

Part 3. List of Publications



Retirement memorial lecture of Prof. Shinji Matsui

List of publications

(1) Papers

1. "Photoneutron cross sections for neodymium isotopes: Toward a unified understanding of (γ ,n) and (n, γ) reactions in the rare earth region"
H.-T. Nyhus, T. Renström, H. Utsunomiya, S. Goriely, D. M. Filipescu, I. Gheorghe, O. Tesileanu, T. Glodariu, T. Shima, K. Takahisa, S. Miyamoto, Y.-W. Lui, S. Hilaire, S. Péru, M. Martini, L. Siess, and A. J. Koning
Physical Review C, **91**, 015808-1-7 (2015).
2. "ニュースバル放射光施設における放射光利用の新展開"
宮本修治
シリーズ「共用施設活用のススメ」第5回
OPTRONICS, Vol.34, No.5, pp.121-127 (2015). ISSN 0286-9659
3. "レーザーコンプトン散乱 γ 線を用いた光核反応"
早川岳人, 宮本修治
展望, Isotope News, No.734, pp. 12-16 (2015).
4. "Photoneutron Reactions in Nuclear Astrophysics"
H. Utsunomiya, S. Goriely, D.M. Filipescu, O. Tesileanu, I. Gheorghe, T. Glodariu, H.-T. Nyhus, T. Renström, Y.-W. Lui, T. Shima, K. Takahisa, S. Miyamoto
Journal of Physics: Conference Series **590**, 012023 (2015).
5. "The γ -Ray Beam-Line at NewSUBARU"
H. Utsunomiya, S. Hashimoto, S. Miyamoto
Nuclear Physics News, vol.25, Issue 3, pp.25-29, July-September (2015). DOI:10.1080/10619127.2015.1067539
6. "Photodisintegration of 9Be through the 1/2+ state and cluster dipole resonance"
H. Utsunomiya, S. Katayama, I. Gheorghe, S. Imai, H. Yamaguchi, D. Kahl, Y. Sakaguchi, T. Shima, K. Takahisa, S. Miyamoto
Physical Review C, **92**, pp. 064323-1-8 (2015).
7. "Dispersion, spatial growth rate, and start current of a Cherenkov free-electron laser with negative-index material"
Y. Wang, Y. Wei, D. Li, K. Takano, Ma. Nakajima, X. Jiang, X. Tang, X. Shi, Y. Gong, J. Feng, and S. Miyamoto
Physics of Plasmas, **22**, 083111-1-7 (2015).
8. "HARPO, a gaseous TPC as a gamma telescope and polarimeter: first measurement in a polarised photon beam between 1.7 and 74 MeV"
Delbart, S. Amano, D. Attié, D. Bernard, P. Bruele, D. Calvet, P. Colas, S. Daté, M. Frotin, Y. Geerebaert, B. Giebels, D. Götz, P. Gros, S. Hashimotob, D. Horan, T. Kotaka, M. Louzir, Y. Minamiyama, S. Miyamoto, H. Ohkuma, P. Poilleux, I. Semeniouk, P. Sizun, A. Takemoto, S. Wang, M. Yamaguchi
The 34th International Cosmic Ray Conference, 30 July- 6 August, 2015
The Hague, The Netherlands, Proceedings of Science (POS)
9. "HARPO: beam characterization of a TPC for gamma-ray polarimetry and high angular-resolution astronomy in the MeV-GeV range"
S. Wang, D. Bernard, P. Bruele, M. Frotin, Y. Geerebaert, B. Giebels, P. Gros, D. Horan, M. Louzir, P. Poilleux, I. Semeniouk, D. Attié, D. Calvet, P. Colas, A. Delbart, P. Sizun, D. Götz, S. Amano, T. Kotaka, S. Hashimoto, Y. Minamiyama, A. Takemoto, M. Yamaguchi, S. Miyamoto, S. Daté, H. Ohkuma
7th International Symposium on Large TPCs for Low-Energy Rare Event Detection
Journal of Physics: Conference Series **650**, 012016 (2015). doi:10.1088/1742-6596/650/1/012016

10. "Damage Characteristics of n-GaN Crystal Etched with N₂ Plasma by Soft X-ray Absorption Spectroscopy"
Masahito Niibe, Takuya Kotaka, Retsuo Kawakami, Yoshitaka Nakano, Takashi Mukai
e-J. Surf. Sci. Nanotech, **14**, 9-13 (2016).
