

2014年 12月 1日

大阪工業大学長

井上正崇 殿

氏名 池田 知行 (印)

## 論文目録

主論文

題目

『各種宇宙機用の低電力型及び大電力型ホールスラスターの研究と  
超小型人工衛星用の姿勢制御システム・電源システムの構築』

1篇 1冊

副論文

(1) 原著学術誌掲載論文, Journals : 11件 (ファーストオーサー6件)

1. 田原弘一, 藤田剛, 池田知行, 渡辺陽介 : ホールスラスター加速チャネル内のプラズマ粒子シミュレーションとその実験的検証, プラズマ応用科学, Vol.17-2, pp.103-108, プラズマ応用科学会, 2009年12月.
2. 田原弘一, 中雅理, 高木宏樹, 池田知行, 渡辺陽介 : 大阪工業大学・超小型人工衛星搭載用パルスプラズマロケットエンジンシステムの開発研究, 電気学会論文誌A, Vol.130, No.10, pp.851-857, 電気学会, 2010年10月.
3. Hirokazu Tahara, Takuma Tonari, Tsuyoshi Fujita, Tomoyuki Ikeda and Yosuke Watanabe : Operational Characteristics of Very Low Power Cylindrical Hall Thrusters, Frontier of Applied Plasma Technology, Vol.4, No.1, pp.6-11, Institute of Applied Plasma Science, January 2011.
4. Tomoyuki Ikeda, Tsuyoshi Fujita, Hirokazu Tahara and Yosuke Watanabe : Prediction of Hall Thruster Performance and Plasma Features, Frontier of Applied Plasma Technology, Vol.4, No.2, pp.70-75, Institute of Applied Plasma Science, July 2011.
5. 池田知行, 石井悠介, 中雅理, 田原弘一, 渡辺陽介 : 超小型人工衛星搭載用電熱加速型パルスプラズマ推進機の流れ場の数値シミュレーション, プラズ

- マ応用科学, Vol.19-1, pp.29-35, プラズマ応用科学会, 2011年6月.
6. 田原弘一, 石井悠介, 中雅理, 田中慎人, 池田知行, 渡辺陽介: 超小型衛星搭載用電熱加速型パルスプラズマ推進機の流れ場の数値計算と性能測定, 日本航空宇宙学会誌, Vol.59, No.694, pp.349-354, 日本航空宇宙学会, 2011年11月.
  7. 池田知行, 藤田雄也, 松本和真, 杉村勇也, 田原弘一, 渡辺陽介: 低毒性推進剤を用いたアークジェットスラスタの基礎作動実験, プラズマ応用科学, Vol.20-1, pp.27-32, プラズマ応用科学会, 2012年6月.
  8. Tomoyuki Ikeda, Hirokazu Tahara and Yosuke Watanabe : Performance Characteristics of Direct-Current Arcjet Thrusters Using Clean Propellant "Hydroxyl Ammonium Nitrate", Frontier of Applied Plasma Technology, Vol.5, No.2, pp.73-78, Institute of Applied Plasma Science, July 2012.
  9. Tomoyuki Ikeda, Kazuya Togawa, Hirokazu Tahara and Yosuke Watanabe : Performance Characteristics of Very Low Power Cylindrical Hall Thrusters for the Nano-Satellite "PROITERES-3", Vacuum, Vol.88, pp.63-69, Institute of Applied Plasma Science, February 2013.
  10. 池田知行, 三藤陽平, 西田万里, 籠田泰輔, 川村剛史, 田原弘一, 渡辺陽介: 超小型人工衛星搭載用シリンドリカル型ホールスラスタの作動特性, プラズマ応用科学, Vol.21-1, pp.23-28, プラズマ応用科学会, 2013年6月.
  11. 籠田泰輔, 西田万里, 池田知行, 松本和真, 田原弘一, 渡辺陽介: ホールスラスタの大電力・高比推力作動特性, プラズマ応用科学, Vol.22-1, プラズマ応用科学会, 2014. 印刷中

(2) 国際会議発表論文, Proceedings (査読あり) : 16件 (ファーストオーサー5件)

1. Tatsuya Kohori, Tomoyuki Ikeda, Masaharu Shimizu, Hiroki Takagi, Minetsugu Yamada and Hirokazu Tahara : Ground-Based Experiment of Current Collection to Bare Tether in High-Speed and High-Density Plasma Generated by Hall Thrusters, 26<sup>th</sup> International Symposium on Rarefied Gas Dynamics, pp.907-912, Rarefied Gas Dynamics, AIP Conference Proceedings, July 2008.
2. Minetsugu Yamada, Tomoyuki Ikeda, Tatsuya Fujiwara and Hirokazu Tahara : Project of Osaka Institute of Technology Electric-Rocket-Engine onboard Small Space Ship, 31<sup>st</sup> International Electric Propulsion Conference, IEPC-2009-51, September 2009.
3. Hirokazu Tahara, Masamichi Naka, Hiroki Takagi, Tomoyuki Ikeda and

