit Groningen, Woulter SEGETH, Lambertus NIESEN, Hendric DE WAARD

1B08 GAMMA-X RAY COINCIDENCE MOSSBAUER SPECTROSCOPIC STUDY OF THE AFTEREFFECT IN SULFATE HYDRATES
Department of Physics, Shiga University of Medical Science, Takayuki KOBAYASHI Tomoko MAKITA, Kazuko FUKUMURA

1B09 EMISSION MOSSBAUER SPECTROSCOPIC STUDY OF TRINUCLEAR IRON-COBALT COMPLEXES
Faculty of Science, Tokyo Metropolitan University, Takuma SATO, Motomi KATADA, Masami NAKADA, Kazutoyo ENDO, Hirotoishi SANO

1B10 INVESTIGATION OF UNSTABLE ^{57}Fe -SPECIES USING MOSSBAUER SPECTROSCOPY
Department of Chemistry, Faculty of Science, Tokyo Metropolitan University, Masami NAKADA, Kazumi TAMEGAYA, Kazutoyo ENDO, Hiromichi NAKAHARA, Hirotoishi SANO

(15:50-16:50)

- 1B11 MOSSBAUER STUDIES ON CHEMICAL STATES OF ^{119}Sb AND $^{119\text{m}}\text{Te}$ IN S, Se, AND Te
The Institute of Physical and Chemical Research, Shizuko AMBE, Fumitoshi AMBE
- 1B12 EMISSION MOSSBAUER SPECTRA OF ^{57}Mn PRODUCED IN CHROMIUM COMPOUNDS
Faculty of Science, the University of Tokyo, M. Kenya KUBO, Kenji MISHIMA,
Takeshi TOMINAGA
Faculty of Science, Tokyo Metropolitan University, Masami NAKADA, Yasuo
WATANABE, Kazutoyo ENDO, Hiromichi NAKAHARA
RIKEN, Yoshio KOBAYASHI, Masao IWAMOTO, Takuya OKADA, Fumitoshi AMBE
- 1B13 UV-PHOTOLYSIS OF DIMETHYLSTANNANE IN LOW TEMPERATURE Ar MATRIX
Faculty of Science, The University of Tokyo, Yasushi T.YAMADA, Takeshi
TOMINAGA
Radioisotope Centre, The University of Tokyo, Yoshihiro MAKIDE

(17:00-18:00)

- 1B14 ^{121}Sb MOSSBAUER SPECTRA OF ANTIMONY(V) OXIDES AND THERMAL DECOMPOSITION
PRODUCTS OF AN ANTIMONIC ACID
Faculty of Science, Toho University, Yoshiki KAJITANI, Masashi TAKAHASHI,
Masuo TAKEDA
Faculty of Science, Tokyo Institute of Technology, Ramesh CHITRAKAR, Mitsuo
ABE
- 1B15 STRUCTURE AND γ -RAY IRRADIATION EFFECT OF SUPERCONDUCTING CERAMICS CONTAINING
TIN
Faculty of Science, Kyushu University, Tetsuaki NISHIDA
Faculty of Science, Tokyo Metropolitan University, Motomi KATADA, Faculty of
Engineering, Kinki University in Kyushu, Yasukuni MATSUMOTO
- 1B16 STUDY ON CHEMICAL EFFECTS OF THERMAL NEUTRON IRRADIATION OF α - LiFeO_2 BY
MOSSBAUER SPECTROSCOPY
Division of Chemistry, Japan Atomic Energy Research Institute, Yasuyuki
ARATONO, Chiaki SAGAWA, Mikio NAKASHIMA, Masakatsu SAEKI
Faculty of Science, Tokyo Metropolitan University, Takuma SATO

(Hot Atom Chemistry Group Meeting 18:30-20:00)

[Radiochemical Analysis]

(9:40-10:40)

1C01 ADSORPTION BEHAVIOR OF HIGH OXIDATION STATE RUTHENIUM IN AQUEOUS SOLUTION

National Institute of Radiological Sciences, Kazuo WATARI, Kiyoko IMAI,
Hirosi TAKESHITA
Japan Atomic Power Co., Masami IZAWA

1C02 ANALYSIS OF RADIOACTIVE NIOBIUM

Department of Chemistry, University of Tsukuba, Michiko YOSHIDA, Riki SEKI,
Nagao IKEDA
Faculty of Engineering, Nihon University, Yasushi NUMATA

1C03 DETERMINATION OF TELLURIUM BY REDOX SSE-IDA METHOD

Faculty of Science, Shizuoka University, Yoshinori MIYAKI,
Hiroe YOSHIOKA, Kunihiro HASEGAWA