11. "Surface Analysis of AlGaN Treated with CF₄ and Ar Plasma Etching"
Shodai Hirai, Masahito Niibe, Retsuo Kawakami, Tatsuo Shirahama, Yoshitaka Nakano, Takashi Mukai
e-J. Surf. Sci. Nanotech, **13**, 481-487 (2015).
12. "Resistance of Hydrogenated Titanium-doped Diamond-Like-Carbon Film to Hyperthermal Atomic Oxygen"
Kengo Kidena, Minami Endo, Hiroki Takamatsu, Masahito Niibe, Masahito Tagawa, Kumiko Yokota, Yuichi Furuyama, Keiji Komatsu, Hidetoshi Saitoh and Kazuhiro Kanda
Metals, **5**, 1957-1970 (2015).
13. "Hyperthermal Atomic Oxygen Beam Irradiation Effect on the Hydrogenated Si-doped DLC Film"
Kengo Kidena, Minami Endo, Hiroki Takamatsu, Ryo Imai, Masahito Niibe, Kumiko Yokota, Masahito Tagawa, Yuichi Furuyama, Keiji Komatsu, Hidetoshi Saitoh and Kazuhiro Kanda
Trans Mat. Res. Soc. Jpn. **40**, 353-358 (2015).
14. "Structural dependence of corrosion resistance of amorphous carbon films against nitric acid"
Atsuyuki Takarada, Tsuneo Suzuki, Kazuhiro Kanda, Masahito Niibe, Masayuki Nakano, Naoto Otake, Hiroki Akasaka
Diamond and Related Materials, **51**, 49-54 (2015)
15. "Study of Synchrotron Radiation Near-Edge X-Ray Absorption Fine-Structure of Amorphous Hydrogenated Carbon Films at Various Thicknesses"
Sarayut Tunmee, Ratchadaporn Supruangnet, Hideki Nakajima, XiaoLong Zhou, Satoru Arakawa, Tsuneo Suzuki, Kazuhiro Kanda, Haruhiko Ito, Kenji Komatsu, and Hidetoshi Saitoh
Journal of Nanomaterials, **2015**, Article ID 276790 (2015).
16. "Surface functionalization of Diamond-like carbon film by the irradiation of soft X-ray"
Kazuhiro Kanda
CERAMICS JAPAN, **50**, 46-52 (2015). (in Japanese)
17. "Comparison between AlGaN surfaces etched by carbon tetrafluoride and argon plasma: Effect of the fluorine impurities incorporated in the surface"
Retsuo Kawakami, Masahito Niibe, Yoshitaka Nakano, Tatsuo Shirahama, Shodai Hirai, Takashi Mukai
Vacuum, **119**, 264-269 (2015).
18. "Ar+-irradiation-induced damage in hydride vapor-phase epitaxy GaN films"
Yoshitaka Nakano, Daisuke Ogawa, Keiji Nakamura, Retsuo Kawakami, and Masahito Niibe
J. Vac. Sci. Technol. A**33**, 043002 (2015).
19. "Recovery of x-ray absorption spectral profile in etched TiO₂ thin films"
Keiji Sano, Masahito Niibe, Retsuo Kawakami and Yoshitaka Nakano
J. Vac. Sci. Technol. A**33**, 031403 (2015).
20. "Electrical Investigation of Deep-Level Defects Induced in AlGaN/GaN Heterostructures by CF₄ Plasma Treatments"
R. Kawakami, Y. Nakano, M. Niibe, T. Shirahama, and T. Mukai
ECS Solid State Letters, **4**, 36-38 (2015).

