

List of Publications

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(1)Papers

1. T. Inoue, T. Mochizuki, S. Miyamoto, K. Masuda, S. Amano, and K. Kanda, "Investigation of Ru Focusing Mirror for 5- to 17-nm Soft X rays from Laser-Produced Plasma", Review of Laser Engineering、 vol.41, no.1, pp.59-62 (2013). (in Japanese)
2. D. Li, M. Hangyo, Z. Yang, Y. Tsunawaki, Y. Wei, Y. Wang, S. Miyamoto, M. R. Asakawa, and K. Imasaki, "Theoretical analysis and simulation of growth rate and start current in Smith–Purcell free-electron lasers", Terahertz Science and Technology, ISSN 1941-7411, vol.6, no.3, pp.189 -205 (2013).
3. Shuji Miyamoto, "Development of Technology and Application of Laser Compton Scattering Gamma-Ray Beam", Review of Laser Engineering, vol.41, no.11, pp.917-921 (2013). (in Japanese)
4. Y.Shoji, "Landau Damping of Collective Betatron Oscillation in a Quasi-Isochronous Electron Storage Ring", Nucl. Instr. and Meth. in Phys. Res. A729, pp.1-2 (2013).
5. S.Amano, T.Inoue, T.Harada, "Plasma debris sputter resistant x-ray mirror", Applied Optics, Vol.52, pp.3845-3848 (2013).
6. S.Amano, T.Inoue, "Diamond-like carbon sputtering by laser produced Xe plasma", NIMB, Vol.314, pp.26-29, (2013).
7. T.Sekioka, S.Amano, T.Inoue, T.Mochizuki, "Characteristics of fast ions from laser produced plasma and their applicability to Shallow junction doping", NIMB, Vol.314, pp.162-165, (2013).
8. K. Kanda, M. Niibe, A. Wada, H. Ito, T. Suzuki, T. Ohana, N. Ohtake, and H. Saitoh, "Comprehensive Classification of Near-Edge X-Ray Absorption Fine Structure Spectra of Si-Containing Diamond-Like Carbon Thin Films", Jpn. J. Appl. 52 pp.095504, (2013).

9. K. Ozeki, D. Sekiba, T. Suzuki, K. Kanda, M. Niibe, K.K. Hirakuri, T. Masuzawa, "Influence of the source gas ratio on the hydrogen and deuterium content of a-C:H and a-C:D films: plasma-enhanced CVD with CH₄/H₂, CH₄/D₂, CD₄/H₂ and CD₄/D₂", *Applied Surface Science*, 265, pp.750, (2013).
10. A. Heya, N. Matsuo, M. Takahashi, K. Ito, and K. Kanda, "Crystallization of Si_{1-x}Ge_x Multilayer by soft X-ray Irradiation", *Applied Physics Express*, 6, pp.065501, (2013).
11. A. Heya, K. Kanda, K. Toko, T. Sadoh, S. Amano, N. Matsuo, S. Miyamoto, M. Miyao, T. Mochizuki, "Low-temperature crystallization of amorphous silicon and amorphous germanium by soft X-ray irradiation", *Thin Solid Films*, 534, 334-340, (2013).
12. K. Kanda, T. Hasegawa, M. Uemura, M. Niibe, Y. Haruyama, M. Motoyama, K. Amemiya, S. Fukushima and T. Ohta, "Construction of a Wide-range High-resolution Beamline BL05 in NewSUBARU for X-ray Spectroscopic Analysis on Industrial Materials", *J. Phys.: Conf. Ser.* 425, pp.065501, (2013).
13. H. Ito, S. Onitsuka, R. Gappa, H. Saitoh, R. Roacho, K. H. Pannell, T. Suzuki, M. Niibe, K.Kanda, "Fabrication of Amorphous Silicon Carbide Films from Decomposition of Tetramethylsilane using ECR plasma of Ar", *J. Phys.: Conf. Ser.* 441, pp.012039, (2013).
14. S. Honda, R. Tamura, Y. Noshio, A. Tsukagishi, M. Niibe, M. Terasawa, R. Hirase, H. Izumi, H. Yoshioka, K. Niwase, E. Taguchi, K-Y. Lee, M. Oura, "Transformation of multiwalled carbon nanotubes to amorphous carbon nanorods under ion irradiation", *Jpn. J. Appl. Phys.* 53 02BD06 ,(2014).
15. K. Kanda, K. Fukuda, K. Kidena, R. Imai, M. Niibe, S. Fujimoto, K. Yokota, M. Tagawa: "Hyperthermal atomic oxygen beam irradiation effect on the Ti-containing DLC film", *Diamond Related Materials*, pp.41 49-52, (2014).
16. R. Kawakami, M. Niibe, H. Takeuchi, M. Konishi, Y. Mori, T. Shirahama, T. Yamada, and K. Tominaga: "Surface damage of 6H-SiC originating from argon plasma irradiations", *Nucl.*

