

原著論文 (accept を含む) / Original Papers

1. J. Xu, D. Wu, J. Y. Ip, K. Midorikawa, and K. Sugioka, "Vertical sidewall electrodes monolithically integrated into 3D glass microfluidic chips using water-assisted femtosecond-laser fabrication for in situ control of electrotaxis", *RSC Adv.* 5, 24072-24080 (2015).
2. D. Wu, J. Xu, L. Niu, S. Wu, K. Midorikawa, and K. Sugioka, "In-channel integration of designable micro optical devices using flat scaffold-supported femtosecond-laser micro fabrication for coupling-free optofluidic cell counting", *Light: Sci. & Appl.* 4, e228 (2015).
3. D. Wu, L. G. Niu, S. Z. Wu, J. Xu, K. Midorikawa, and K. Sugioka, "Ship-in-a-bottle femtosecond laser integration of optofluidic microlens arrays with center-pass units enabling coupling-free parallel cell counting with 100% success rate", *Lab. Chip.* 15, 1515-1523 (2015).
4. E. Loetstedt and K. Midorikawa, "Carrier-envelop phase control of electron motion in laser-driven H_3^{2+} ", *J. Phys. B* 47, 204018 (2014).
5. E. Loetstedt and K. Midorikawa, "Ejection of innershell electrons induced by recollision in a laser-driven carbon atom", *Phys. Rev. A* 90, 043415 (2014).
6. A. Amani Eilanlou, Y. Nabekawa, M. Kuwata-Gonokami, and K. Midorikawa, "Femtosecond laser pulses in a Kerr lens mode-locked thin-disk ring oscillator with an intra-cavity peak power beyond 100 MW," *Jpn. J. Appl. Phys.* 53, 082701 (2014).
7. H. Kinoshita, T. Harada, Y. Nagata, T. Watanabe, and K. Midorikawa, "Development of EUV mask inspection system using high-order harmonic generation with a femtosecond laser," *Jpn. J. Appl. Phys.* 53, 086701 (2014).
8. T. Okino, Y. Furukawa, T. Shimizu, Y. Nabekawa, K. Yamanouchi, and K. Midorikawa, "Nonlinear Fourier transformation spectroscopy of small molecules with intense attosecond pulse train," *J. Phys. B* 47, 124007 (2014).
9. D. Wu, S. Z. Wu, J. Xu, L. G. Niu, K. Midorikawa, and K. Sugioka, "Hybrid femtosecond laser microfabrication to achieve true 3D glass/polymer composite biochips with multiscale features and high performance: the concept of ship-in-a-bottle biochip," *Laser & Photo. Rev.* 8, 458-467 (2014).
10. P. Lan, Y. Zhou, A. N. Pfeiffer, Q. Zhang, P. Lu, and K. Midorikawa, "Revealing the role of electron correlation in sequential double ionization," *Phys. Rev. A* 89, 033424 (2014).
11. E. Loetstedt and K. Midorikawa, "Nuclear reaction induced by carrier-envelop-phase controlled proton recollision in a laser-driven molecule," *Phys. Rev. Lett.* 112, 093001 (2014).
12. A. Matsuda, E. J. Takahashi, and A. Hishikawa, "Time-resolved laser Coulomb explosion imaging using few-cycle intense laser pulses: Application to exploding CS₂ in highly charged states", *J. Electron Spectroscopy* 195, 327 (2014).
13. S. Nakashima, K. Sugioka, Katsumi Midorikawa, and Kohki Mukai, "Plasmonically coupled Faraday effect in Fe- and Au-doped silicate glasses irradiated with femtosecond laser", *J. Laser Micro/Nanoengin.* 9, 132-136 (2014).

