

■学術誌論文

1. "Temperature-dependent recombination velocity analysis on artificial small angle grain boundaries using electron beam induced current method," Takuto Kojima, Tomihisa Tachibana, Yoshio Ohshita, Ronit R. Prakash, Takashi Sekiguchi, Masafumi Yamaguchi, *J. Appl. Phys.* **119** (2016) 065302.
2. "Origin of recombination activity at small angle grain boundaries in multicrystalline silicon using multi-seed casting growth method," Takuto Kojima, Tomihisa Tachibana, Yoshio Ohshita, Ronit R. Prakash, Takashi Sekiguchi, Masafumi Yamaguchi, *Jpn J. Appl. Phys.* **54** (2015) 08KD16.
3. "Double acceptor in p-type GaAsN grown by chemical beam epitaxy," Omar Elleuch, Li Wang, Kan-Hua Lee, Kazuma Ikeda, Nobuaki Kojima, Yoshio Ohshita, Masafumi Yamaguchi, *J. Cryst. Growth* **432** (2015) 45-48.
4. "Hole traps associated with high-concentration residual carriers in p-type GaAsN grown by chemical beam epitaxy," Omar Elleuch, Li Wang, Kan-Hua Lee, Koshiro Demizu, Kazuma Ikeda, Nobuaki Kojima, Yoshio Ohshita, Masafumi Yamaguchi, *J. Appl. Phys.* **117** (2015) 045712.
5. "Identification of N-H related acceptor defects in GaAsN grown by chemical beam epitaxy using hydrogen isotopes," Omar Elleuch, Li Wang, Kan-Hua Lee, Kazuma Ikeda, Nobuaki Kojima, Yoshio Ohshita, Masafumi Yamaguchi, *Journal of Alloys and Compounds* **649** (2015) 815-818.
6. "Si etching with reactive neutral beams of very low energy," Yasuhiro Hara, Takaya Mise, Manabu Hamagaki, Naotaka Iwata, and Tamio Hara, *Journal of Applied Physics* **116** (2014) 223301.
7. "Formation of conductive spontaneous via holes in AlN buffer layer on n+Si substrate by filling the vias with n-AlGaN by metal chemical vapor deposition and application to vertical ultraviolet photo-sensor," N. Kurose, N. Iwata, I. Kamiya, and Y. Aoyagi, *AIP Advances* **4** (2014) 123007.
8. "InGaAs triangular barrier photodiodes for high-responsivity detection of

near-infrared light,” Kazuya Sugimura, Masato Ohmori, Takeshi Noda, Tomoya Kojima, Sakunari Kado, Pavel Vitushinskiy, Naotaka Iwata, and Hiroyuki Sakaki, *Appl. Phys. Exp.* **9** (2015) 062101.

9. “Dilute nitride InNP quantum dots: Growth and photoluminescence mechanism,” Y. J. Kuang, K. Takabayashi, S. Sukrittanon, J. L. Pan, I. Kamiya, and C. W. Tu, *Appl. Phys. Lett.* **105** (2014) 173112.
10. “Strain engineering of quantum dots for long wavelength emission: Photoluminescence from self-assembled InAs quantum dots grown on GaAs(001) at wavelengths over 1.55 μm,” Kenichi Shimomura and Itaru Kamiya, *Appl. Phys. Lett.* **106** (2015) 082103.
11. “Enhancement of the performance of GaP Solar cells by embedded In(N)P quantum dots,” Y. J. Kuang, K. Takabayashi, S. Sukrittanon, J. L. Pan, I. Kamiya, and C. W. Tu, *Nano Energy* **15** (2015) 782-788.
12. “Femtosecond upconverted photocurrent spectroscopy of InAs quantum nanostructures,” Yasuhiro Yamada, David M. Tex, Itaru Kamiya, and Yoshihiko Kanemitsu, *Appl. Phys. Lett.* **107** (2015) 013905.
13. “Direct observation of strain in InAs quantum dots and cap layer during molecular beam epitaxial growth using *in situ* X-ray diffraction,” Kenichi Shimomura, Hidetoshi Suzuki, Takuo Sasaki, Masamitu Takahasi, Yoshio Ohshita, and Itaru Kamiya, *J. Appl. Phys.* **118** (2015) 185303.
14. “Formation of preferentially oriented $\text{Y}_3\text{Al}_5\text{O}_{12}$ film on a reactive sapphire substrate: Phase and texture transitions from Y_2O_3 ,” Shuichi Arakawa, Hiroaki Kadoura, Takeshi Uyama, Kazumasa Takatori, Yasuhiko Takeda, Yoshihiko Tani, *J. Eur. Ceram. Soc.* **36** (2016) 663-670.
15. “Effect of Surface Ion Conductivity of Anion Exchange Membranes on Fuel Cell Performance,” M. Hara, T. Kimura, T. Nakamura, M. Shimada, H. Ono, S. Shimada, K. Miyatake, M. Uchida, J. Inukai, M. Watanabe, *Langmuir* **32** (2016) 9557-9565.