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17. Tsukagishi, S. Honda, R. Osugi, H. Okada, M. Niibe, M. Terasawa, R. Hirase, H. Izumi, H. Yoshioka, K. Niwase, E. Taguchi, K-Y. Lee, M. Oura, "Spectroscopic characterization of ion-irradiated multi-layer graphenes", Nucl. Instrum. Methods in Phys. Res., B 315 pp.64-67 (2013).
18. R. Kawakami, M. Niibe, Y. Nakano, T. Shirahama, T. Yamada, K. Aoki, M. Takabatake, K. Tominaga, and T. Mukai, "Damage characteristics of n-GaN thin film surfaces etched by N₂ Plasmas", Physica Status Solidi, C 10, pp.1553-1556, (2013).
19. R. Kawakami, M. Niibe, Y. Nakano, M. Konishi, Y. Mori, A. Takeichi, K. Tominaga, and T. Mukai, "Comparison between Damage Characteristics of p- and n-GaN Surfaces Etched by Capacitively Coupled Radio Frequency Argon Plasmas", Jpn. J. Appl. Phys. 52, pp.05EC05, (2013).
20. R. Kawakami, M. Niibe, Y. Nakano, M. Konishi, Y. Mori, H. Takeuchi, T. Shirahama, T. Yamada, and K. Tominaga: "Characteristics of TiO₂ Surfaces Etched by Capacitively Coupled Radio Frequency N₂ and He Plasmas", J. Phys.: Conf. Series, 441, pp.012038, (2013).
21. T. Kobayashi, D. Itami, R. Hashimoto, T. Takashina, H. Kanematsu, K. Mizuta and Y. Utsumi, "Optimizing Structure of LED Light Bulb for Heat Transfer", Journal of Physics Conference Series, 433, pp.012016, (2013).
22. T. Kobayashi, M. Doi, T. Fukuda, R. Hashimoto, H. Kanematsu and Y. Utsumi, "Study on evaluation methods Performance Simulation of Polymer Electrolyte Fuel Cell", Journal of Physics: Conference Series 433 (2013), pp.012021, (2013).
23. T. Kobayashi, K. Doi, H. Kanematsu, Y. Utsumi, R. Hashimoto, and T. Takashina "Remote Sensing of Radiation Dose Rate by a Robot for Outdoor Usage", Journal of Physics: Conference Series 433 (2013), pp.012030, (2013).
24. T. Kobayashi, S. Kamikawa, Y. Itou, H. Kanematsu and Y. Utsumi, "Effect of Deposition and