[Activation Analysis]

(10:50-12:10)

1C04 PHOTON ACTIVATION ANALYSIS OF TRACE ELEMENTS IN LOW-ALLOY STEELS USING THE
INTERNAL STANDARD METHOD COUPLED WITH THE STANDARD ADDITION METHOD

Institute for Materials Research, Tohoku University, Mitsuo HARA, Eiichi IINO,
Masuo YAGI
Laboratory of Nuclear Science, Faculty of Science, Tohoku University,
Kazuyoshi MASUMOTO

1C05 DETERMINATION OF LOW CONCENTRATION CARBON IN HIGH-PURITY ARSENIC AND GALLIUM
BY PHOTON ACTIVATION ANALYSIS

Mitsubishi Metal Co., Akira YOSHIOKA, Osamu KAWAKAMI, Tadahiro FUKAYA, Koichi
NOMURA
Laboratory of Nuclear Science, Tohoku University, Kazuyoshi MASUMOTO
Institute for Materials Research, Tohoku University, Masuo YAGI

1C06 NEUTRON ACTIVATION ANALYSIS BY THE USE OF HIGH FLUX REACTOR(I). HIGHLY SENSITIVE ANALYSIS OF URANIUM AND THORIUM AND THE SPECIFIC INTERFERENCE BY NEUTRON DOUBLE CAPTURE OF TANTALUM
Institute for Materials Research, Tohoku University, Toshiaki MITSUGASHIRA, Yoshikazu KOMA, Masuo YAGI
Atomic Energy Research Laboratory, Musashi Institute of Technology, Shoji HIRAI, Noboru KURASHIMA, Hiroyuki SAKURAI

1C07 BEHAVIOR OF THE MINOR ELEMENTS IN THE EJECTA FROM NORTHERN IZU ISLANDS
College of Science and Engineering, Aoyama Gakuin University, Chieko SHINDO, Yuko SAITO, Kan KIMURA

(Lunch Time 12:10-13:10)

(Plenary Lecture PL01 13:10-14:10)

[Activation Analysis] (Continued)

(14:20-15:00)

1C09 NEUTRON ACTIVATION ANALYSIS OF TRACE ELEMENTS IN PLANTS(II)
Research Reactor Institute, Kyoto University, the late Mutsuo KOYAMA, Jitsuya TAKADA, Sharshar TAHER

1C10 CHARGED PARTICLE ACTIVATION ANALYSIS OF LIGHT IMPURITY ELEMENTS IN COMPOUND SEMICONDUCTOR MATERIALS AND RELATED SUBSTANCES
Sumitomo Metal Mining Co., Sumitomo Heavy Industries Ltd., Kitasato University
Eiji TODA, Kouji SASAKI, Syoji KATAOKA, Syuichi TAZAWA, Yuji TARUMI, Tadashi NOZAKI

(15:10-16:10)

1C11 DEVELOPMENT OF PNUMATIC TRANSFER SYSTEM FOR NEUTRON ACTIVATION ANALYSIS
Atomic Energy Research Laboratory, Musashi Institute of Technology, Shogo SUZUKI, Natsuko KATSURAGI, Shoji HIRAI

1C12 ESTIMATION OF ANALYTICAL ERRORS IN NEUTRON ACTIVATION ANALYSIS
Atomic Energy Research Laboratory, Musashi Institute of Technology, Noriyuki SEKI, Shogo SUZUKI, Shoji HIRAI

1C13 DETERMINATION OF TRACE IMPURITIES IN HIGH PURITY RARE EARTH METALS AND OXIDES
BY CHARGED PARTICLE ACTIVATION ANALYSIS

Laboratory of Nuclear Science, Tohoku University, Kazuyoshi MASUMOTO
Institute for Material Research, Tohoku University, Eiichi IINO, Masuo YAGI

(16:20-17:40)

1C14 CHARGED PARTICLE ACTIVATION ANALYSIS OF LIGHT ELEMENTS IN RARE METALS(1)
NTT Opto-electronics Laboratories, Toshio SHIGEMATSU, Koji SHIKANO

1C15 DETERMINATION OF LIGHT ELEMENTS IN HIGHLY PURE NIOBIUM
NTT Opto-electronics Laboratories, Koji SHIKANO, Toshio SHIGEMATSU