21. "**Three-dimensional hydrogen silsesquioxane nanostructure fabrication by reversal room-temperature nanoimprint using poly(dimethylsiloxane) mold**"
N. Sugano, M. Okada, Y. Haruyama, and S. Matsui
Jpn. J. Appl. Phys. **54**, 06FM05-1-06FM05-4 (2015).
22. "**Evaluation of the fluorinated antisticking layer by using photoemission and NEXAFS spectroscopies**"
Y. Haruyama, Y. Nakai, and S. Matsui
Applied Physics A **121**, pp. 437–441 (2015).
23. "**Electronic structure of fluorinated self-assembled monolayer investigated by photoelectron spectroscopy in the valence band region**"
Y. Haruyama and S. Matsui
Jpn. J. Appl. Phys. **54**, 075202-1-075202-4 (2015).
24. "**High-resolution line and space pattern fabrication by electron beam lithography using NEB-22 resist**"
M. Okada and S. Matsui
Jpn. J. Appl. Phys. **54**, 118004-1-118004-2 (2015).
25. "**Influence of film thickness on the reorientation structure of photoalignable liquid crystalline polymer films**"
N. Kawatsuki, Y. Taniguchi, M. Kondo, Y. Haruyama, S. Matsui
Polymer **90**, pp. 290-294 (2016).
26. "**Phase Imaging Results of Phase Defect Using Micro Coherent EUV Scatterometry Microscope**"
Tetsuo Harada, Hiraku Hashimoto, Tsuyoshi Amano, Hiroo Kinoshita, and Takeo Watanabe
J. Micro-Nanolith. Mem. **15**, 021007 (2016).
27. "**Actual defect observation results of an extreme ultraviolet blank mask by coherent diffraction imaging**"
Tetsuo Harada, Hiraku Hashimoto, Tsuyoshi Amano, Hiroo Kinoshita, and Takeo Watanabe
Appl. Phys. Express **9**, 035202 (2016).
28. "**Phase Imaging Results of Phase Defect Using Micro Coherent EUV Scatterometry Microscope**"
Tetsuo Harada, Hiraku Hashimoto, Tsuyoshi Amano, Hiroo Kinoshita, and Takeo Watanabe
Proc. SPIE 9635 96351E (2015).
29. "**Development of element technologies for EUVL**"
Hiroo Kinoshita, Takeo Watanabe and Tetsuo Harada
Adv. Opt. Techn. **4**, pp. 319-331 (2015).
30. "**Development of High-Reflective W/Si-multilayer Diffraction Grating for the Analysis of Fluorine Materials**"
Masaki Kuki, Tomoyuki Uemura, Masato Yamaguchi, Tetsuo Harada, Takeo Watanabe, Yasuji Muramatsu, and Hiroo Kinoshita
J. Photopolym. Sci. Technol., **28**, pp. 531-536 (2015).
31. "**Development of Transmission Grating for EUV Interference Lithography of 1X nm HP**"
Tsubasa Fukui, Hirohito Tamino, Yuki Fukuda, Masaki Kuki, Takeo Watanabe, Hiroo Kinoshita, and Tetsuo Harada
J. Photopolym. Sci. Technol., **28**, pp. 525-529 (2015).

32. "Effective EUV Resist Outgassing Barrier Using a Novel Top Coat Material"
 Xiaowei Wang, Georg Pawlowski, Tetsuo Okayasu, Masato Suzuki, Yusuke Hama, Takeo Watanabe, Tetsuo Harada, and Hiroo Kinoshita
J. Photopolym. Sci. Technol., **28**, pp. 111-117 (2015).
33. "Recent Progress in EUV Resist Outgas Research at EIDEC"
 Eishi Shiobara, Isamu Takagi, Yukiko Kikuchi, Takeshi Sasami, Shinya Minegishi, Toru Fujimori, Takeo Watanabe, Tetsuo Harada, Hiroo Kinoshita, and Soichi Inoue
J. Photopolym. Sci. Technol., **28**, pp. 103-110 (2015).
34. "Development of a reflectometer for a large EUV mirror in NewSUBARU"
 Haruki Iguchi, Hiraku Hashimoto, Masaki Kuki, Tetsuo Harada, Takeo Watanabe, and Hiroo Kinoshita
Proc. SPIE 9658, 965819 (2015).