- Storage Conditions on the Gas Permeability of SiO_x Thin Films” *Applied Mechanics and Materials*, 378, pp.248-252, (2013).
25. 岸原充佳, 山島芸, 内海裕一, “ポスト壁導波路を用いたチップサイズ連続マイクロ波照射構造,” *電気学会論文誌, Sec.E, Vol.133, No.12*, pp.365-371, (2013).
 26. Takeo Watanabe, Yukiko Kikuchi, Toshiya Takahashi, Kazuhiro Katayama, Isamu Takagi, Norihiko Sugie, Hiroyuki Tanaka, Eishi Shiobara, Soichi Inoue, Tetsuo Harada, and Hiroo Kinoshita, “Development of Tool for Contamination Layer Thickness Measurement Using High Power Extreme Ultraviolet Light and In-Situ Ellipsometer,” *Jpn. J. Appl. Phys.* 52 pp.056701-1, 056701-5, (2013).
 27. Takeo Watanabe, Kazuya Emura, Daiji Shiono, Yuichi Haruyama, Yasuji Muramatsu, Katsumi Ohmori, Kazufumi Sato, Tetsuo Harada, and Hiroo Kinoshita, “EUV Resist Chemical Reaction Analysis using SR,” *J. Photopolym. Sci. Technol.* 26, pp.635-642, (2013).
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 29. Tsuyoshi Amano, Susumu Iida, Ryoichi Hirano, Tsuneo Terasawa, Hidehiro Watanabe, Kenjiro Yamasoe, Mitsunori Toyoda, Akifumi Tokimasa, Tetsuo Harada, Takeo Watanabe, and Hiroo Kinoshita, “Observation of Residual-Type Thin Absorber Defect on Extreme Ultraviolet Lithography Mask Using an Extreme Ultraviolet Microscope,” *Appl. Phys. Express* 6 pp.046501-1, 046501-3, (2013).
 30. Y. Nagata T. Harada, T. Watanabe, K. Midorikawa, and H. Kinoshita, “Defect Sensing of EUV Mask using Coherent EUV Light,” (in Japanese), *Journal of the Institute of Electrical Engineers of Japan A*, 133, pp.509-518, (2013).
 31. T. Kudo, K. Kobayashi, S. Ono, N. Teranishi, T. Watanabe, H. Kinoshita, M. Okihara, and T. Hatsui, “Development of High-Speed Evaluation Method of Radiation hardness of

- Semiconductor Devices,” Silicon Technology Division of the Japan Society of Applied Physics 170, “The Effect of Radiation Irradiation to Semiconductor Devices”, pp.24-29, (2014).
32. M. Okada, E. Nishioka, M. Kondo, Y. Haruyama, T. Sasaki, H. Ono, N. Kawatsuki and S. Matsui, “Comparison Molecular Orientation of Photoinduced Liquid Crystalline Polymer induced by Thermal Nanoimprinting to that by Graphoepitaxy”, *Journal of Photopolymer Science and Technology*, 26, pp.65-68, (2013).
 33. M. Okada, E. Nishioka, M. Kondo, Y. Haruyama, T. Sasaki, H. Ono, N. Kawatsuki and S. Matsui, “Molecular Orientation of Photoinduced Liquid Crystalline Polymer with 3D Structure fabricated by Thermal Nanoimprinting”, *Journal of Photopolymer Science and Technology*, 26, pp.83-85, (2013).
 34. T. Oyama, M. Okada, S. Iyoshi, Y. Haruyama, H. Miyake, T. Mizuta and S. Matsui, “Surface Evaluation of Cationic UV-curable Resin with Fluorine Additive by X-ray Photoelectron Spectroscopy”, *Journal of Photopolymer Science and Technology*, 26, pp.129-132, (2013).
 35. H. Wakaba, M. Okada, S. Iyoshi, Y. Haruyama and S. Matsui, “Release Property Evaluation of Fluorinated Antisticking Layer by a Mixture of Release Agents”, *Journal of Photopolymer Science and Technology*, 26, pp.143-146, (2013).
 36. T. Watanabe, K. Emura, D. Shiono, Y. Haruyama, Y. Muramatsu, K. Ohmori, K. Sato, T. Harada and H. Kinoshita, “EUV Resist Chemical Reaction Analysis using SR”, *Journal of Photopolymer Science and Technology*, 26, pp.635-641, (2013).
 37. M. Okada, H. Miyake, S. Iyoshi, T. Yukawa, T. Katase, K. Tone, Y. Haruyama, S. Matsui “Double patterning in nanoimprint lithography”, *Microelectronic Engineering* 112, pp.139-142, (2013).
 38. M. Okada, Y. Haruyama, S. Matsui, E. Nishioka, R. Hosoda, M. Kondo, N. Kawatsuki, T. Sasaki and H. Ono, “Reorientation of photoreactive liquid crystalline polymer pattern fabricated by hybrid nanoimprinting”, *Journal Vacuum Science Technology B* 31, pp. 06FB04-1-06FB04-4, (2013).

39. N. Kawatsuki, Y. Inada, M. Kondo, Y. Haruyama, and S. Matsui, "Molecular Orientation at the Near-Surface of Photoaligned Films Determined by NEXAFS", *Macromolecules* 47, pp.2080–2087, (2014).

