

**平成 18 年度 KUR 専門研究会  
「原子核プローブ生成とそれを用いた物性研究」**  
目 次

- 1)  $\text{Fe}_2\text{O}_3$  の高圧下メスバウア一分光 ..... (1)  
阪大院基礎工<sup>1</sup>、海洋研 地球内部変動研究セ<sup>2</sup>、阪大 RI セ<sup>3</sup>、大阪大谷大薬<sup>4</sup>  
森本正太郎<sup>1,3</sup>、佐多永吉<sup>2</sup>、斎藤直<sup>3</sup>、川瀬雅也<sup>4</sup>、那須三郎<sup>1,3</sup>
- 2) シリコン中の置換格子および格子間鉄不純物 ..... (3)  
静岡理工科大学 吉田豊
- 3) 酸素雰囲気下での鉄レーザー蒸着による酸化鉄薄膜生成 ..... (5)  
東理大理<sup>1</sup>、理研<sup>2</sup>  
高野勝弘<sup>1</sup>、加藤宏和<sup>1</sup>、小林義男<sup>2</sup>、山田康洋<sup>1</sup>
- 4) カーボンナノチューブに内包された鉄微粒子のメスバウア一分光 ..... (9)  
信州大教育、信州大院教育<sup>1</sup>、信州大工<sup>2</sup>  
村松久和、永田佳奈子<sup>1</sup>、田島千聖、金隆岩<sup>2</sup>、遠藤守信<sup>2</sup>
- 5) 中性子照射した Fe-Hf 合金の PAC 及び陽電子消滅寿命測定 ..... (13)  
京大原子炉、京大院理<sup>1</sup>  
佐藤絢一、村上幸弘<sup>1</sup>
- 6) 核モノクロメーターによる超単色 X 線の生成と応用可能性 ..... (18)  
JAEA<sup>1</sup>、CREST-JST<sup>2</sup> 三井隆也<sup>1,2</sup>
- 7) 充填スクッテルダイトの  $^{121}\text{Sb}$  核共鳴非弾性散乱 ..... (24)  
JASRI (SPRING-8)<sup>1</sup>、CREST<sup>2</sup>、兵庫県立大学<sup>3</sup>  
筒井智嗣<sup>1</sup>、依田芳卓<sup>1,2</sup>、小林寿夫<sup>3,2</sup>
- 8)  $\mu$  SR による電荷移動相転移のダイナミクスの研究 ..... (28)  
東大院総文<sup>1</sup>、理研先端中間子<sup>2</sup>  
木田紀行<sup>1</sup>、榎本真哉<sup>1</sup>、小島憲道<sup>1</sup>、渡邊功雄<sup>2</sup>、鈴木栄男<sup>2</sup>
- 9) PAC 法を利用した生体分子活性位における超微細場測定—Ag-111 を用いた PAC 測定 ..... (33)  
金沢大院自然、京大原子炉<sup>1</sup>、阪大院理<sup>2</sup>  
横山明彦、山崎逸郎、村上幸弘<sup>1</sup>、大久保嘉高<sup>1</sup>、佐藤涉<sup>2</sup>
- 10) ゾルゲルで作製した室温強磁性半導体  $\text{Sn}_{1-x}^{57}\text{Fe}_x\text{O}_{2-\delta}$  のメスバウアー解析 ..... (37)  
東大院工<sup>1</sup>、Antioquia 大<sup>2</sup>、東邦大理<sup>3</sup>、  
野村貴美<sup>1</sup>、バレロ・セザール<sup>1,2</sup>、佐久間絢子<sup>1,3</sup>、竹田満洲雄<sup>3</sup>

- 11) リン酸カルシウム中の正ミュオンの挙動の研究 ..... (47)  
 国際基督教大院理、高エネ機構物質構造科学研究所<sup>1</sup>、理研<sup>2</sup>  
 角山智子、鶴岡洋児、久保謙哉、幸田章宏<sup>1</sup>、西山樟生<sup>1</sup>、小林義男<sup>2</sup>、  
 鈴木栄男<sup>2</sup>、渡邊功雄<sup>2</sup>
- 12) 中性子捕獲反応で二硫化鉄中に生成した<sup>57</sup>Fe のインビームメスバウアースペクトル ..... (51)  
 ICU、理研<sup>1</sup>、東理大理<sup>2</sup>、大同工大<sup>3</sup>、サンゴバン<sup>4</sup>、首都大院理<sup>5</sup>、  
 阪大理<sup>6</sup>、原子力機構<sup>7</sup>  
 鶴岡洋児、久保謙哉、小林義男<sup>1</sup>、山田康洋<sup>2</sup>、高山努<sup>3</sup>、渡辺裕夫<sup>3,4</sup>、酒井陽一<sup>3</sup>、  
 荘司準<sup>5</sup>、佐藤渉<sup>6</sup>、篠原厚<sup>6</sup>、松江秀明<sup>7</sup>
- 13) メスバウア一分光法による動的状態の解析 ..... (55)  