35. "EUV mask observations using a coherent EUV scatterometry microscope with a high-harmonic-generation source"
 Takahiro Fujino, Yusuke Tanaka, Tetsuo Harada, Yutaka Nagata, Takeo Watanabe, and Hiroo Kinoshita
Proc. SPIE 9658, 965818 (2015).
36. "Quantitative phase imaging of a small phase structure on an extreme-ultraviolet mask by coherent diffraction imaging"
 Tetsuo Harada, Hiraku Hashimoto, Yusuke Tanaka, Tsuyoshi Amano, Takeo Watanabe, Hiroo Kinoshita
Appl. Phys. Express **8**, 055202 (2015).
37. "Extreme ultraviolet mask observations using a coherent extreme ultraviolet scatterometry microscope with a high-harmonic-generation source"
 Takahiro Fujino, Yusuke Tanaka, Tetsuo Harada, Yutaka Nagata, Takeo Watanabe, and Hiroo Kinoshita
Jpn. J. Appl. Phys. **54**, 06FC01 (2015).
38. "Analysis of EUV Resist Outgassing Depended on the Dosage"
 E. Shiobara, I. Takagi, Y. Kikuchi, T. Sasami, S. Minegishi, T. Fujimori, T. Watanabe, T. Harada, H. Kinoshita, S. Inoue
SPIE Proc. 9422, 942210 (2015).
39. "Study of Dill's B parameter measurement of EUV resist"
 Atsushi Sekiguchi, Yoko Matsumoto, Tetsuo Harada, Takeo Watanabe, and Hiroo Kinoshita
SPIE Proc. 9422, 94222L (2015).
40. "ニュースバル多目的ビームラインBL10における軟X線吸収分析(4) ; 軟X線吸収分析装置の導入と有機薄膜試料の軟X線吸収・反射率分析"
 植村智之, 村松康司, 南部啓太, 福山大輝, 九鬼真輝, 原田哲男, 渡邊健夫, 木下博雄
X線分析の進歩第46集, pp. 317-325 (2015).
41. "Surface-enhanced Raman Scattering active metallic nanostructure fabricated by photochemical reaction of synchrotron radiation"
 A. Yamaguchi, T. Matsumoto, I. Okada, I. Sakurai and Y. Utsumi
Materials Chemistry and Physics **160**, 205-211 (2015).

42. "On-chip integration of novel Au electrode with a higher order three-dimensional layer stack nanostructure for surface-enhanced Raman spectroscopy"
 Akinobu Yamaguchi, Takao Fukuoka, Ryohei Hara, Kazuhisa Kuroda, Ryo Takahashi and Yuichi Utsumi
RSC Advances, **5**, 73194 -73201 (2015).
43. "Fabrication of Dihedral Corner Reflector Array for Floating Image Manufactured by X-ray Lithography using Synchrotron Radiation"
 A. Yamaguchi, S. Maekawa, T. Yamane, I. Okada and Y. Utsumi
Transactions of the Japan Institute of Electronics Packaging **8**(1), 23-28 (2015).
44. "Water-clock-based autonomous flow sequencing in steadily rotating centrifugal microfluidic device"
 Yoshiaki Ukita, Yuzuru Takamura, Yuichi Utsumi
Sensors and Actuators B: Chemical, **220**, 180-183 (2015).
45. "Proposal of Minicentrifuge-Compatible Centrifugal Microfluidic Device"
 Yoshiaki Ukita, Yuichi Utsumi, Yuzuru Takamura
Sensors and Materials, **27**, 5, 391-402 (2015).
46. "Fabrication of SERS Active Noble Metallic Nanostructure by Synchrotron Radiation Induced Photochemical Reaction"
 T. Matsumoto, I. Okada, I. Sakurai, Y. Utsumi and A. Yamaguchi
IEEE Xplore (Electronic Packaging and iMAPS All Asia Conference (ICEP-IACC), 2015 International Conference on, Kyoto 2015), pp866-869 (2015).