(2)Internatonal Meetings

1. Shuji Miyamoto (invited), "Laser Compton Scattering Gamma-ray Source and Nuclear Applications - Photo Nuclear Reaction and Transmutation-", International Conference on Laser Applications in Nuclear Engineering LANE 2013, Pacifico YOKOHAMA, Japan, April 23-25 (2013).
2. S.Miyamoto, S.Amano, S.Hashimoto, M.Terasawa, A. Koizumi, T. Mochizuki, H. Utsunomiya, T. Shima, T.Hayakawa, T.Shizuma, K.Imasaki, D.Li, Y.Izawa, F.Hori, Y.Asano and H.Ohkuma, "Gamma-ray Generation and Application by Laser Compton Scattering", The Eighth International Conference on Inertial Fusion Science and Applications (IFSA), P.Th_76, Nara Prefectural New Public Hall, Nara, Japan, Sept. 8-13 (2013).
3. Shuji Miyamoto (invited). "Gamma-ray Generation and Application by Laser Compton Scattering", "Interaction Meeting on X-ray Lithography and Microfabrication" , Raja Ramanna Center for Advanced Technology, Indore, India,December 5-6 (2013).
4. S.Miyamoto, S.Amano, S.Hashimoto, T.Mochizuki, K.Imasaki, D.Li, Y.Izawa (invited), "Laser Compton Gamma-ray Application for Nuclear Decommissioning", International Workshop on Laser Application to Nuclear Decommissioning and Decontamination (LANDD2013), The Wakasawan Energy Research Center, Tsuruga, Japan, December 12 (2013).
5. Shuji Miyamoto (invited), "Laser Compton Gamma-ray Beam Source at NewSUBARU", International Workshop on "Nuclear Physics and Gamma-ray sources for Nuclear Security and Nonproliferation (NPNSNP)", Ricotti, Tokai, Japan, January 28-30 (2014).
6. K. Kobayashi, Y.Kawamoto, W.El-Masry, M.Eto, H. Tokimura, T.Kaneko, Y.Obayashi, H.Mita,

- Kanda, S.Yoshida, H.Fukuda and Y.Oguri, "Evolution of Interstellar Organics to Meteoritic and Cometary Organics: Approaches by Laboratory Simulations", International Astrobiology Workshop 2013, Sagamihara, Nov.28-Dec.1,(2013).
7. K. Kobayashi, H. Mita, H. Yabuta, K. Nakagawa, Y. Kawamoto, K. Kanda, E. Imai, H.Hashimoto, S. Yokobori, A. Yamagishi, and Tanpopo WG, "pace Exposure of Amino Acids and Their Precursors in the Tanpopo Mission Using the International Space Station", 29th International Symposium on Space Technology and Science, Nagoya, Jun.2-9,(2013).
 8. R. Imai, A. Fujimoto, M. Okada, S. Matsui, T. Yokogawa, E. Miura, T. Yamasaki, T. Suzuki, K. Kanda, "Soft X-ray Irradiation Effect on the Surface and Material Properties of Highly Hydrogenated Diamond-like Carbon Thin Films", New Diamond and Nano Carbons Conference, Singapore, May. 19-23,(2013).
 9. K. Kanda, K. Fukuda, K. Kidena, R. Imai, M. Niibe, S. Fujimoto, K. Yokota, M. Tagawa, "Hyperthermal Atomic Oxygen Beam Irradiation Effect on the Ti-containing DLC Film", New Diamond and Nano Carbons Conference, Singapore, May. 19-23,(2013).
 10. M. Niibe, T. Kotaka, R. Kawakami, Y. Nakano, T. Mukai, "Damage Analysis of N₂ Plasma-etched n-GaNcrystal", 6th International Symposium on Advanced Plasma Science and its Applications for Nitrides and, Nanomaterials, Nagoya, Japan., Mar. 2-6,(2014).
 11. Masahito Niibe, Takuya Kotaka, Satoshi Jinguji, Shozo Inoue., "Evaluation of BN Thin Film Deposited on Cemented Carbide using Soft X-ray Absorption Spectroscopy", 15th International Conference on Total Reflection X-ray Fluorescence Analysis and Related Methods (TXRF 2013), Sep. Osaka, Japan. Sep.23-27, (2013).
 12. M. Niibe, K. Sano, R. Kawakami, Y. Nakano, "Recovery of disordered spectra of Ti-L NEXAFS in dry-etched TiO₂ thin film by UV irradiation", 15th International Conference on Total Reflection X-ray Fluorescence Analysis and Related Methods (TXRF 2013), Osaka, Japan. Sep. 23-27, (2013).
 13. Masahito Niibe, Keiji Sano, Takuya Kotaka, Retsuo Kawakami, Kikuo Tomonaga, Yoshitaka