16. "Effects of hot liquid-water treatment on local proton conductivity at surfaces of sulfonated poly(arylene ketone) block copolymer membrane for fuel cells studied by current-sensing atomic force microscopy.", M. Hara, M. Hara, K. Miyatake, J. Inukai, M. Watanabe, *Electrochim. Acta* **143** (2014) 383-389.
17. "Low Density Growth of Graphene by Air Introduction in Atmospheric Pressure Chemical Vapor Deposition," Seiya Suzuki, Kana Kiyosumi, Takashi Nagamori, Kei Tanaka, and Masamichi Yoshimura, *e-Journal of Surface Science and Nanotechnology* **13** (2015) 404-409.
18. "Raman spectral mapping of self-aligned carbon nanowalls," Toshio Kawahara, Satarou Yamaguchi, Yasuhide Ohno, Kenzo Maehashi, Kazuhiko Matsumoto, Kazumasa Okamoto, Risa Utsunomiya, Teruaki Matsuba, Yuki Matsuoka and Masamichi Yoshimura, *Jpn. J. Appl. Phys.* **53** (2014) 05FD10.
19. "Macroscopic, Freestanding, and Tubular Graphene Architectures Fabricated via Thermal Annealing", D. Dung, S. Suzuki, S. Kato, B. To, C. Hsu, H. Murata, E. Rokuta, N. Tai, M. Yoshimura, *ACS Nano* **9** (2015) 3206-3214.
20. "Enhancement of spin Hall effect induced torques for current-driven magnetic domain wall motion: Inner interface effect," Do Bang, Jiawei Yu, Xuepeng Qiu, Yi Wang, Hiroyuki Awano, Aurelien Manchon, and Hyunsoo Yang, *Phys. Rev. B* **93** (2016) 174424.
21. "Current-induced domain wall motion attributed to spin Hall effect and Dzyaloshinsky-Moriya interaction in Pt/GdFeCo (100 nm) magnetic wire," Yuichiro Kurokawa, Masaya Kawamoto, and Hiroyuki Awano, *Jpn. J. Appl. Phys.* **55** (2016) 07MC02.
22. "High efficiency of the spin-orbit torques induced domain wall motion in asymmetric interfacial multilayered Tb/Co wires," Do Bang, and Hiroyuki Awano, *J. Appl. Phys.* **117** (2015) 17D916.
23. "Investigation of domain wall motion in RE-TM magnetic wire towards a current driven memory and logic," Hiroyuki Awano, *Journal of Magnetism and Magnetic Materials* **383** (2015) 50-55