1C16 DETERMINATION OF BORON BY NEUTRON CAPTURE PROMPT GAMMA RAY ANALYSIS
NTT Opto-electronics Laboratories, Hiroki YONEZAWA, Koji SHIKANO, Masaaki
KATOH, Toshio SHIGEMATSU
Atomic Energy Research Laboratory, Musashi Institute of Technology, Tetsuo
MATSUMOTO
NTT Technology Transfer Corporation, Hiroshi TOYODA

1C17 DETERMINATION OF OXYGEN IN GALLIUM ARSENIDE BY CHARGED -PARTICLE ACTIVATION
ANALYSIS
Japan Chemical Analysis Center, Hiroshi KIRITA, Hiroto FUKUSHIMA, Yoshiaki
IMAZAWA, Takashi OOISHI, Yasushi KOBAYASHI, Masayoshi KOSHIKAWA, Tutomu MIURA
The Institute of Physical and Chemical Research, Yoshiko ITOH
Shibaura Institute of Technology, Kohjyu TACHI

Thursday, October 5

PLENARY LECTURE 13:10-14:10

PLO2 SPIN TRANSITION IN IRON COMPLEXES INDUCED BY HEAT, PRESSURE, LIGHT, AND NUCLEAR DECAY

Institut für Anorganische Chemie und Analytische Chemie, Johannes Gutenberg-Universität
P. Gutlich

Lecture Session

[Meson Chemistry-Positronium Chemistry]

(9:00-9:40)

2A01 POSITIVE MUONS IN HEXACYANO METAL COMPLEXES

Faculty of Science, the University of Tokyo,
M. Kenya KUDO, Kenji MISHIMA, Yasushi YAMADA, Takeshi TOMINAGA,
Kusuo NISHIYAMA, Kanetada NAGAMINE

2A02 MUON IRRADIATION BEHAVIOR OF HIGHLY PURE D₂/T₂ TARGET

Department of Radioisotopes, Japan Atomic Energy Research Institute, Hiroshi KUBO, Masakazu TANASE, Mineo KATO, Hirokazu UMEZAWA, Faculty of Science, University of Tokyo, Kanetada NAGAMINE, Kusuo NISHIYAMA, Yasuo MIYAKE, Shinichi SAKAMOTO, Yasushi WATANABE, Masahiko IWASAKI, Institute for Physical and Chemical Research, Teichiro MATSUZAKI, Katsuhiko ISHIDA, Faculty of Engineering, Yamanashi University, Eiko TORIGAI

(9:40-10:20)

2A03 CHEMISTRY OF MESONIC ATOMS II -PION CAPTURE RATIOS IN SOME ACETYLACETONATO METAL COMPLEXES-

Faculty of Science, Nagoya University, Atsushi SHINOHARA, Michiaki FURUKAWA, Faculty of Science, Osaka University, Tadashi SAITO
National Laboratory for High Energy Physics, Taichi MIURA, Yoshio YOSHIMURA
Faculty of Technology, Kyoto University, Nobutugu IMANISHI
Ottemon Gakuin University, Ichiro FUJIWARA

2A04 CHARACTERIZATION OF SYNTHETIC ZEOLITES BY POSITRON ANNIHILATION
Research Center for Nuclear Science and Technology, Univ. of Tokyo, Yasuo ITO

[Solution Chemistry]

(10:20-11:00)

2A05 REACTION OF TECHNETIUM(III)-THIOUREA COMPLEX WITH PYRIMIDINE DERIVATIVES
Tokai Research Establishment, Japan Atomic Energy Research Institute, Kazuyuki
HASHIMOTO, Shoji MOTOISHI, Hiromitsu MATSUOKA
Faculty of Science, Tohoku University, Takashi OMORI, Kenji YOSHIHARA

2A06 MECHANISM OF THE BASE HYDROLYSIS REACTIONS OF TRIS(ACETYLACETONATO)-TECHNETIUM
(III) AND RUTHENIUM(III)
Faculty of Science, Tohoku University, Abdul MUTALIB, Takashi OMORI, Kenji
YOSHIHARA

[Thermoluminescence]

(11:00-12:00)

2A07 MEASUREMENTS OF THERMOLUMINESCENT SPECTRA FROM NATURAL AND SYNTHETIC QUARTZ
USING PMA (PHOTONIC MULTICHANNEL ANALYZER) SYSTEM
Faculty of Science, Niigata University, Tetsuo HASHIMOTO, Tadashi SAKAI,
Motoshi KOJIMA, Mutsuhiro NAKADA