- Nakano, "Etching Damage and Its Recovery by Soft X-ray Irradiation Observed in Soft X-ray Absorption Spectra of TiO₂ Thin Film", 38th International conference on Vacuum Ultraviolet and X-ray Physics, Hefei, China, Jul.12-19, (2013).
14. Masahito Niibe, Takuya Kotaka, Satoshi Jinguji, Shozo Inoue, "Characterization of BN Thin Film Deposited on Cemented Carbide Using Near Edge X-ray Absorption Fine Structure Spectroscopy", 38th International conference on Vacuum Ultraviolet and X-ray Physics, Hefei, China, Jul.12-19, (2013).
 15. R. Kawakami, M. Niibe, H. Takeuchi, T. Shirahama, M. Konishi, Y. Mori, T. Yamada. K. Tominaga, "Damage characteristics of 6H-SiC surface etched using capacitively-coupled helium plasmas driven by a radio frequency power", 12th International symposium on Sputtering and Plasma Processes, Kyoto, Japan, Jul.10-12, (2013).
 16. R. Kawakami, M. Niibe, Y. Nakano, M. Konishi, T. Shirahama, K. Tominaga and T. Mukai : "Damage Characteristics of n-GaN Thin Film Surfaces Etched by Ultraviolet Light-Assisted Helium Plasmas", The 4th International Symposium on Organic and Inorganic Electronic Materials and Related Nanotechnologies (EM-NANO2010), Kanazawa, Jun, (2013).
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20. R. Takahashi, T. Fukuoka, Y. Utsumi, "Microfluidic Devices with Three-dimensional Gold Nanostructure for Surface Enhanced Raman Scattering", IEEE International Conference on Nano/Micro Engineered and Molecular Systems (IEEE-NEMS), pp722-725, Suzhou, China, Apr. 7-10, (2013).
21. Hideki Kido, Ikuo Okada, Yuichi Utsumi, Hajime Mita, "Fabrication of PTFE micro fluidic chip for amino acid derivatization process", International Conference on Electronics Packaging (ICEP2013) , pp881-884, Osaka, Japan , Apr. 10-12, (2013).
22. M. Ishizawa, H. Nose, Y. Ukita, and Y. Utsumi, "Proposal of a Novel Internally-Triggered Automatic Flow Sequencing on Centrifugal Microfluidics", International Conference on Electronics Packaging (ICEP2013) , Osaka, Japan. pp.890-893, Apr. 10-12, (2013).
23. R. Takahashi, T. Fukuoka, Y. Utsumi, A. Yamaguchi, "Microfluidic Devices with SERS Active Three-dimensional Gold Nanostructure", International Conference on Electronics Packaging (ICEP2013) , pp.885-888, Osaka, Japan. Apr. 10-12, (2013).
24. R. Hara, R. Takahashi, T. Fukuoka, A. Yamaguchi, Y. Utsumi, "Three-dimensional Silver Nanostructure for Surface Enhanced Raman Scattering", International Conference on Electronics Packaging (ICEP2013) , pp.885-888, Osaka, Japan Apr. 10-12, (2013).
25. Yamaguchi, K. Motoi, H. Miyajima and Y. Utsumi, "Broadband noise spectroscopy of a nano-scale magnetic wire", 10th International Workshop on High Aspect Ratio Micro and Nano System Technology (HARMST2013), Apr.21-24, (2013).
26. M. Kishihara, H. Ikeuchi, H. Kido, Y. Utsumi, A. Yamaguchi, and I. Ohta, "Trial Fabrication of 180 GHz Waveguide by SR Direct Etching of PTFE", 10th International Workshop on High Aspect Ratio Micro and Nano System Technology (HARMST2013), pp.114-115, Apr. 21-24, (2013).
27. Yasuto Arisue, Yuya Matsui, Tsunemasa Saiki, Kazusuke Maenaka, Akinobu Yamaguchi and Yuichi Utsumi, "Powder Transport Direction Control Method by Using Drive Frequency of Surface Acoustic Wave", Proc. of 10th International Workshop on High Aspect Ratio Micro

