

Publications (Apr.2012 - Mar. 2013)

1. Y. Nabekawa, T. Shimizu, Y. Furukawa, E. J. Takahashi, K. Midorikawa: "Interferometry of an attosecond pulse train generated from Xe gas target", *Chem. Phys.* **414**, 20-25 (2013).
2. Y. Liao, Y. Shen, L. Qiao, D. Chen, Y. Cheng, K. Sugioka, and K. Midorikawa, "Femtosecond laser nanostructuring in porous glass with sub-50nm feature sizes", *Opt. Lett.* **38**, 187-189 (2013).
3. Y. Liao, Y. Cheng, C. Liu, J. Song, F. Hei, Y. Shen, D. Chen, Z. Xu, Z. Fan, X. Wei, K. Sugioka, and K. Midorikawa, "Direct laser writing of sub-50 nm nanofluidic channels buried in glass for three-dimensional micro-nanofluidic integration", *Lab. Chip.* **13**, 1626-1631 (2013).
4. S. Nakashima, K. Sugioka, K. Midorikawa, and Mukai, "Spatially selective modification of optical and magneto-optical properties in Fe- and Au-doped glasses irradiated with femtosecond-laser", *Appl. Phys. A* **110**, 765-769 (2013).
5. Zhihai Wang, Koji Ishibashi, S. Komiyama, Mikhail Patrashin, and Iwao Hosako, "Charge sensitive infrared photo transistors with integrated plasmonic photocouplers", *Journal of Physics D: Applied Physics*, **46**, 165107 (2013)
6. H. Ohmori: "Effect of nanodiamond on ultraprecision machining process", *Proceedings of CJUMP Symposium*, Mar.(2013).
7. C. Liu, Y. Liao, F. He, Y. Shen, D. Chen, Y. Cheng, Z. Xu, K. Sugioka, and K. Midorikawa, "Fabrication of three-dimensional microfluidic channels inside glass using nanosecond laser direct writing", *Opt. Express*, **20**, 4291-4296 (2012).
8. J. X. Song, Y. Liao, C. N. Liu, D. Lin, L. L. Qiao, Y. Cheng, K. Sugioka, K. Midorikawa, S. Zhang, "Fabrication of gold microelectrodes on a glass substrate by femtosecond-laser-assisted electroless plating", *J. Laser Micro/Nanoengin.* **7**, 334-338 (2012).
9. S. Nakashima, K. Sugioka, K. Tanaka, M. Shimizu, Y. Shimotsuma, K. Miura, K. Midorikawa, and Mukai, "Plasmonically enhanced Faraday effect in metal and ferrite nanoparticles composite precipitated inside glass", *Opt. Express* **20**, 28191-28199 (2012).
10. S. Wu, D. Wu, J. Xu, Y. Hanada, R. Suganuma, H. Wang, T. Makimura, K. Sugioka, and K. Midorikawa, "Characterization and mechanism of glass microwelding by double-pulse ultrafast laser irradiation", *Opt. Express* **20**, 28893-28905 (2012).
11. M. Nakasuji, A. Tokimasa, T. Harada, Y. Nagata, T. Watanabe, K. Midorikawa, and H. Kinoshita: "Development of Coherent Extreme-Ultraviolet Scatterometry Microscope with High-Order Harmonic Generation Source for Extreme-Ultraviolet Mask Inspection and Metrology", *Jpn. J. Appl. Phys.* Vol.51, 06FB09 pp.1-6 (2012).
12. H. Ohmori: "A Study on Characteristics of ELID Lapping for Sapphire Wafer Material", *Journal of the Korean Society for Precision Engineering*, Oct.(2012).
13. S. Beke, L. Körösi, K. Sugioka, and K. Midorikawa: "Fabrication of Transparent and Conductive Microdevices", *J. Laser Micro/Nanoengin.* **7**, 28-32 (2012).
14. Y. Hanada, K. Sugioka, and K. Midorikawa: "High sensitive optofluidic chips for biochemical liquid assay fabricated by femtosecond laser 3D micromachining followed by polymer coating", *Lab. Chip.* **12**, 3688-3693 (2012).
15. S. Nakashima, K. Sugioka, K. Midorikawa and K. Mukai: "Effect of femtosecond-laser irradiation on magnetic and optical properties in Au- and Fe-doped transparent glass", *J. Laser Micro/Nanoengin.* **7**, 212-216 (2012).
16. P. Lan, E. J. Takahashi, K. Midorikawa: "Rotation-free holographic imaging with extended arc reference", *Opt. Express* **20**, 6669 (2012).
17. P. Lan, E. J. Takahashi, K. Midorikawa: "Efficient control of electron localization by subcycle waveform synthesis", *Phys. Rev. A* **86**, 013418 (2012).
18. Y. Furukawa, Y. Nabekawa, T. Okino, A. Amani Eilanlou, E. J. Takahashi, P. Lan, K. L. Ishikawa, T. Sato, K. Yamanouchi, and K. Midorikawa: "Resolving vibrational wave-packet dynamics of D_2^+ using multicolor probe pulses", *Opt. Lett.* **37**(14), 2922-2924 (2012).