 首都大院理工 片田元己
- 14) 核共鳴非弾性散乱法による鉄ドープ酸化チタンおよび酸化スズの  
 フォノン状態密度解析 ..... (60)  
 東大院工<sup>1</sup>、SSRC(ロシア)<sup>2</sup>、東邦大理<sup>3</sup>、高輝光(SPring8)<sup>4</sup>、原研(SPring8)<sup>5</sup>  
 野村貴美<sup>1</sup>、リコフ・アレキサンドル<sup>1,2</sup>、佐久間絢子<sup>1,3</sup>、竹田満州雄<sup>3</sup>、  
 依田芳卓<sup>4</sup>、三井隆也<sup>5</sup>
- 15) 集積型鉄錯体におけるスピンクロスオーバー現象の発現 ..... (69)  
 広大 N-BARD、広大院理<sup>1</sup>  
 中島覚、森田高樹<sup>1</sup>、厚地正樹<sup>1</sup>、井上克也<sup>1</sup>
- 16) ウラニル(VI)錯体の結晶構造の結合距離とネプツル(VI)錯体の  
 Np-237 メスバウアーパラメーター ..... (73)  
 東邦大理、日本原子力機構<sup>1</sup>  
 北澤孝史、川崎武志、中田正美<sup>1</sup>、佐伯正克<sup>1</sup>
- 17) ウラン化合物の電子状態と超微細相互作用 ..... (78)  
 阪大院理  
 小倉昌子、赤井久純
- 18) リチウムおよびナトリウムイオン電池新規正極材料 FePO<sub>4</sub> のメスバウアーレーストudies ..... (82)  
 近大産業理工<sup>1</sup>、九大先導研<sup>2</sup>  
 西田哲明<sup>1</sup>、吉田悠<sup>1</sup>、白土友透<sup>2</sup>、岡田重人<sup>2</sup>、山木準<sup>2</sup>
- 19) 最近の<sup>57</sup>Mn インビーム・メスバウア一分光実験 ..... (86)  
 理研、静岡理工科大<sup>1</sup>、東京理科大理<sup>2</sup>、国際基督教大教養<sup>3</sup>、東工大院<sup>4</sup>  
 小林義男、吉田豊<sup>1</sup>、宮崎淳<sup>2</sup>、加藤和宏<sup>2</sup>、山田康洋<sup>2</sup>、久保謙哉<sup>3</sup>、  
 上野秀樹、島田健司<sup>4</sup>、長江大輔<sup>4</sup>、旭耕一郎<sup>4</sup>

- 20)  ${}^8\text{Li}$  を用いたペロブスカイト型リチウムイオン伝導体の拡散係数測定 ..... (90)  
 鳥取大工、高エネ研<sup>1</sup>、原研機構<sup>2</sup>  
 田村春樹、高井茂臣、江坂享男、鄭淳讚<sup>1</sup>、片山一郎<sup>1</sup>、川上宏金<sup>1</sup>、石山博恒<sup>1</sup>、  
 今井伸明<sup>1</sup>、平山賀一<sup>1</sup>、渡辺裕<sup>1</sup>、宮武宇也<sup>1</sup>、左高正雄<sup>2</sup>、須貝宏之<sup>2</sup>、  
 岡安悟<sup>2</sup>、市川進一<sup>2</sup>、仲野谷孝充<sup>2</sup>、橋本尚志<sup>2</sup>
- 21) 摂動角相関法によるペロブスカイト型マンガン酸化物の研究 ..... (94)  
 阪大院理、京大原子炉<sup>1</sup>  
 佐藤涉、越智憲崇、谷口秋洋<sup>1</sup>、篠原厚、大久保嘉高<sup>1</sup>
- 22) 原子線法を用いた RI の核偏極生成のための開発研究 ..... (97)  
 理研仁科加速器研究センター<sup>1</sup>、東工大理<sup>2</sup>、立教大理<sup>3</sup>  
 吉見彰洋<sup>1</sup>、上野秀樹<sup>1</sup>、杉本崇<sup>1</sup>、島田健二<sup>2</sup>、長江大輔<sup>2</sup>、  
 村田次郎<sup>3</sup>、川村広和<sup>3</sup>、旭耕一郎<sup>1,2</sup>
- 23) fcc 金属中  $\beta$  放射核のナイトシフトの温度依存性 ..... (102)  
 阪大院理<sup>1</sup>、福井工大<sup>2</sup>  
 三原基嗣<sup>1</sup>、松多健策<sup>1</sup>、神代真一<sup>1</sup>、福田光順<sup>1</sup>、  
 小堺俊<sup>2</sup>、梅本康隆<sup>2</sup>、吉川瑞恵<sup>2</sup>、南園忠則<sup>2</sup>
- 24) ベータ NMR 法を用いた質量数 20 体系の  $\beta$  線角度分布の  
 精密測定による第二種核子流の探索 ..... (105)  