47. "Fabrication and evaluation of dihedral corner reflector array for floating image manufactured by synchrotron radiation"
 T. Yamane, S. Maekawa, Y. Utsumi, I. Okada and A. Yamaguchi
IEEE Xplore (Electronic Packaging and iMAPS All Asia Conference (ICEP-IACC), 2015 International Conference on, Kyoto 2015), pp436-439 (2015).
48. "Application of Gold Nanoparticles Self-assemblies to Unclonable Anti-counterfeiting Technology"
 T. Fukuoka, A. Yamaguchi, R. Hara, T. Matsumoto, Y. Utsumi and Y. Mori
IEEE Xplore (Electronic Packaging and iMAPS All Asia Conference (ICEP-IACC), 2015 International Conference on, Kyoto 2015), pp432-435 (2015).
49. "X 線励起液相反応による金属ナノ粒子生成と応用 (Synthesis and application of gold nanoparticles using photochemical reaction induced by X-ray irradiation)"
 山口明啓, 岡田育夫, 福岡隆夫, 村上元規, 内海裕一
MES 2015, pp265-268 (2015). (in Japanese)
50. "微量分子検出のための高次ナノ構造体の創製と実装 (Fabrication and Assembly of Higher Order Nanostructure for Surface Enhanced Raman Scattering)"
 山口明啓, 福岡隆夫, 内海裕一
Mate 2016, pp281-284 (2015). (in Japanese)
51. "放射光光化学反応による金属ナノ粒子生成 (Synthesis of metallic nanoparticles in liquid solution using X-ray photochemical reaction)"
 山口明啓, 岡田育夫, 櫻井郁也, 福岡隆夫, 石原マリ, 内海裕一
Mate 2016, pp457-458 (2016). (in Japanese)

(2) International meetings

1. **"Measurement of a Polarized Gamma Ray Beam from 1.7 to 74 MeV with the HARPO TPC"**
P.Gros, D. Bernard, Ph. Bruel, M. Frotin, Y. Geerebaert, B. Giebels, Ph. Gros, D. Horan, M. Louzir, P. Poilleux, I. Semeniouk, S. Wang, D. Calvet, D. Attié, P. Colas, A. Delbart, P. Sizun, Diego Götz, S. Amano, T. Kotaka, S. Hashimoto, Y. Minamiyama, A. Takemoto, S. Miyamoto, M. Yamaguchi, S. Daté, H. Ohkuma
13th Pisa Meeting on Advanced Detectors, 24-, May (2015).
2. **"NewSUBARU LCS Gamma-ray Source"**
Shuji Miyamoto
International Workshop of Laser Compton Scattering Gamma Ray Sources and Their Applications, NewSUBARU, Kouto, Japan, Nov. 11 - 12, 2015.
3. Hold International Workshop 国際ワークショップ開催
International Workshop of Laser Compton Scattering Gamma Ray Sources and Their Applications, NewSUBARU, Kouto, Japan, Nov. 11 - 12, 2015
4. **"Low-Temperature Crystallization of Si, Ge and Si-Nanocrystal by Soft X-Ray Irradiation"**
N. Matsuo, A. Heya, S. Miyamoto, T. Mochizuki, K. Kanda, K. Kohama, M. Takahashi, K. Itoh
Collaborative Conference on 3D and Materials Research 2015, 15-19 June 2015, Busan, South Korea.
5. **"Development of DLC cone for fast ignition experiment"**
Mayuko Koga, Takuma Ono, Takuma Tokunaga, Hayato Kadota, Takashi Hashimoto, Kazuhiro Kanda, Takayoshi Norimatsu
9th International Conference on Reactive Plasmas (ICRP-9) October 12-16, 2015.
6. **"Double Crystal Monochromator Controlled by Integrated Computing on BL07A in New SUBARU, Japan"**
Masato Okui, Naoki Yato, Akinobu Watanabe, Baiming Lin, Norio Murayama, Sei Fukushima and Kazuhiro Kanda
12th International Conference on Synchrotron Radiation Instrumentation(SRI2015) July 6-10, 2015, Marriott Marquis Times Square New York City, NY United States.