- Yosuke Watanabe : Research and Development of Electrothermal Pulsed Plasma Thrusters onboard PROITERES Satellite, New Trend in Applied Plasma Science and Technology, 7<sup>th</sup> Int. Symp. on Applied Plasma Sciences, Vol.1282, pp.87-91, AIP Conference Proceedings, September 2010.
- 4 . Jun-ichi Ozaki, Tomoyuki Ikeda, Tatsuya Fujiwara, Masaya Nishizawa, Shunsuke Araki, Hirokazu Tahara and Yosuke Watanabe : Development of Osaka Institute of Technology Nano-Satellite “PROITERES” with Electrothermal Pulsed Plasma Thrusters, 32<sup>nd</sup> International Electric Propulsion Conference, IEPC-2011-035, September 2011.
- 5 . Tomoyuki Ikeda, Tsuyoshi Fujita, Naru Sugimoto, Jun-ichi Ozaki, Hirokazu Tahara and Yosuke Watanabe : Optimization of Acceleration Channel Structure and Material for Magnetic-Layer-Type Hall Thrusters, 32<sup>nd</sup> International Electric Propulsion Conference, IEPC-2011-038, September 2011.
- 6 . Tomoyuki Ikeda, Kazuya Togawa, Takahiro Nishida, Hirokazu Tahara and Yosuke Watanabe : Research and Development of Very Low Power Cylindrical Hall Thrusters for Nano-Satellites, 32<sup>nd</sup> International Electric Propulsion Conference, IEPC-2011-039, September 2011.
- 7 . Tomoyuki Ikeda, Kazuya Togawa , Hirokazu Tahara and Yosuke Watanabe : Performance Characteristics of Very Low Power Cylindrical Hall Thrusters for the Nano-Satellite “PROITERES-3”, Advances in Applied Plasma Science, Proc. of 7<sup>th</sup> Int. Symp. on Applied Plasma Science, Vol.8, pp.101-102, September 2011.
- 8 . Naoki Egami, Yoichi Inoue, Sae Nakano, Tomoyuki Ikeda and Hirokazu Tahara : Research and Development of Nano-Satellite PROITERES with Electric Rocket Engines at Osaka Institute of Technology, Proc. 8<sup>th</sup> IEEE Vehicle Power and Propulsion Conference, SS01-0298, October 2012.
- 9 . Masato Tanaka, Shuya Kisaki, Tomoyuki Ikeda and Hirokazu Tahara : Research and Development of Pulsed Plasma Thruster Systems for Nano-Satellites at Osaka Institute of Technology, Proc. 8<sup>th</sup> IEEE Vehicle Power and Propulsion Conference, SS01-0300, October 2012.
- 10 . Yohei Mito, Tomoyuki Ikeda, Naru Sugimoto, Kazuya Togawa and Hirokazu Tahara : Research and Development of High-Power High-Efficiency Hall-Type Ion Engines for Space Exploration, Int. Conf. on Renewable Energy Research and Applications 2012, November 2012.

- 1 1 . Shuya Kisaki, Tomoyuki Ikeda, Yoichi Inoue, Naoki Egami and Hirokazu Tahara : Development of Highly-Functional Nano/Small Satellites with Pulsed Plasma Engines, Int. Conf. on Renewable Energy Research and Applications 2012, November 2012.
- 1 2 . Tomoyuki Ikeda, Naru Sugimoto, Kazuya Togawa, Yohei Mito and Hirokazu Tahara : Research and Development of High-Efficiency Hall-Type Ion Engines for Small Spacecrafts, Int. Conf. on Renewable Energy Research and Applications 2012, November 2012.
- 1 3 . Yohei Mito, Masato Nishida, Taisuke Kagota, Tsuyoshi Kawamura, Tomoyuki Ikeda and Hirokazu Tahara : Performance Characteristics of High-Power, High-Specific-Impulse Hall Thrusters for Japanese In-Space Propulsion , 33<sup>rd</sup> International Electric Propulsion Conference , IEPC-2013-096, October 2013.
- 1 4 . Naoki Egami, Takaaki Matsuoka, Masaaki Sakamoto, Yoichi Inoue, Tomoyuki Ikeda and Hirokazu Tahara : R&D , Launch and Initial Operation of the Osaka Institute of Technology 1st PROITERES Nano-Satellite with Electrothermal Pulsed Plasma Thrusters and Development of the 2nd Satellite, 33<sup>rd</sup> International Electric Propulsion Conference, IEPC-2013-100, October 2013.
- 1 5 . Masato Nishida, Yohei Mito, Taisuke Kagota, Tsuyoshi Kawamura, Tomoyuki Ikeda and Hirokazu Tahara : Research and Development of Hall Thruster Series at Osaka Institute of Technology, 33<sup>rd</sup> International Electric Propulsion Conference, IEPC-2013-101, October 2013.
- 1 6 . Tomoyuki Ikeda, Yohei Mito, Masato Nishida, Taisuke Kagota, Tsuyoshi Kawamura and Hirokazu Tahara : Research and Development of Very Low-Power Cylindrical Hall Thrusters for Nano Satellites , 33<sup>rd</sup> International Electric Propulsion Conference, IEPC-2013-109, October 2013.