 阪大院理<sup>1</sup>、NSCL<sup>2</sup>、筑波大理<sup>3</sup>、TRIUMF<sup>4</sup>、理研<sup>5</sup>、福井工大<sup>6</sup>  
 長友傑<sup>1,5</sup>、南園啓<sup>2</sup>、松多健策<sup>1</sup>、C. D. P. Levy<sup>4</sup>、三原基嗣<sup>1</sup>、炭竈聰之<sup>5</sup>、  
 小沢顕<sup>3</sup>、田岸義宏<sup>3</sup>、小倉昌子<sup>1</sup>、松宮亮平<sup>1</sup>、福田光順<sup>1</sup>、  
 山口充孝<sup>5</sup>、J. A. Behr<sup>4</sup>、K. P. Jackson<sup>4</sup>、藤原弘樹<sup>1</sup>、安野琢磨<sup>3</sup>、  
 太田寛史<sup>3</sup>、橋爪佑平<sup>3</sup>、千葉明子<sup>3</sup>、南園忠則<sup>6</sup>
- 25)  $\text{TiO}_2$  中  ${}^{12}\text{N}$  の低温における NMR 測定 ..... (109)  
 阪大院理<sup>1</sup>、高エネ研<sup>2</sup>、新潟大 RI センター<sup>3</sup>、福井工大<sup>4</sup>  
 三原基嗣<sup>1</sup>、松宮亮平<sup>1</sup>、松多健策<sup>1</sup>、下村浩一郎<sup>2</sup>、小紫順治<sup>1</sup>、  
 西村大樹<sup>1</sup>、長沢拓<sup>1</sup>、石川大貴<sup>1</sup>、福田光順<sup>1</sup>、泉川卓司<sup>3</sup>、南園忠則<sup>4</sup>
- 26)  $\alpha\text{-Al}_2\text{O}_3$  中  ${}^{25}\text{Al}$  の NQR ..... (111)  
 阪大院理<sup>1</sup>、理研<sup>2</sup>、高知工科大<sup>3</sup>、新潟大自然<sup>4</sup>、新潟大 RI センター<sup>5</sup>、  
 放医研<sup>6</sup>、福井工大<sup>7</sup>、核物理研究センター<sup>8</sup>、LBL<sup>9</sup>  
 松多健策<sup>1</sup>、三原基嗣<sup>1</sup>、長友傑<sup>2</sup>、松宮亮平<sup>1</sup>、百田佐多生<sup>3</sup>、大坪隆<sup>4</sup>、  
 泉川卓司<sup>5</sup>、平野晴誉<sup>4</sup>、高橋慎太郎<sup>4</sup>、西村太樹<sup>1</sup>、小紫順治<sup>1</sup>、  
 北川敦志<sup>6</sup>、金澤光隆<sup>6</sup>、取越正巳<sup>6</sup>、佐藤真二<sup>6</sup>、福田光順<sup>1</sup>、南園忠則<sup>7</sup>、  
 炭竈聰之<sup>2</sup>、田中鐘信<sup>2</sup>、武智麻耶<sup>8</sup>、石川大貴<sup>1</sup>、S. A. Pahlový<sup>3</sup>、長尾守<sup>3</sup>、  
 野尻洋一<sup>3</sup>、J. R. Alonso<sup>9</sup>、G. F. Krebs<sup>9</sup>、T. J. M. Symons<sup>9</sup>

## CONTENTS

- 1) Mössbauer Spectroscopy of Fe<sub>2</sub>O<sub>3</sub> under High Pressure ..... (1)  
S. Morimoto<sup>1,3</sup>, N. Sata<sup>2</sup>, T. Saito<sup>3</sup>, M. Kawase<sup>4</sup>, and S. Nasu<sup>1,3</sup>  
(<sup>1</sup>Grad. Sch. of Eng. Sci., Osaka Univ., <sup>2</sup>IFREE, JAMSTEC, <sup>3</sup>RIRC, Osaka Univ.,  
<sup>4</sup>Fac. of Pharm. Sci., Osaka Ohtani Univ.)
- 2) Substitutional and Interstitial Iron Impurities in Silicon ..... (3)  
Yutaka Yoshida (Shizuoka Institute of Science and Technology)
- 3) Iron Oxide Films Produced by Laser-Deposition of Iron Atoms in Oxygen Atmosphere ..... (5)  