7. **"Continuous Generation of Laser Plasma x-ray using Solid Rare Gas Targets"**
S.Amano
The 4th Advanced Lasers and Photon Source Conference (ALPS'15), Yokohama, Apr.22-24, 2015.
8. **"Anatase TiO₂ Thin Films Grown by Facing-Target Reactive Sputtering and Its Impact on Photocatalytic Activity"**
Retsuo Kawakami, Masahito Niibe, Yoshitaka Nakano, Chisato Azuma and Takashi Mukai
Proceedings of International Symposium of Dry Process 2015, pp.125–126, Nov. 2015, Awaji Japan.
9. **"A Relation between Pinch-Off Voltages and Deep-Level Defects in AlGaN/GaN Hetero-Structures Treated by CF₄ Plasma"**
Yoshitaka Nakano, Retsuo Kawakami, Masahito Niibe, Tatsuo Shirahama and Takashi Mukai
11th International Conference on Nitride Semiconductors (ICNS-11), Beijing, Sep. 2015.

10. "**Low energy soft X-ray Emission Spectrometer at BL-09A in NewSUBARU"**
Masahito Niibe and Takashi Tokushima
The 12th inter'l conf. on Synchrotron Radiation Instrumentation (SRI2015) 6-10 July 2015, New York, USA.
11. "**Development of the Surface-sensitive Soft X-ray Absorption Fine Structure Measurement Technique for the Bulk Insulator"**
Takumi Yonemura, Junji Ihara, Shigeaki Uemura, Koji Yamaguchi, Masahito Niibe
The 12th inter'l conf. on Synchrotron Radiation Instrumentation (SRI2015) 6-10 July 2015, New York, USA.
12. "**Comparison between Surface Characteristics of Titanium Oxide Thin Films Treated with N2 Dielectric Barrier Discharge Plasma and Annealed in N2 Gas"**
Retsuo Kawakami, Masahito Niibe, Yoshitaka Nakano and Takashi Mukai
Proc. 13th International Symposium of Sputtering & Plasma Processes (ISSP), pp.63--66, Kyoto, Jul. 2015.
13. "**Temperature dependence of molecular orientation of liquid crystalline polymer induced by nanoimprint-graphoepitaxy"**
M. Okada, Y. Haruyama, S. Matsui, R. Hosoda, Y. Taniguchi, N. Kawatsuki and H. Ono
59th International Conference on electron, ion, photon beam technology and fabrication(EIPBN2015), San Diego, USA, 2015/5/27
14. "**Upgrade of a Vacuum Ultraviolet and Soft X-ray Undulator Beamline BL07B in NewSUBARU"**
Y. Haruyama and S. Matsui
12th International Conference on Synchrotron Radiation Instrumentation (SRI 2015), Newyork, USA, 2015/7/7
15. "**Surface Evaluation of HSQ containing PDMS Additive after Room-temperature Nanoimprinting"**
N. Sugano, M. Okada, Y. Haruyama, and S. Matsui
32nd International Conference of Photopolymer Science and Technology(ICPST-32), Chiba, Japan, 2015/7/25
16. "**Toward Less Than 50 nm-Line and Space Negative Tone Pattern Fabrication by Electron Beam Lithography using NEB-22"**
M. Okada and S. Matsui
41th International Conference on Micro and Nano Engineering (MNE2015), The Netherlands, 2015/9/22
17. "**Localized liquid crystalline molecular orientation in line and space pattern fabricated by double nanoimprint-graphoepitaxy"**
M. Okada, Y. Taniguchi, Y. Haruyama, H. Ono, N. Kawatsuki, and S. Matsui
41th International Conference on Micro and Nano Engineering (MNE2015), The Netherlands, 2015/9/23
18. "**Negative tone high resolution line and space pattern mold fabrication by electron beam lithography using NEB-22"**
M. Okada and S. Matsui
The 14th International Conference on Nanoimprint and Nanoprint Technology 2015 (NNT2015), Napa, USA, 10/23

19. "Double nanoimprint-graphoepitaxy for localized liquid crystalline molecular orientation in imprinted pattern"