2A08 CONTINUOUS MEASUREMENT OF H₂ GAS EVOLUTION BASED ON REACTION OF GAMMA-
IRRADIATED NATURAL MINERALS WITH WATER
Faculty of Science, Niigata University, Tetsuo HASHIMOTO, Satoshi TAKAHASHI,
Hideaki KATAGIRI

2A09 THERMOLUMINESCENT PROPERTIES OF NATURAL QUARTZ CRYSTAL AND THREE METEORITES
(YAMATO) FROM SOUTH POLE
Faculty of Science, Niigata University, Tetsuo HASHIMOTO, Mutsuhiro NAKADA,
Motoshi KOJIMA, Tadashi SAKAI

(Lunch Time 12:00-13:00)

(Poster Session 13:00-14:00)

(Plenary Lecture PL02 14:10-15:10)

[Radioactivity Measurements]

(15:20-16:40)

- 2A10 MEASUREMENT OF THE HALF-LIVES OF LONG-LIVED ^{138}La AND ^{176}Lu
Low Level Radioactivity Laboratory, Kanazawa University, Kazuhisa KOMURA,
Fumikazu MIYASHITA, Masayoshi YAMAMOTO, Kaoru UENO
- 2A11 CHEMICAL EFFECT OF INTENSITY OF LX-RAYS IN THE NIOBIUM AND MOLYBDENUM
COMPOUNDS: COMPARISON OF $L\gamma_1$ WITH $L\beta_{2,15}$
Faculty of Science, Tohoku University, Junji IIHARA, Gunzo IZAWA, Takashi
OMORI, Kenji YOSHIHARA
- 2A12 PHOTOPEAK PROFILE OF A Ge DETECTOR: SMALL-ANGLE-SCATTERING SHAPE FUNCTION OF A
BASE COMPONENT OF THE PEAK PROFILE
Faculty of Engineering, Kumamoto University, Toshiaki KISHIKAWA, Satoshi
HIROSE
- 2A13 MEASUREMENT OF RADIOACTIVE IODINE IN DIGESTED SAMPLES WITH TMAH BY LIQUID
SCINTILLATION COUNTER
Dept. of Chem., Tokyo Metropol. University, Kimiko HORIUCHI
Research Laboratory Tama Chemical Comp Ltd., Toshitsura CHOH, Syunpei SHIMIZU,
Isoko AKABANE, Yukio MURAKAMI

[Mossbauer Effect] (Continued)

(9:00-10:00)

- 2B01 CATION DISTRIBUTION IN MAGNESIUM FERRITE STUDIED BY THE ^{119}Sn MOSSBAUER EFFECT
Faculty of Science, Hiroshima University, Manabu ANDO, Hiroshi SAKAI, Koji
YAMADA, Sumio ICHIBA
- 2B02 ^{119}Sn MOSSBAUER EFFECT IN THE OXIDATION PROCESS OF $\text{Fe}_{3-x}\text{Sn}_x\text{O}_4$
Faculty of Science, Hiroshima University, Shuji TOBASHI, Koji YAMADA, Sumio
ICHIBA
- 2B03 CONDUCTIVITY AND ^{119}Sn MOSSBAUER EFFECT OF TRIIODOSTANNATE(II)
Faculty of Science, Hiroshima University, Takashi MATSUI, Koji YAMADA,
Tsutomu OKUDA, Sumio ICHIBA

(10:00-11:00)

- 2B04 MOSSBAUER SPECTROSCOPIC STUDIES OF $(C_nH_{2n+1}NH_3)_2SnBr_6$ ($n=0,2,4$)
Department of Chemistry, Faculty of Science, Tokyo Metropolitan University,
Mikage YONEYAMA, Motomi KATADA, Hirotooshi SANO
- 2B05 A STUDY OF THE OXYGEN-DEFICIENT PEROVSKITE $Ba_{1-x}La_xFeO_{3-y}$ BY MOSSBAUER
SPECTROSCOPY
The Graduate School at Nagatsuta, Tokyo Institute of Technology, Motoyuki
MATSUO
School of Chemistry, The University of Leeds, Terence C. GIBB
- 2B06 MOSSBAUER SPECTROSCOPY IN APPLIED ORGANOMETALLIC CHEMISTRY
Faculty of Science, Osaka University, Seiichi MIYANAGA, Akio HIWARA, Hajime
YASUDA, Akira NAKAMURA,
Faculty of Science, Hiroshima University, Hiroshi SAKAI

(11:00-12:00)