Katsuhiro Kouno<sup>1</sup>, Hirokazu Katou<sup>1</sup>, Yoshio Kobayashi<sup>2</sup>, and Yasuhiro Yamada<sup>1</sup>  
(<sup>1</sup>Department of Chemistry, Tokyo University of Science, <sup>2</sup>RIKEN)
- 4) Mössbauer Spectroscopy of Iron Nanoparticles Included in Carbon Nanotube ..... (9)  
Hisakazu Muramatsu<sup>1</sup>, Kanako Nagata<sup>2</sup>, Chise Tajima<sup>1</sup>, Y. A. Kim<sup>3</sup> and Morinobu Endo<sup>3</sup>  
(Faculty of Education, Shinshu University,  
<sup>1</sup>Graduate School of Education, Shinshu University,  
<sup>2</sup>Faculty of Engineering, Shinshu University)
- 5) Perturbed Angular Correlation and Positron Annihilation Lifetime  
Measurements of Neutron Irradiated Fe-Hf Alloy ..... (13)  
K. Sato and Y. Murakami<sup>1</sup>  
(Research Reactor Institute, Kyoto University,  
<sup>1</sup>Graduate School of Science, Kyoto University)
- 6) Production and Application Potential of Ultrahigh Monochromatic  
X-ray Using Nuclear Monochromator ..... (18)  
Takaya Mitsui<sup>1,2</sup> (<sup>1</sup>JAEA, <sup>2</sup>CREST- JST)
- 7) <sup>121</sup>Sb Nuclear Resonant Inelastic Scattering of a Filled Skutterudite Compound ..... (24)  
S. Tsutsui<sup>1</sup>, Y. Yoda<sup>1,2</sup>, H. Kobayashi<sup>3,2</sup>  
(<sup>1</sup> Japan Synchrotron Radiation Research Institute (SPring-8), <sup>2</sup> CREST,  
<sup>3</sup> Graduate School of Material Science, University of Hyogo)
- 8) Study on Dynamical Behavior of Charge Transfer Phase Transition Probed by μSR Spectroscopy ..... (28)  
N. Kida<sup>1</sup>, M. Enomoto<sup>1</sup>, N. Kojima<sup>1</sup>, I. Watanabe<sup>2</sup> and T. Suzuki<sup>2</sup>  
(<sup>1</sup>Graduate School of Arts and Sciences, University of Tokyo,  
<sup>2</sup>Advanced Meson Science Laboratory, RIKEN)

- 9) Preparation of Parent Probe Tracer of Ag-111 for Measurement of Perturbed Angular Correlation in Biomolecules ..... (33)  
 A. Yokoyama, I. Yamazaki, Y. Murakami<sup>1</sup>, Y. Ohkubo<sup>1</sup> and W. Sato<sup>2</sup>  
 (Graduate School of Natural Science and Technology, Kanazawa Univ.,  
<sup>1</sup>Research Reactor Institute, Kyoto Univ.,  
<sup>2</sup>Graduate School of Science, Osaka Univ.)