M. Okada, Y. Taniguchi, Y. Haruyama, H. Ono, N. Kawatsuki, and S. Matsui
The 14th International Conference on Nanoimprint and Nanoprint Technology 2015 (NNT2015), Napa, USA, 10/23
20. "Resin Concentration Dependence of Residual Layer Thickness in UV Reversal Nanoimprinting"
N. Sugano, M. Okada, Y. Haruyama and S. Matsui
28th International Microprocesses and Nanotechnology Conference (MNC2015), Toyama, Japan, 2015/11/12
21. "Negative Tone 40 nm-Line and 60 nm-Space Pattern Fabrication by Electron Beam Lithography Using NEB-22"
M. Okada and S. Matsui
28th International Microprocesses and Nanotechnology Conference (MNC2015), Toyama, Japan, 2015/11/12
22. "Study of the Durability of Antisticking Layer against Repeated Ultra Violet Nanoimprinting"
S. Iyoshi, M. Okada, Y. Haruyama and S. Matsui
28th International Microprocesses and Nanotechnology Conference (MNC2015), Toyama, Japan, 2015/11/13
23. "Evaluation of Molecular Orientation of Photo-Cross-Linkable Liquid Crystalline Polymer in 200 nm-Line and Space Pattern by Measuring Diffraction Efficiency"
M. Okada, Y. Taniguchi, Y. Haruyama, H. Ono, N. Kawatsuki, and S. Matsui
28th International Microprocesses and Nanotechnology Conference (MNC2015), Toyama, Japan, 2015/11/13
24. "Observation Result of Actual Phase Defects on an EUV Mask Using Micro Coherent EUV Scatterometry Microscope"
H. Hashimoto, T. Harada, T. Amano, H. Kinoshita and T. Watanabe
Micronano conference 2015, Toyama, Japan, Nov.10-13, 2015.
25. "Measurement Result of an EUV Collector Mirror Using a Large Reflectometer at NewSUBARU"
H. Iguchi, H. Hashimoto, M. Kuki, T. Harada, H. Kinoshita, T. Watanabe, Y.Y. Platonov, M.D. Kriese and J.R. Rodriguez
Micronano conference 2015, Toyama, Japan, Nov.10-13, 2015.
26. "Soft X-ray Absorption Spectroscopy using SR for EUV Resist Chemical Reaction Analysis (Invited talk)"
Takeo Watanabe
TWG EUV Ressit Workshop, Maastricht, Netherland, Oct. 4, 2015.
27. "Extreme ultraviolet mask observations using a coherent extreme ultraviolet scatterometry microscope with a high-harmonic-generation source"
Takahiro Fujino, Yusuke Tanaka, Tetsuo Harada, Yutaka Nagata, Takeo Watanabe, Hiroo Kinoshita
Photomask Technology 2015, Monterey, USA, 2015/9/29.

28. **"Development of Transmission Grating for EUV Interference Lithography of 1X nm HP"**
 Tsubasa Fukui, Hirohito Tanino, Yuki Fukuda, Masaki Kuki, Takeo Watanabe, Hiroo Kinoshita, and
 Tetsuo Harada
 The 32nd International Conference of Photopolymer Science and Technology, Makuhari Messe, Chiba,
 Japan, June 24 - 26, 2015.
29. **"Development of High-Reflective W/Si-multilayer Diffraction Grating for the Analysis of Fluorine Materials"**
 Masaki Kuki, Tomoyuki Uemura, Masato Yamaguchi, Tetsuo Harada, Takeo Watanabe, Yasuji
 Muramatsu, and Hiroo Kinoshita
 The 32nd International Conference of Photopolymer Science and Technology, Makuhari Messe, Chiba,
 Japan, June 24 - 26, 2015.
30. **"Recent Progress in EUV Resist Outgas Research at EIDEC"**
 Eishi Shiobara, Isamu Takagi, Yukiko Kikuchi, Takeshi Sasami, Shinya Minegishi, Toru Fujimori, Takeo
 Watanabe, Tetsuo Harada, Hiroo Kinoshita, and Soichi Inoue
 The 32nd International Conference of Photopolymer Science and Technology, Makuhari Messe, Chiba,
 Japan, June 24 - 26, 2015.