24. "Domain wall motion in Tb/Co multilayer wires with a large domain wall depinning field," Do Bang, and Hiroyuki Awano, *J. Appl. Phys.* **115** (2014) 17D512.
25. "Carrier Concentration Dependence of Superconducting Gap of $\text{Bi}_2(\text{Sr}, \text{La})_2\text{CuO}_{6+\delta}$," H. Sakamoto, K. Ogawa, T. Kondo, S. Shin, M. Matsunami, H. Ikuta, and T. Takeuchi, *J. Phys. Soc. Jpn.* **85** (2016) 104710.
26. "Thermoelectric Properties of Al-Mn-Si Based C54 Phase Containing Small Amount of C40 Phase," A. Yamamoto, S. Ghodke, H. Miyazaki, Y. Nishino, M. Matsunami and T. Takeuchi, *Mater. Trans.* **57** (2016) 1055.
27. "Thermoelectric Properties of Fe_2VAl -Based Thin-Films Deposited at High Temperature," S. Hiroi, M. Mikami and T. Takeuchi, *Mater. Trans.* **57** (2016) 1628.
28. "Enhanced thermoelectric properties of W and Fe substituted MnSi_Y ," S. Ghodke, N. Hiroishi, A. Yamamoto, H. Ikuta, M. Matsunami, and T. Takeuchi, *J. Electron. Mater.* **45** (2016) 5279.
29. "Development of Thermoelectric Materials Consisting Solely of Environmental Friendly Elements," T. Takeuchi, A. Yamamoto and S. Ghodke, *Mater. Trans.* **57** (2016) 1029 (Review article).

■会議発表

1. "Study of recombination center in GaAsN grown by chemical beam epitaxy," Omar Elleuch, Hiroyuki Kowaki, Nobuaki Kojima, Yoshio Ohshita, Masafumi Yamaguchi, the 26th International Photovoltaic Science and Engineering Conference (PVSEC-26), Singapore, Oct. 24-28 (2016).
2. "Light-Induced Degradation and Thermal-Induced Recovery of PECVD- $\text{SiN}_x:\text{H}$ Passivation: Reaction Kinetics and Interfacial Properties," Yoshio Ohshita, Takefumi Kamioka , Taisei Iwahashi, Lee Hyunju, Yuri Sato, the 6th International Conference on Silicon Photovoltaics (SiliconPV 2016), Chambéry,

France, Mar. 07-10 (2016).

3. "Study of the recombination center in GaAsN grown by chemical beam epitaxy," Omar Elleuch, Li Wang, Hiroyuki Kowaki, Kan-Hua Lee, Kazuma Ikeda, Taketo Aihara, Nobuaki Kojima, Yoshio Ohshita, Masafumi Yamaguchi, the 25th International Photovoltaic Science and Engineering Conference (PVSEC-25), Busan, Korea, Nov. 15- 20 (2015).
4. "Effects of Arsenic Source Molecule on N-H related Defects Formation in GaAsN Grown by Chemical Beam Epitaxy," Yoshio Ohshita, Koshiro Demizu, Omar Elleuch, Kazuma Ikeda, Nobuaki Kojima, Hideaki Machida, Hiroshi Sudoh, Masafumi Yamaguchi, the 42th IEEE Photovoltaic Specialists Conference (PVSC42), New Orleans, USA, June 14-19 (2015).
5. "Suppression of Twin Formation in Layered In₂Se₃ Grown on GaAs(111)," Nobuaki Kojima, Hiroya Nakamura, Yoshio Ohshita, Masafumi Yamaguchi, the 42th IEEE Photovoltaic Specialists Conference (PVSC42), New Orleans, USA, June 14-19 (2015).
6. "Novel vertical AlGaN deep ultra violet photo-detector on n+Si substrate using spontaneous via holes growth technique," Kota Ozeki, Noriko Kurose, Naotaka Iwata, Kentaro Shibano, Tsutomu Araki, Itaru Kamiya, and Yoshinobu Aoyagi, the 2014 International Conference on Solid State Devices and Materials, 2014/09/11, C-7-4L.
7. "AlGaAs/InGaAs HEMTs Passivated with Atomic Layer Deposited SiO₂ using Aminosilane Precursors," Takayuki Suzuki, Yousuke Takigawa, Naotaka Iwata, Zhang Dongyan, and Yoshio Ohshita, the 2015 International Meeting for Future of Electron Devices, Kansai (IMFEDK2015), 2015/06/04, 10.1109/IMFEDK.2015.7158492
8. "The Current Conduction Mechanism of Novel Silver Thick Film Electrode", 高橋哲、立花福久、神岡武文、岩田直高、大下祥雄
The 31st European Photovoltaic Solar Energy Conference and Exhibition 2015/09/14, pp. 696-699