- 2B07 SPIN CROSSOVER BEHAVIOR OF POLYMER-IRON(III) COMPLEXES
Department of Chemistry, Faculty of Science, Kyushu University, Yonezo MAEDA,
Makoto MIYAMOTO, Hiroki OSIO, Yoshimasa TAKASHIMA
- 2B08 REACTIONS AND CHEMICAL STATES OF PHTHALOCYANINEIRON(II) IN NaY ZEOLITE
Faculty of Science, The University of Tokyo, Miho TANAKA, Yoichi SAKAI,
Yoshitaka MIANAI, Takeshi TOMINAGA
The Tokyo University of Fisheries, Tokuko WATANABE
- 2B09 MOSSBAUER SPECTROSCOPIC STUDY OF VOLCANIC ROCKS ALONG AIMAGAWA RIVER, MOTOJUKU
AND KUMAKURA, WESTERN GUNMA, CENTRAL JAPAN
Faculty of Science, Tokyo Metropolitan University, Kazutoyo ENDO, Makoto
YANAGA, Kazumi TAMEGAYA, Mituru EBIHARA, Hiromichi NAKAHARA
Faculty of Science, Toho University, Masashi TAKAHASHI, Masuo TAKEDA

(15:20-16:20)

- 2B10 ^{125}Te MOSSBAUER EFFECT ON Bi_2O_3 - TeO_2 SYSTEMS
Faculty of Science, Hokkaido University, Takeshi KIKUCHI
Faculty of Science, Hiroshima University, Hiroshi SAKAI

2B11 SKELETON STRUCTURE AND γ -RAY IRRADIATION EFFECT OF HIGHLY FUNCTIONAL
TELLURITE GLASSES

Faculty of Science, Kyushu University, Tetsuaki NISHIDA, Miho YAMADA,
Yoshimasa TAKASHIMA

2B12 LOCAL STRUCTURE AND γ -RAY IRRADIATION EFFECT OF IR-TRANSMITTING GALLATE AND
ALUMINATE GLASSES

Faculty of Science, Kyushu University, Tetsuaki NISHIDA, Hiroshi IDE,
Yoshimasa TAKASHIMA

(16:20-17:00)

2B13 ESTIMATION OF THE VALUE OF $\Delta R/R$ FOR ^{121}Sb NUCLEUS BY MEANS OF MOSSBAUER
SPECTROSCOPY AND MOLECULAR ORBITAL CALCULATION (2)

Faculty of Science, Tokyo Metropolitan University, Makoto YANAGA, Shigeru
IKUTA, Kazutoyo ENDO, Hiromichi NAKAHARA

National Laboratory for High Energy Physics, Taichi MIURA

Faculty of Science, Toho University, Masashi TAKAHASHI, Masuo TAKEDA

2B14 MEASUREMENTS OF γ -RAY PERTURBED ANGULAR CORRELATION FOR ^{99}Ru USING ^{99}Rh
RIKEN, Yoshitaka OHKUBO, Yasuo YANAGIDA, Fumitoshi AMBE

[Environmental Radioactivity]

(9:00-10:00)

2C01 OBSERVATIONS OF MODERN RADIOCARBON VARIATIONS IN THE AIR BY METHANOL-LSC
METHOD

Osaka Prefectural Radiation Research Institute, Setuko SHIBATA, Eiko KAWANO,
Shunichi KAWAMURA, Hirokazu TORATANI

2C02 PHYSICO-CHEMICAL BEHAVIOR OF RADON-DAUGHTERS IN GAS PHASE

National Laboratory for High Energy Physics, Kenjiro KONDO, Yuichi OKI, Taichi
MIURA, Takenori SUZUKI, Masaharu NOGUCHI

2C03 URANIUM ISOTOPES IN GROUND AND SURFACE WATERS FROM THE VICINITY OF A URANIUM
MINE

Faculty of Science, Kanazawa University, Takashi NAKANISHI, Katsuhiko HAMA

(10:00-11:00)

2C04 DETERMINATION OF ACTIVITY RATIOS OF $^{234}\text{U}/^{238}\text{U}$ AND Th-DECAY SERIES IN NATURAL WATERS USING A CONVENTIONAL CO-PRECIPITATION AND AN ADVANCED TIA (TIME INTERVAL ANALYSIS) METHOD

Faculty of Science, Niigata University, Tetsuo HASHIMOTO, Tomoaki KUBOTA, Masami NOGUCHI

2C05 DISTRIBUTION OF URANIUM AND THORIUM DECAY SERIES NUCLIDES WITH THE ENVIRONMENTAL CHANGE OF SPRING WATERS

College of Science and Engineering, Aoyama Gakuin University, Tsuyoshi YAITA, Kan KIMURA