- 10) Mössbauer Analysis on Room Temperature Ferromagnetism of <sup>57</sup>Fe Diluted Sn<sub>1-x</sub>Fe<sub>x</sub>O<sub>2-δ</sub> Powders Synthesized by a Sol-Gel Method ..... (37)  
 K. Nomura<sup>1</sup>, C. A. Barrero<sup>1,2,\*</sup>, J. Sakuma<sup>1,3</sup> and M. Takeda<sup>3</sup>  
 (<sup>1</sup>School of Engineering, The University of Tokyo, <sup>2</sup>Universidad de Antioquia, Colombia,  
<sup>3</sup>Faculty of Science, Toho University)
- 11) Positive Muons in Calcium Phosphate ..... (47)  
 T. Kakuyama, Y. Tsuruoka, M. K. Kubo, A. Koda<sup>1</sup>, K. Nishiyama<sup>1</sup>, Y. Kobayashi<sup>2</sup>,  
 T. Suzuki<sup>2</sup>, and I. Watanabe<sup>2</sup>  
 (Division of Natural Sciences, Graduate School of International Christian Univ.,  
<sup>1</sup>KEK, <sup>2</sup>RIKEN)
- 12) In-Beam Mössbauer Spectra of <sup>57</sup>Fe Produced in Iron Disulfide by Neutron Capture Reaction ..... (51)  
 Y. TSURUOKA, M. K. KUBO, Y. KOBAYASHI<sup>1</sup>, Y. YAMADA<sup>2</sup>, T. TAKAYAMA<sup>3</sup>,  
 Y. WATANABE<sup>3,4</sup>, Y. SAKAI<sup>3</sup>, H. SHOJI<sup>5</sup>, W. SATO<sup>6</sup>, A. SHINOHARA<sup>6</sup>, and H. MATSUE<sup>7</sup>  
 (ICU, <sup>1</sup> RIKEN, <sup>2</sup>Tokyo Univ. Sci., <sup>3</sup>Daido Inst. Tech., <sup>4</sup>Saint-Gobain, <sup>5</sup>TMU, <sup>6</sup>Osaka Univ., <sup>7</sup>JAEA)
- 13) Analysis of Dynamic State by Means of Mössbauer Spectroscopy ..... (55)  
 M. Katada  
 (Graduate School of Science and Engineering, Tokyo Metropolitan Univ.)
- 14) Phonon Density of States on TiO<sub>2</sub> and SnO<sub>2</sub> Doped with Fe by Nuclear Inelastic Scattering ..... (60)  
 K. Nomura<sup>1</sup>, A.I. Rykov<sup>1,2</sup>, J. Sakuma<sup>1,3</sup>, M.Takeda<sup>3</sup>, Y. Yoda<sup>4</sup> and T Mitsui<sup>5</sup>  
 (<sup>1</sup>Graduate School of Engineering, The University of Tokyo,  
<sup>2</sup>Siberian Synchrotron Radiation Center, Budker Institute of Nuclear Physics,  
<sup>3</sup> School of Science, Toho University,  
<sup>4</sup>Japan Synchrotron Radiation Research Institute,  
<sup>5</sup>Japan Atomic Energy Research Institute)
- 15) Occurrence of Spin-Crossover Phenomenon of the Assembled Iron Complexes ..... (69)  
 S. Nakashima, T. Morita<sup>1</sup>, M. Atsushi<sup>1</sup>, and K. Inoue<sup>1</sup>  
 (N-BARD, Hiroshima Univ., <sup>1</sup>Graduate School of Science, Hiroshima Univ.)