31. **"Effective EUV Resist Outgassing Barrier Using a Novel Top Coat Material"**
 Xiaowei Wang, Georg Pawlowski, Tetsuo Okayasu, Masato Suzuki, Yusuke Hama, Takeo Watanabe,
 Tetsuo Harada, and Hiroo Kinoshita
 The 32nd International Conference of Photopolymer Science and Technology, Makuhari Messe, Chiba,
 Japan, June 24 - 26, 2015.
32. **"EUV resist outgassing analysis for the new platform resists at EIDEC"**
 Eishi Shiobara, Yukiko Kikuchi, Shinji Mikami, Takeshi Sasami, Takashi Kamizono, Shinya Minegishi,
 Takakazu Kimoto, Toru Fujimori, Takeo Watanabe, Tetsuo Harada, Hiroo Kinoshita, Satoshi Tanaka
 SPIE advanced Lithography 2016, San Jose USA, Feb. 23-24, 2016.
33. **"FABRICATION OF TRANSMISSION GRATING OF EUV INTERFERENCE LITHOGRAPHY FOR 1X NM HP EUV RESIST EVALUATION"**
 Takeo Watanabe, Tsubasa Fukui, Hirohito Tanino, Yuki Fukuda, Masaki Kuki, Masato Yamaguchi,
 Tetsuo Harada
 EUV International Symposium 2015, Masstricht, Netherland, Oct. 6-8, 2015.
34. **"QUANTITATIVE PHASE-CONTRAST IMAGING OF A PHASE DEFECT USING A LENSLESS MICROSCOPE"**
 Tetsuo Harada, Hiraku Hashimoto, Tsuyoshi Amano, Hiroo Kinoshita, Takeo Watanabe
 EUV International Symposium 2015, Masstricht, Netherland, Oct. 6-8, 2015.
35. **"A Study of EUV Resist Sensitivity by Using Metal materials"**
 Atsushi Sekiguchi, Yoko Matsumoto, Tadashi Yamanouchi, Takeo Watanabe, Tetsuo Harada, Hiroto
 Kudo
 EUV International Symposium 2015, Masstricht, Netherland, Oct. 6-8, 2015.
36. **"Comparison of EUV Resist Outgassing between Organic and Inorganic Materials"**
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- 37. **"Phase Imaging Results of Phase Defect Using Micro Coherent EUV Scatterometry Microscope"**
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 - 38. **"Development of Micro Coherent EUV Scatterometry Microscope for Phase Defect Characterization"**
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 - 39. **"Development of a reflectometer for a large EUV mirror in NewSUBARU"**
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 - 40. **"EUV mask observations using a coherent EUV scatterometry microscope with a high-harmonic-generation source"**
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 - 41. **"Fabrication of SERS Active Noble Metallic Nanostructure by Synchrotron Radiation Induced Photochemical Reaction"**
T. Matsumoto, I. Okada, I. Sakurai, Y. Utsumi and A. Yamaguchi
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 - 42. **"Fabrication and evaluation of dihedral corner reflector array for floating image manufactured by synchrotron radiation"**
T. Yamane, S. Maekawa, Y. Utsumi, I. Okada and A. Yamaguchi
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 - 43. **"Application of Gold Nanoparticles Self-assemblies to Unclonable Anti-counterfeiting Technology"**
T. Fukuoka, A. Yamaguchi, R. Hara, T. Matsumoto, Y. Utsumi and Y. Mori
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 - 44. **"Optofluidicdevices implemented 3D gold nanostructure enabling surface enhanced Raman scattering"**
Akinobu Yamaguchi, Takao Fukuoka, Ryo Takahashi, and Yuichi Utsumi
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 - 46. **"Surface enhanced Raman scattering sensing using a coffee-ring-type 3D silver nanostructure self-assembled on glass substrates"**
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49. "**Fundamental study of a microwave irradiation structure using transparent post-wall waveguide**"
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