2C06 IRON(III) HYDROXIDE COPRECIPITATION OF PLUTONIUM AND AMERICIUM IN COLD SEAWATER

Faculty of Science, Kanazawa University, Takashi NAKANISHI, Mitsuyoshi SATOH

(11:00-12:00)

2C07 DISTRIBUTION OF ^{237}Np , $^{239,240}\text{Pu}$ AND ^{241}Am IN COASTAL AND ESTUARINE SEDIMENTS IN IRISH SEA

Department of Chemistry, University of Tsukuba, Chang-Kyu KIM, Riki SEKI, Nagao IKEDA, Marubun Co.Ltd. Yuichi TAKAKU

2C08 DISTRIBUTION AND BEHAVIOR OF ^{237}Np , Pu ISOTOPES AND ^{241}Am IN COASTAL SEDIMENTS FROM IRISH SEA

Low Level Radioactivity Laboratory, Kanazawa University, Yoshiyasu YAMAUCHI, Masayoshi YAMAMOTO, Kazuhisa KOMURA, Kaoru UENO
Fukui Prefectural Institute of Public Health, Syuichi IGARASHI
North Wales University, D.J.ASSINDER

2C09 CONCENTRATIONS OF ^{210}Pb AND ^{210}Po IN THE SURFACE AIR AND VOLCANIC ASH FROM MT.SAKURAJIMA

Low Level Radioactivity Laboratory, Kanazawa University, Kengo UCHIDA, Kazuhisa KOMURA, Masayoshi YAMAMOTO, Kaoru UENO

(Lunch Time 12:00-13:00)

(Poster Session 13:00-14:00)

(Plenary Lecture PLO2 14:10-15:10)

[Environmental Radioactivity] (Continued)

(15:20-16:00)

- 2C10 DISTRIBUTION AND MIGRATION OF ENVIRONMENTAL RADIOACTIVITIES IN SOILS
Radioisotope Center, Kyushu University, Shinji SUGIHARA, Susumu OSAKI
Faculty of Science, Kyushu University, Motonari NOMURA, Yoshimasa TAKASHIMA
- 2C11 RADIAL DISTRIBUTION OF ^{90}Sr AND ^{137}Cs IN WOOD XYLEM AND ITS SIGNIFICANCE FOR
ELEMENTAL CYCLE IN FOREST ECOSYSTEM
Faculty of Science, Kyushu University, Noriyuki MOMOSHIMA
Oak Ridge National Laboratory, E.A.BONDIETTI

(16:00-17:00)

- 2C12 CHARACTERISTICS OF LOW-BACKGROUND β -RAY SPECTROMETER USING SURFACE-BARRIER Si
DETECTOR AND ITS APPLICATION TO ENVIRONMENTAL SAMPLES
Low Level Radioactivity Laboratory, Kanazawa University, Kazuhisa KOMURA,
Fumikazu MIYASHITA, Masayoshi YAMAMOTO, Kaoru UENO
- 2C13 INVESTIGATION OF TECHNETIUM-99 IN ENVIRONMENTAL SAMPLES
Kyushu Environ. Eval. Assoc., Nobuaki MATSUOKA, Masaki OKAMURA
Faculty of Science, Kyushu University, Naoko INOUE, Noriyuki MOMOSHIMA,
Yoshimasa TAKASHIMA
- 2C14 DETERMINATION OF TC-99 IN SOME ENVIRONMENTAL SAMPLES USING INDUCTIVELY COUPLED
PLASMA MASS SPECTROMETRY
Department of Chemistry, University of Tsukuba, Shigemitsu MORITA,
Chang-Kyu. Kim, Makiko OTSUJI, Riki SEKI, Nagao IKEDA
Marubun Co. Ltd. Yuichi TAKAKU

Poster Session 13:00-14:00

- P01 DEVELOPMENT OF IN-LINE MONITOR FOR α ACTIVITY IN LIQUID BY MEANS OF PULSE
SHAPE DISCRIMINATION
Japan Atomic Energy Research Institute, shigekazu USUDA, Akira MIHARA,
Hitoshi ABE