9. "SiNx Passivated GaN HEMT by Plasma Enhanced Atomic Layer Deposition," Takayuki Suzuki, Tomiaki Yamada, Ryosuke Kawai, Shohei Kawaguchi, Dongyan Zhang, and Naotaka Iwata, the 43rd International Symposium on Compound Semiconductors (ISCS), 2016/6/27, MoP-ISCS-086
10. "Realization of Conductive AlN Epitaxial Layer on Si Substrate using Spontaneously Formed Nano-Size Via-Holes for Vertical AlGaN High Power FET," Noriko Kurose, Kota Ozeki, Tsutomu Araki, Naotaka Iwata, Itaru Kamiya, and Yoshinobu Aoyagi, the 43rd International Symposium on Compound Semiconductors (ISCS), 2016/6/30, ThD2-4
11. "Tuning the emission wavelength from self-assmbled InAs quantum dots on GaAs(001) to over 1.55 μm by controlling the cap and barrier layers," K. Shimomura and I. Kamiya,
42nd Conference on Physics and Chemistry of Surfaces and Interfaces, January 18-22, 2015, Snowbird Ski & Resort, Snowbird, UT, USA. We1150 (Jan. 21, 2015).
12. "Growth of InAs-based Quantum Structures and their Electronic Properties Controlled by Strain,"
(招待講演) Itaru Kamiya, SemiconNano 2015 Lakeshore Hotel, Hsinchu, Taiwan (Sep. 6 – 10, 2015) I-39 (September 10, 2015)
13. "nm-scale Workfunction Measurements on the Interface between Si and Surface Layers on the Crystalline Si Solar Cell using Kelvin Probe Force Microscopy,"
(招待講演) Fumihiko Yamada, Takefumi Kamioka, Kyotaro Nakamura, Yoshiro Ohshita, and Itaru Kamiya, Energy Materials Nanotechnology (EMN) Meeting on Vacuum Electronics, New York-New York Hotel & Casino, Las Vegas, NV, U.S.A. (Nov. 21 – 24, 2015) S05 (November 21, 2015)
14. "Epitaxial Growth of InAs-based Quantum Structures on GaAs,"
(招待講演) Itaru Kamiya, Collaborative Conference on Crystal Growth (3CG 2015) Eaton Hotel Kowloon, Hong Kong, China (Dec. 13 – 17, 2015) D29 (December 16, 2015)
15. "Photon upconversion using InAs-based quantum structures and the control of

intermediate states," (招待講演) Itaru Kamiya, David M. Tex, Yuwei Zhang, Toshiyuki Ihara, Yasuhiro Yamada, and Yoshihiko Kanemitsu, SPIE Photonic West, San Francisco, U.S.A. (Jan. 28 – Feb. 2, 2017) 10099-15 (Jan. 31)