- 16) Relationship between Np-237 Mössbauer Parameters and Bond Distances in Neptunyl(VI) and Uranyl(VI) Compounds ..... (73)  
 T. Kitazawa, T. Kawasaki, M. Nakata<sup>1</sup> and M. Saeki<sup>1</sup>  
 (Faculty of Science, Toho University, <sup>1</sup>JAEA)
- 17) Hyperfine Interaction of U Compounds..... (78)  
 M. Ogura and H. Akai (Department of Physics, Osaka University)
- 18) Mössbauer Study of FePO<sub>4</sub> as a New Cathode Material for Lithium-and Sodium-Ion Batteries ..... (82)  
 Tetsuaki Nishida<sup>1</sup>, Yu Yoshida<sup>1</sup>, Tomoyuki Shiratsuchi<sup>2</sup>,  
 Shigeto Okada<sup>2</sup> and Jun-ichi Yamaki<sup>2</sup>  
 (<sup>1</sup>School of Humanity-Oriented Science and Engineering, Kinki University  
<sup>2</sup>Institute for Materials Chemistry and Engineering, Kyushu University)
- 19) Recent Aspects of <sup>57</sup>Mn In-Beam Mössbauer Spectroscopy in RIKEN..... (86)  
 Y. Kobayashi, Y. Yoshida<sup>1</sup>, J. Miyazaki<sup>2</sup>, K. Kato<sup>2</sup>, Y. Yamada<sup>2</sup>, M. K. Kubo<sup>3</sup>,  
 H. Ueno, K. Shimada<sup>4</sup>, D. Nagae<sup>4</sup>, and K. Asahi<sup>4</sup>  
 (RIKEN,  
<sup>1</sup> Shizuoka Institute of Science and Technology,  
<sup>2</sup> Faculty of Science, Tokyo University of Science,  
<sup>3</sup> International Christian University,  
<sup>4</sup> Graduate School of Science, Tokyo Institute of Technology)
- 20) Diffusion Coefficient Measurements on the Perovskite-Type Structured Lithium Ion Conductors by Means of <sup>8</sup>Li..... (90)  
 H. Tamura, S. Takai, T. Esaka, S.C. Jeong<sup>1</sup>, I. Katayama<sup>1</sup>, H. Kawakami<sup>1</sup>, H. Ishiyama<sup>1</sup>,  
 N. Imai<sup>1</sup>, K. Hiraga<sup>1</sup>, Y. Watanabe<sup>1</sup>, H. Miyatake<sup>1</sup>, M. Sataka<sup>2</sup>, H. Sugai<sup>2</sup>, S. Yasuoka<sup>2</sup>,  
 S. Ichikawa<sup>2</sup>, T. Nakanoya<sup>2</sup> and T. Hashimoto<sup>2</sup>  
 (Faculty of Eng., Tottori Univ., <sup>1</sup>KEK, <sup>2</sup>JAEA)
- 21) Observation of the Internal Magnetic Field at the A Site of a Perovskite La<sub>0.7</sub>Ca<sub>0.3</sub>MnO<sub>3</sub>..... (94)  
 W. Sato, N. Ochi, A. Taniguchi<sup>1</sup>, A. Shinohara, and Y. Ohkubo<sup>1</sup>  
 (Graduate School of Science, Osaka Univ.,  
<sup>1</sup>Research Reactor Institute, Kyoto Univ.)