- P02 ISOTOPE EFFECT OF RETENTION VALUE BETWEEN ^{64}Cu AND ^{66}Cu IN NEUTRON-IRRADIATED COPPER PHTHALOCIANINE
Institute for Atomic Energy, Rikkyo University, Tatsuo MATSUURA,
Faculty of General Education, Rikkyo University, Ken ichi SASAKI
Department of Chemistry, University of Tsukuba, Hitoshi SHOJI
- P03 TIME VARIATIONS OF ARTIFICIAL RADIONUCLIDES CONCENTRATIONS IN THE ATMOSPHERE (1974 TO THE PRESENT)
Faculty of Science, Nagoya University, Michiaki FURUKAWA, Masayuki MATSUDA
Radioisotope Research Center, Aichi Medical University, Sadao KOJIMA
- P04 MEASUREMENTS OF ^{10}Be , ^{14}C AND ^{26}Al BY ACCELERATOR MASS SPECTROMETRY
College of Humanities and Sciences, Nihon Univ., Hisao NAGAI, Masataka HONDA,
Institute for Nuclear Study, Univ. of Tokyo, Mineo IMAMURA
Res. Center for Nuclear Science and Technology, Univ. of Tokyo,
Koichi KOBAYASHI, Faculty of Science, Univ. of Tokyo, Kunio YOSHIDA, Hiroshi YAMASHITA, Institute for Cosmic Ray Research, Univ. of Tokyo, Hideo OHASHI
Kyoritsu College of Pharmacy, Hideki YOSHIKAWA
- P05 HEAVY-ION SCATTERING SPECTROSCOPY USING RILAC APPLIED TO CHARACTERIZATION OF MULTI-LAYERED FILMS CONTAINING HEAVY ELEMENTS
Radiochemistry Laboratory, RIKEN, Michi ARATANI, Minoru YANOKURA,
Masaki MINAMI,
Research & Development Center, Toshiba Corporation, Kazuo SAITO
- P06 PIXE ANALYSIS OF Tb-Fe FILM MADE BY RF SPATTERING
Faculty of Engineering, Hiroshima University, Shinji TANAKA, Hiroki SAKAMOTO,
Fumitaka NISHIYAMA, Yoshiyuki KISO

Friday, October 6

Lecture Session

[Mossbauer Effect] (Continued)

(9:00-10:20)

3B01 CORROSION PRODUCTS OF NAILS AND INFLUENCE OF THEIR ENVIRONMENT
Faculty of Science, Kyushu University, Yonezo MAEDA, Yutaka MATSUO,
Yoshimasa TAKASHIMA

3B02 MOSSBAUER SPECTROSCOPY OF BIOGENIC MAGNETIC MINERALS
Research Reactor Institute, Kyoto University, Yutaka MAEDA, Faculty of Science
Hiroshima University, Hiroshi SAKAI, School of Mathematical and Physical
Sciences, Murdoch University, John WEBB

3B03 IMPROVEMENT AND APPLICATION OF A DETECTION SYSTEM WITH MICRO CHANNEL PLATE FOR
ENERGY SELECTED CONVERSION ELECTRON MOSSBAUER SPECTROSCOPY
Faculty of Science, Science University of Tokyo, Masamitsu MITSUHASHI,
Haruo SATO

3B04 MAGNETIC PROPERTIES OF CORROSION INVESTIGATED BY CEMS AT LOW TEMPERATURES
NEAR 4.2K
Department of Physics, Shiga University of Medical Science, Takayuki KOBAYASHI
Kazuko FUKUMURA,
Radioisotope Research Center, Kyoto University, Yasuhito ISOZUMI,
Institute for Chemical Research, Kyoto University, Rintaro KATANO

[Cold Nuclear Fusion]

(10:20-11:00)

3B05 QUANTITATIVE DEPTH PROFILING OF HYDROGEN ISOTOPES ANALYSIS IN ELECTRODE BY THE
HEAVY ION RUTHERFORD SCATTERING
Riken Institute, Minoru YANOKURA, Isao TANIHATA, Michi ARATANI, Masaki MINAMI,
Akira KIRA, Seiichiro NAKABAYASHI, Sadamu YAMAGATA

3B06 FAST NEUTRON EMISSION FROM TITANIUM-DEUTERON SYSTEM
Institute for Materials Research, Tohoku University, Masuo YAGI,
Yoshinobu SHIOKAWA, Mitsuo HARA, Isamu SATOH, Toshiaki MITSUGASHIRA,
Laboratory of Nuclear Science, Faculty of Science, Tohoku University,
Kazuyoshi MASUMOTO, Shinsuke SUZUKI

[Accelerators and Their Applications]

(11:00-12:20)

