

# Publications in 2006

## 1 JOURNAL PAPER/PROCEEDINGS

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- Tomita, Hideki; Watanabe, Kenichi; Takiguchi, Yu; Kawarabayashi, Jun; Iguchi, Tetsuo, "Rapid-Swept CW Cavity Ring-down Laser Spectroscopy for Carbon Isotope Analysis," J. Nucl. Sci. Technol. **43**, 311-315 (2006).
- Asai, Keisuke; Naoi, Norihiro; Iguchi, Tetsuo; Watanabe, Kenichi; Kawarabayashi, Jun; Nishitani, Takeo, "Neutron Spectrometer for Burning D/T Ratio Measurement in Fusion Reactor," J. Nucl. Sci. Technol. **43**, 320-324 (2006).
- Watanabe, Kenichi; Higuchi, Yuki; Kawarabayashi, Jun; Iguchi, Tetsuo, "Development of the Isotope Analysis Technique for Inorganic Trace Element using Laser Ablation Assisted Resonance Ionization Mass Spectrometry (LA-RIMS)," J. Nucl. Sci. Technol. **43**, 325-329 (2006).
- Matsui, Teruhisa; Aoki, Katsunori; Kawarabayashi, Jun; Watanabe, Kenichi; Iguchi, Tetsuo, "Conceptual Design of High-Spatial-Resolution Position-Sensitive Radiation Detector with Single-Electron Transistors," J. Nucl. Sci. Technol. **43**, 330-333 (2006).
- Higuchi, Yuki; Watanabe, Kenichi; Kawarabayashi, Jun; Iguchi, Tetsuo, "Development of Trace Isotope Analysis Using Resonance Ionization Mass Spectrometry Based on Isotope Selection with Doppler Shift of Laser Ablated Atoms," J. Nucl. Sci. Technol. **43**, 334-338 (2006).
- Miyata, Manabu; Tomita, Hideki; Watanabe, Kenichi; Kawarabayashi, Jun; Iguchi, Tetsuo, "Development of TOF-PET using Cherenkov Radiation," J. Nucl. Sci. Technol. **43**, 339-343 (2006).
- Takemoto, Hisato; Watanabe, Kenichi; Kawarabayashi, Jun; Iguchi, Tetsuo; Uritani, Akira, "Development of Dynamic Three-Dimensional Multi-Pinhole Gamma Camera," J. Nucl. Sci. Technol. **43**, 344-347 (2006).
- Asai, K.; Naoi, N.; Iguchi, T.; Watanabe, K.; Kawarabayashi, J.; Nishitani, T., "Novel concept of time-of-flight neutron spectrometer for measurement of the D/T burning ratio in the ITER," Rev. Sci. Instrum, **77**, 10E721, (2006)
- Naoi, N.; Asai, K.; Iguchi, T.; Watanabe, K.; Kawarabayashi, J.; Nishitani, T., "Design consideration for high energy resolution neutron spectrometer based on associated particle detection using proton recoil telescope and time-of-flight technique for ITER," Rev. Sci. Instrum, **77**, 10E704, (2006)
- 瀧口優、富田英生、渡辺賢一、河原林順、井口哲夫 「高速走査型キャビティリングダウン吸収分光法を用いた炭素同位体測定法の研究」、放射線 **32** (2006)134-138
- 竹元久人、渡辺賢一、河原林順、井口哲夫 「マルチピンホールガンマカメラによる 3次元ダイナミックイメージング技術の開発」、放射線 **32** (2006)118-122

- K. Asai, T. Iguchi, T. Nishitani, C.I. Walker, J. Kawarabayashi and K. Watanabe Improved in situ calibration technique for ITER ex-vessel neutron yield monitor, Fusion Engineering and Design, 81, 1497-1502, (2006)
- K. Watanabe, S. Mihoya, J. Kawarabayashi, T. Iguchi, Development of Compact Wide-Angle Imaging Detector for MeV Gamma-Rays Using Stacked BGO Scintillator Rods, IEEE Nuclear Science Symposium Conference Record 2006, 253-256, (2006)
- 井口 哲夫 中性子捕獲ガンマ線分析による先進対人地雷探知技術の開発, 計測と制御, 45, 541-546, (2006)
- Kawarabayashi, J. ; Takebe, Y. ; Naoi, N. ; Asai, K. ; Watanabe, K. ; Iguchi, T., Distributed Radiation Sensor with Flexible Light Guide filled with Liquid Organic Scintillator, IEEE Nuclear Science Symposium Conference Record, 2006, 1164-1165, (2006).
- Takada, E. ; Hayashi, M. ; Imai, H. ; Kuroda, H. ; Kawarabayashi, J., A Grid-Type Scintillating Device for Radiation Imaging, IEEE Nuclear Science Symposium Conference Record, 2006, 1129-1133, (2006).

## 2 THESIS

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### 2005 年度修士論文

- 樋口雄紀, "ドップラー速度選択方式共鳴イオン化質量分析法の開発基礎研究"
- 松井照久, "単電子素子を用いた放射線検出器に関する基礎研究"
- 宮田学, "チェレンコフ輻射を用いた TOF-PET の基礎研究"

### 2005 年度博士論文

- Hideki Tomita, "Development of Advanced Nuclear Monitoring System Based on Cavity Ring-down Laser Spectroscopy"