16. 「サファイア基板上 Y_2O_3 薄膜から作製した YAG 薄膜の結晶配向性解析」
荒川修一, 門浦弘明, 宇山健, 鷹取一雅, 竹田康彦, 谷俊彦
日本セラミックス協会 2016 年年会（東京） 2016, (3/14)
17. 「サファイア基板を Reactive substrate として用いた YAG 配向膜の作製」
荒川修一, 門浦弘明, 宇山健, 鷹取一雅, 谷俊彦
日本セラミックス協会 2015 年年会（岡山） 2015, (3/18)
18. "In Situ ATR-FTIR Analysis of the Structure of Nafion–Pt/C Interface by Use of MEA-type Cell," M. Hara, K. Kunimatsu, M. Watanabe, H. Uchida, The 228th ECS Meeting, Phoenix, USA, 2015 年 10 月.
19. 「MEA 型 ATR-FTIR セルを用いた Nafion-Pt/C 触媒界面における反応挙動の解析」, 原正則(招待講演) 第 14 回燃料電池基盤技術研究懇話会, 神奈川, 2015 年 9 月
20. 「ラマン-AFMによるカーボン材料の評価」吉村雅満、上原諒、鈴木誠也、(招待講演)、応用物理学会、名古屋国際会議場、愛知県名古屋市、2015.9.15
21. "Tip-enhanced Raman scattering spectroscopy of transferred graphene on SiO_2 substrate," Masamichi Yoshimura and Ryo Uehara, 2015 MRS Fall Meeting, Boston, USA, 2015.11.30
22. "Structural characterization of hydrothermally reduced graphene oxide," H. -H. Huang, G. R. A. Kumara, M. Yoshimura, International Colloquium on Scanning Probe Microscopy, Hawaii, 2016.12
23. "Inner interface effect enhances spin-orbit torques in Tb/Co multilayered wires," Do Bang, Jiawei Yu, Xuepeng Qiu, Hiroyuki Awano, Aurelien Manchon, and Hyunsoo Yang, 61st Annual Conference on Magnetism and Magnetic Materials, BD-11 (2016)

24. "Novel magnetic wire fabrication process by way of nano-imprint lithography for current induced magnetization switching," T. Asari, H. Awano and R. Shibata, 61st Annual Conference on Magnetism and Magnetic Materials, EU-03 (2016)
25. "Enhancement of spin orbit torques in a Tb-Co alloy magnetic wire by controlling its Tb composition," Y. Kurokawa, A. Shibata, and H. Awano, 61st Annual Conference on Magnetism and Magnetic Materials, EU-03 (2016)
26. "Magnetic recording on the RE-TM /Pt magnetic wire deposited on nano-imprinted plastic substrate," Hiroyuki Awano, Satoshi Sumi, Yuichiro Kurokawa, Do Bang, Akihiko Moribayashi, Ryogo Yoshimura, and Tsukasa Asari, International conference of the Asian Union of Magnetic Societies, (Invited DC-01) (2016)
27. "Enhancement of spin Hall effect-induced torques for current driven magnetic domain wall motion," Do Bang and Hiroyuki Awano, IEEE International Magnetics Conference GT-07 (2015)
28. 「異常電子熱伝導度と異常格子熱伝導度を利用した革新的熱利用材料」
(招待講演) 竹内恒博、日本伝熱学会東海支部主催 第 27 回東海伝熱セミナー『エネルギー有効利用のための熱工学的アプローチ』(鳥羽シーサイドホテル, 2016/9/17)
29. 「ZT>2 を実現する条件と新しい熱電材料の開発」
(招待講演) 竹内恒博、第 77 回応用物理学会秋季学術講演会 (朱鷺メッセ, 新潟コンベンションセンター, 2016/9/16)
30. "Thermoelectric properties of lacunar spinel $\beta\text{-In}_{2-2x}\text{Cu}_x\text{Zn}_x\text{S}_3$,"
(口頭発表) K. Delime-Codrin, T. Takeuchi, 第 13 回日本熱電学会学術講演会(東京理科大学 葛飾キャンパス, 2016/9/6)
31. "Amorphous $\text{Si}_{1-x}\text{Ge}_x$ containing crystalline nano-particles prepared by high-energy planetary ball milling,"
(口頭発表) M. Omprakash, S. Nishino, M. Adachi, T. Takeuchi, 第 13 回日本

熱電学会学術講演会（東京理科大学 葛飾キャンパス， 2016/9/5）

32. "Development of high performance thermoelectric materials consisting solely of environmental friendly elements,"
(招待講演) Akio Yamamoto, Tsunehiro Takeuchi, BIT's 5th Annual World Congress of Advanced Materials-2016, (Chongqing, China, 2016/6/8)