- 22) Development of Atomic Beam Resonance Method for Production of Spin-Polarized RI Beam..... (97)  
 A. Yoshimi<sup>1</sup>, H. Ueno<sup>1</sup>, T. Sugimoto<sup>1</sup>, K. Shimada<sup>2</sup>, D. Nagae<sup>2</sup>,  
 J. Murata<sup>3</sup>, H. Kawamura<sup>3</sup>, K. Asahi<sup>1,2</sup>  
 (<sup>1</sup>Nishina Center for Accelerator-based Science, RIKEN  
<sup>2</sup> Department of Physics, Tokyo Institute of Technology,  
<sup>3</sup> Department of Physics, Rikkyo University)

- 23) Temperature Dependence of Knight Shifts for  $\beta$  Emitting Nuclei in fcc Metals ..... (102)  
M. Mihara<sup>1</sup>, K. Matsuta<sup>1</sup>, S. Kumashiro<sup>1</sup>, M. Fukuda<sup>1</sup>, S. Kosakai<sup>2</sup>,  
Y. Umemoto<sup>2</sup>, M. Yoshikawa<sup>2</sup>, and T. Minamisono  
(<sup>1</sup> Graduate School of Science, Osaka University,  
<sup>2</sup> Fukui University of Technology)
- 24) Search for the Second Class Current by the Precise Measurement of  $\beta$ -Ray Angular Distributions in Mass 20 System with the  $\beta$ -NMR Technique ..... (105)  
T. Nagatomo<sup>1,5</sup>, K. Minamisono<sup>2</sup>, K. Matsuta<sup>1</sup>, C.D.P. Levy<sup>4</sup>, M. Mihara<sup>1</sup>,  
T. Sumikama<sup>5</sup>, A. Ozawa<sup>3</sup>, Y. Tagishi<sup>3</sup>, M. Ogura<sup>1</sup>, R. Matsumiya<sup>1</sup>,  
M. Fukuda<sup>1</sup>, M. Yamaguchi<sup>5</sup>, J.A. Behr<sup>4</sup>, K.P. Jackson<sup>4</sup>, H. Fujiwara<sup>1</sup>, T. Yasuno<sup>3</sup>,  
H. Ohta<sup>3</sup>, Y. Hashizume<sup>3</sup>, A. Chiba<sup>3</sup>, and T. Minamisono<sup>6</sup>  
(<sup>1</sup>Graduate School of Science, Osaka Univ., <sup>2</sup>NSCL,  
<sup>3</sup>Graduate School of Science, Tsukuba Univ., <sup>4</sup>TRIUMF, <sup>5</sup>RIKEN, <sup>6</sup>Fukui Univ. of Tech)
- 25) Nuclear Magnetic Resonance of  $^{12}\text{N}$  in  $\text{TiO}_2$  at Low Temperatures ..... (109)  
M. Mihara<sup>1</sup>, R. Matsumiya<sup>1</sup>, K. Matsuta<sup>1</sup>, K. Shimomura<sup>2</sup>, J. Komurasaki<sup>1</sup>,  
D. Nishimura<sup>1</sup>, T. Nagasawa<sup>1</sup>, D. Ishikawa<sup>1</sup>, M. Fukuda<sup>1</sup>, T. Izumikawa<sup>3</sup>, and T. Minamisono<sup>4</sup>  
(<sup>1</sup>Graduate School of Science, Osaka University, <sup>2</sup>Institute of Materials Structure Science, KEK,  
<sup>3</sup>Radioisotope Center, Niigata University, <sup>4</sup>Fukui University of Technology)
- 26) NQR of  $^{25}\text{Al}$  in  $\alpha\text{-Al}_2\text{O}_3$  ..... (111)  
K. Matsuta<sup>1</sup>, M. Mihara<sup>1</sup>, T. Nagatomo<sup>2</sup>, R. Matsumiya<sup>1</sup>, S. Momota<sup>3</sup>,  
T. Ohtsubo<sup>4</sup>, T. Izumikawa<sup>5</sup>, H. Hirano<sup>4</sup>, S. Takahashi<sup>4</sup>, D. Nishimura<sup>1</sup>,  
J. Komurasaki<sup>1</sup>, A. Kitagawa<sup>6</sup>, M. Kanazawa<sup>6</sup>, M. Torikoshi<sup>6</sup>, S. Sato<sup>6</sup>,  
M. Fukuda<sup>1</sup>, T. Minamisono<sup>7</sup>, T. Sumikama<sup>2</sup>, K. Tanaka<sup>2</sup>, M. Takechi<sup>8</sup>,  
D. Ishikawa<sup>1</sup>, S.A. Pahlový<sup>3</sup>, M. Nagao<sup>3</sup>, Y. Nojiri<sup>3</sup>,  
J.R. Alonso<sup>9</sup>, G.F. Krebs<sup>9</sup>, and T.J.M. Symons<sup>9</sup>  
(<sup>1</sup>Osaka University, <sup>2</sup>RIKEN, <sup>3</sup>Kochi Univ. of Tech., <sup>4</sup>Niigata Univ.,  
<sup>5</sup>RI Center, Niigata Univ., <sup>6</sup>NIRS, <sup>7</sup>Fukui Univ. of Tech., <sup>8</sup>RCNP, <sup>9</sup>LBL)