- 3B07 PRODUCTION OF ^{95m}Tc FROM ^{95}Mo TARGET IRRADIATED WITH PROTON BEAM
Tokai Research Establishment, Japan Atomic Energy Research Institute,
Hiromitsu MATSUOKA, Misiroku IZUMO, Takami SORITA, Yuichiro NAGAME,
Toshiki SEKINE, Sumiko BABA
- 3B08 RUTHERFORD SCATTERING ANALYSIS FOR EXCHANGE OF ENVIRONMENTAL WATER WITH
D-SUBSTITUTED SODA-LINE GLASS
Faculty of Hygienic Sciences, Kitasato University, Kazuhiro NIISAWA,
Tadashi NOZAKI, IPCR, Michi ARATANI, Minoru YANOKURA
- 3B09 RBS ANALYSIS OF Tb-Fe FILM MADE BY SPATTERING
Faculty of Engineering, Hiroshima University, Hiroki SAKAMOTO, Shinji TANAKA,
Takeshi HIROKAWA, Fumitaka NISHIYAMA, Yoshiyuki KISO
- 3B10 ANALYSIS OF TRACE ELEMENTS IN Al BY IP-PIXE METHOD
Faculty of Engineering, Hiroshima University, Hiromi IKEDA, Takeshi HIROKAWA,
Fumitaka NISHIYAMA, Yoshiyuki KISO

[Environmental Radioactivity] (Continued)

(9:00-9:40)

- 3C01 RECENT TRITIUM LEVELS OF PRECIPITATION AND RIVER WATERS
Research Institute for Hazards in Snowy Areas, Niigata University,
Takao NAKAGAWA, Osamu SATO, Faculty of Science, Niigata University,
Tetsuo HASHIMOTO

3C02 AN IMPROVED APPARATUS FOR COMBUSTION OF A LARGE QUANTITY OF SAMPLES WITH OXYGEN PLASMA

Faculty of Engineering, Kyushu University, Tomio OKAI, Faculty of Science, Kyushu University, Yoshimasa TAKASHIMA

(9:40-10:40)

3C03 BEHAVIOR OF TRITIUM IN THE OCEAN

Radioisotope Center, Kyushu University, Toshio KAJI, Faculty of Science, Kyushu University, Noriyuki MOMOSHIMA, Yoshimasa TAKASHIMA

3C04 DETERMINATION OF ^{129}I IN ALKALINE-DIGESTED ENVIRONMENTAL SAMPLES WITH TMAH I TRACER EXPERIMENT ON SUSPECTED LOSS OF IODINE OCCURRED BY OXIDATION-REDUCTION CYCLE

TAMA CHEMICAL K.K. Kawasaki Laboratory, Shumpei SHIMIZU, Isoko AKABANE, Toshitsura CHO, Tsurahide CHO, Kitasato Research Center of Environmental, Yukio MURAKAMI

3C05 BEHAVIOR OF URANIUM NUCLIDES IN THE PHOSPHORITE

Geological Survey of Japan, Yutaka KANAI, Yukio SAKAMAKI

[Actinoid Chemistry]

(10:40-11:20)

3C06 PREPARATION OF ACTINIDE OXIDES BY CHEMICAL VAPOR DEPOSITION USING β -DIKETONE CHELATES

Institute for Materials Research, Tohoku University, Yoshinobu SHIOKAWA, Akira NOMURA, Masuo YAGI, School of Allied Medical Professions, Kanazawa University, Ryouhei AMANO

3C07 PREPARATION OF ACTINIDE SULFIDES BY CHEMICAL VAPOR DEPOSITION USING β -DIKETONE CHELATES

School of Allied Medical Professions, Kanazawa University, Ryouhei AMANO, Institute for Materials Research, Tohoku University, Yoshinobu SHIOKAWA, Masuo YAGI

(11:20-12:20)

3C08 ALPHA PARTIAL HALFLIVES OF $^{247,248}\text{Es}$

Japan Atomic Energy Research Institute, Yuichi HATSUKAWA, Department of Chemistry, Tokyo Metropolitan University, Hiromichi NAKAHARA, Department of Chemistry, University of California at Berkeley, H.L. HALL, K.E. GREGORICH, D.C. HOFFMAN

3C09 CHARACTERIZATION OF AQUATIC HUMIC ACID AND ITS BINDING WITH AMERICIUM(III)
(Florida State Univ.)

Yoshitaka MINAI*, Gregory R. Choppin

*On the leave from Univ. of Tokyo

3C10 SOLVENT EXTRACTION STUDY OF $\text{Eu}^{3+}\text{-F}^-$ INTERACTION IN MIXED SYSTEM OF H_2O AND CH_3OH

Faculty of Science, Shizuoka University, Hideo SUGANUMA, Department of Chemistry, Florida State University, Gregory R. CHOPPIN