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28. H. Kido, I. Okada, H. Mita, A. Yamaguchi, Y. Utsumi, “Fabrication of amino acid analysis chip using SR direct dry etching of PTFE”, 10th International Workshop on High Aspect Ratio Micro Structure Technology (HARMST2013), pp.58-59, Berlin, Germany, Apr.21-24, (2013).
 29. Y. Kang, R. Takahashi, T. Fukuoka, Y. Utsumi, Y. Haruyama, S. Matsui, “Fabrication of gold nanoparticles pattern using imprinted HSQ pattern for SERS measurement”, 10th International Workshop on High Aspect Ratio Micro Structure Technology (HARMST2013), pp.260-261, Berlin, Germany, Apr. 21-24, (2013).
 30. R. Takahashi, T. Fukuoka, Y. Utsumi, A. Yamaguchi, “Optimization of Surface Enhanced Raman Scattering Active Three- Dimensional Gold Nanostructure”, 10th International Workshop on High Aspect Ratio Micro Structure Technology (HARMST2013), pp.152-153, , Berlin, Germany, Apr.21-24, (2013).
 31. T. Yamane, S. Maekawa, I. Okada, Y. Utsumi, A. Yamaguchi, “Micro-Mirror Array Device for Floating image manufactured by Synchrotron radiation”, 10th International Workshop on High Aspect Ratio Micro Structure Technology (HARMST2013), pp.227-228, Berlin, Germany, Apr.21-24, (2013).
 32. R. Hara, R. Takahashi, T. Fukuoka, A. Yamaguchi, Y. Utsumi, “Fabrication of SARS Active Three-dimensional Silver Nanostructure”, 10th International Workshop on High Aspect Ratio Micro and Nano System Technology, pp.146-147, Berlin, Germany, Apr. 21-24, (2013).
 33. T. Kunisada, H. Nose, M. Ishizawa, K. Kuroda, I. Okada, A. Yamaguchi and Y. Utsumi, “Blood separation chip for automated biological analysis”, 10th International Workshop on High Aspect Ratio Micro and Nano System Technology, pp.194-195, Berlin, Germany, Apr.21-24, (2013).
 34. T. Yamamoto, Y. Yoritama, T. Uchiyama, Y. Utsumi, A. Yamaguchi, “Fabrication and characterization of three-dimensional type micro magneto-impedance sensor”, 10th International Workshop on High Aspect Ratio Micro and Nano System Technology, pp.225-226,

Berlin, Germany, Apr.21-24, (2013).

35. A.Yamaguchi and H. Miyajima, "Detection and stochastic analysis of magnetization fluctuation in a nano-scale magnetic wire", 8th International Symposium on Metallic Multilayers (MML2013), Kyoto, May 19-24, (2013).
36. T Yamamoto, Y. Yoritama, T. Uchiyama, Y. Utsumi, A. Yamaguchi, "Estimation of magnetic impedance of a thin Fe₁₉Ni₈₁ wire using built up micro-scale pickup coil", 8th International Symposium on Metallic Multilayers (MML2013), pp.288-289, Kyoto, May 19-24, (2013).
37. T. Kobayashi, S. Kamikawa, Y. Itou, H. Kanematsu and Y. Utsumi, International Conference on Applied Mechanics, Materials, and Manufacturing (AMMM), Hong Kong, August 17-18, (2013).
38. R. Takahashi, R. Hara, T. Fukuoka, Y. Utsumi, A. Yamaguchi, "Microfluidic Devices with SERS Active Self-assembled Gold Nanostructures", RSC Tokyo International Conference, A222, Makuhari, Chiba, Sep.5-6, (2013).
39. T. Kobayashi, T. Yokoyama, Y. Utsumi, H. Kanematsu and T. Masuda, "Measuring the Ductility of Organic Semiconductor Materials", 19th International Vacuum Congress (IVC-19), Paris, France, Sep. 9-13, (2013).
40. T. Saiki, Y. Arisue, Y. Matsui, K. Kasai, A. Yamaguchi, M. Takeo, K. Maenakab, Y. Utsumi, "Design of Surface Acoustic Wave Actuator using Bragg Reflection for Powder Transport", Proc. of 39th International Conference on Micro and Nano Engineering (MNE2013), pp.172-173, London, UK, Sep.6-19, (2013).
41. M. Takeo, S. Nii, D. Kato, S. Negoro, S. Yusa, T. Saiki, Y. Takizawa, Y. Utsumi, "Development of a Portable Fluidic and Detection System for ELISA in a 3-Dimensional Microreactor", Proc. of 39th International Conference on Micro and Nano Engineering (MNE2013), pp.178-179, London, UK, Sep.6-19. (2013).
42. T. Kobayashi, I. Hashimoto, R. Hashimoto, T. Takashina, H. Kanematsu and Y. Utsumi,