19. K. Isobe, H. Kawano, T. Takeda, A. Suda, A. Kumagai, H. Mizuno, A. Miyawaki, and K. Midorikawa: "Background-free deep imaging by spatial overlap modulation nonlinear optical microscopy," Biomed. Opt. Express, **3**, 1594-1608 (2012).
20. Z. Wang, K. Ishibashi, S. Komiyama, N. Nagai, and K. Hirakawa, "Integrating a plasmonic coupler to photo detector of Terahertz frequency", Appl. Phys. Lett. 101, 091114 (3 pages) (2012).
21. S. Kunimura and H. Ohmori: "Mirror surface finishing of plastics using ELID grinding with a conductive rubber bonded abrasive wheel", International state-of-the-art on nanoManufacturing, 113-116 (2012).
22. A. Amani Eilanlou, K. Ishikawa, Y. Nabekawa, H. Takahashi, and K. Midorikawa: "Simulation of intense isolated attosecond pulse generation with a two-color laser field", IEEJ Transactions on Electronics, Information and Systems, 132(8), 1265-1272 (2012).
23. Y. Kojima, A. Amani Eilanlou, Y. Furukawa, Y. Nabekawa, E. J. Takahashi, F. Kannari, and K. Midorikawa: "Material survey for a novel beam splitter separating high-order harmonics from high-average-power fundamental pulses", Jpn. J. Appl. Phys., 51, 062601/1-6 (2012).

Books, Proceedings

1. H. Ohmori: "Electrolytic in-process dressing grinding and polishing", Tribology of Abrasive Machining Process, pp. 364-398 (2013).
2. K. Sugioka, "Microstructuring of Photosensitive Glass", G. Cerullo and R. Osellame (Eds.), Femtosecond laser micromachining: photonic and microfluidic devices in transparent materials, (Springer, Berlin, 2012) p. 421-441.
3. K. Sugioka and Y. Cheng: "A tutorial on optics for ultrafast laser materials processing: basic microprocessing system to beam shaping and advanced focusing methods", Adv. Opt. Technol. (2012). in press.
4. K. Midorikawa: "Multiphoton Processes and Attosecond Physics", Springer Proceedings in Physics 125: Multiphoton Processes and Attosecond Physics, (2012).
5. K. Midorikawa: "X-ray and EUV sources", Handbook of Lasers and Optics, 907-916 (2012).
6. K. Ishibashi: "Nanoelectronics" (pp451-480) in "Nanofabrication Handbook" edited by Stefano Cabrini and Satoshi Kawata (CRC Press, Florida, 2012)
7. K. Sugioka and Y. Cheng: "Femtosecond laser processing for optofluidic fabrication", Lab. Chip. **12**, 3576-3589 (2012).
8. 杉岡幸次, " フェムト秒レーザーによる微小流体光学素子の作製 ", レーザー研究, **40**, 919-925 (2012).
9. 杉岡幸次 : "2.7 レーザ加工分野の市場動向: 2.7.1 はじめに"、光産業の動向 ((財) 光産業技術振興協会編)、196-202 (2012).
10. 杉岡幸次 : "2.7 レーザ加工分野の市場動向: 2.7.3 おわりに"、光産業の動向 ((財) 光産業技術振興協会編)、230-231 (2012).
11. 高橋栄治、鍋川康夫、緑川克美 : "高次高調波による XUV 極短パルス光源の短波長化"、光技術コンタクト、日本オプトメカトロニクス協会、50(5), 23-31 (2012).
12. 磯部圭佑、緑川克美 : "深部超解像イメージングのための非線形光学顕微鏡"、Oplus E, 34, 870-875 (2012).
13. 尾上順 編著、大澤映二、松尾豊、高井和之、榎木敏明、石橋幸治、本間芳和 共著 ナノ学会編シリーズ : 未来を創るナノ・サイエンス&テクノロジー第1巻「ナノカーボン 一炭素材の基礎と応用一」 (近代科学社、2012)