- “Comparison of Heat Transfer Performance among Solid, Hollow and Sodium Encapsulated Engine Valves”, The Irago Conference 2013, Tahara, Aichi, Japan, Oct. 24-25, (2013).
43. T. Kobayashi, Y. Sakate, R. Hashimoto, T. Takashina, H. Kanematsu, and Y. Utsumi, “Research on Optimization of Cooling Structure of LED Element (The 2nd Report)”, The Irago Conference 2013, Tahara, Aichi, Japan. Oct. 24-25,(2013).
 44. T. Kobayashi, J. Okamoto, Y. Utsumi, H. Kanematsu and T. Masuda, “Measuring the Deformation characteristics of The Films for Flexible Organic Light Emission Diode”, The Irago Conference 2013, Tahara, Aichi, Japan. Oct. 24-25, (2013).
 45. T. Kobayashi, S. Ishikawa, R. Hashimoto, T. Takashina, H. Kanematsu, K. Mizuta and Y. Utsumi, “ Optimizing Structure of LED Light Bulb for Heat Transfer (Part 2)”, The Irago Conference 2013, Tahara, Aichi, Japan. Oct. 24-25, (2013).
 46. T. Kobayashi, M. Kameyama, Y. Yabunaka, R. Hashimoto, T. Takashina, H. Kanematsu and Y. Utsumi, “Creation of a Taguchi Method Education System using Simulation of Golf Ball Trajectory”, The Irago Conference 2013, Tahara, Aichi, Japan. Oct. 24-25, (2013).
 47. T. Kobayashi, T. Yokoyama, Y. Utsumi, H. Kanematsu, T. Masuda and M. Yamamoto, “Improvement of ductility of Organic Semiconductor Materials for Flexible Organic Light Emitting Diode” 8th International Symposium on Advanced Science and Technology in Experimental Mechanics (8th ISEM '13-Sendai), Sendai, Japan, Nov. 3-6, (2013).
 48. T. Kobayashi, H. Ikeda, Y. Utsumi, H. Kanematsu, T. Masuda and M. Yamamoto, “Measurement of Reduced Elastic Modulus of Organic Semiconductor Materials for Flexible Organic Light Emitting Diode”, 8th International Symposium on Advanced Science and Technology in Experimental Mechanics, Sendai, Japan, Nov. 3-6, (2013).
 49. Y. Arisue, T. Saiki, A. Ymaguchi, and Y. Utsumi, “Study on Reflected Surface Acoustic Wave Actuator for Powders using a Grating Reflector”, Proc. of 2013 International Microprocesses and Nanotechnology Conference (MNC2013), 8P-11-88, Sapporo, Japan, Nov.5-8, (2013).

50. M. Ishizawa, T. Kunisada, K. Kuroda, C. Kataoka, A. Yamaguchi and Y. Utsumi, "Centrifugal Microfluidic Chip for Blood Separation", Proc. of 2013 International Microprocesses and Nanotechnology Conference (MNC2013), 7P-7-107, Sapporo, Japan, Nov. 5-8, (2013).
51. R. Takahashi, T. Fukuoka, Y. Utsumi, A. Yamaguchi, "Optimization of SERS Active Three-Dimensional Gold Nanostructure with High Sensitivity", Proc. of 2013 International Microprocesses and Nanotechnology Conference (MNC2013), 7D-6-2, Sapporo, Japan, Nov. 5-8, (2013).
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