著書、解説等 / Book Editions, Review Papers

1. K. Sugioka, J. Xu, D. Wu, Y. Hanada, Z. Wang, Y. Cheng, and K. Midorikawa: "Femtosecond laser 3D micromachining: a powerful tool for the fabrication of microfluidic, optofluidic, and electrofluidic devices based on glass", *Lab. Chip.* 14, 3447-3458 (2014).
2. 古川裕介、鍋川康夫、緑川克美: "アト秒フリンジ分解計測によるフーリエ変換分子分光"、*CSJ カレントレビュー: 強光子場の化学*、91-97 (2015).
3. 沖野友哉、山内薫: "強光子場・アト秒科学の基礎と歴史"、*CSJ カレントレビュー: 強光子場の科学*、14-25 (2015).
4. 磯部圭佑、緑川克美: "空間重なり変調による深部観察での背景光を除去する多光子励起顕微鏡"、*光学*、44、18-22 (2015)
5. 高橋栄治、緑川克美: "水の窓領域におけるフルコヒーレント光の発生"、*0 plus E* 36、266 (2014).
6. 磯部圭祐、緑川克美: "非線形光学顕微鏡の深部超解像化"、*光アライアンス*、25、12-15 (2014).

7. 磯部圭祐、緑川克美：“非線形光学顕微鏡の基本的限界を超える手法”、0 pulse E、32、157-162 (2014).

招待講演 / Invited Talks

1. F. Sima, D. Wu, J. Xu, K. Midorikawa, K. Sugioka, “Hybrid subtractive and additive femtosecond laser micro-machining for highly functional biochip fabrication”, 6th European Conference on Applications of Femtosecond Lasers in Materials Science (FemtoMat 2015), Mauterndorf, Austria, March (2015).
2. K. Midorikawa, “Generation and application of intense isolated attosecond pulses”, Frontier in Attosecond Lasers and Science, Hsinchu, Taiwan, Dec. (2014).
3. K. Midorikawa, “Nuclear reaction by laser induced proton recollision,” ICOMP 13, Shanghai, China, Dec. (2014).
4. T. Okino, Y. Furukawa, Y. Nabekawa, A. Amani Eilanlou, E. J. Takahashi, K. Yamanouchi, and K. Midorikawa, “Observation of Vibrational and Electron Wavepackets in Nitrogen Molecule with Intense a-Few-Pulse Attosecond Pulse Train”, Asian Symposium on Intense Laser Science 8, Taipei, Taiwan, Nov. (2014).
5. N. Kanda, A. Amani Eilanlou, T. Imahoko, T. Sumiyoshi, Y. Nabekawa, M. Kuwata-Gonokami, and K. Midorikawa, “Yb:YAG Thin Disk Mode-Locked Oscillator with High Pulse Energy for Intra-Cavity High Harmonic Generation,” IEEE Photonics Conference 2014, San Diego, USA, Oct. (2014).
6. K. Sugioka, D. Wu, J. Xu, and K. Midorikawa, “Ship-in-a-bottle integration by hybrid femtosecond laser processing for fabrication of highly functional biochips”, 23rd Int. Cong. on Applications of Lasers & Electro-Optics (ICALEO 2014), San Diego, USA, Oct. (2014).
7. K. Midorikawa, “Probing atomic and molecular processes by intense attosecond pulses”, Frontier in Optics and Laser Science 2014, Tucson, USA, Oct. (2014).
8. E. J Takahashi, “Generation of high-power isolated attosecond pulses by an infrared TC gating”, Frontier in Optics and Laser Science 2014, Tucson, USA, Oct. (2014).
9. J. Xu, K. Midorikawa, and K. Sugioka, “Electrofluidics fabricated by femtosecond laser direct writing”, 22nd Int. Conf. on Advanced Laser Technology (ALT’ 14), Cassis, France, Oct. (2014).
10. K. Midorikawa, “Intense attosecond pulses for Probing ultrafast molecular dynamics,” The 5th International Symposium on Filamentation, Shanghai, China, Sept. (2014).
11. K. Sugioka, J. Xu, D. Wu, and K. Midorikawa, “Femtosecond laser 3D micromachining: reliable tool for fabrication of highly functional biochips”, 23rd General Meeting of the International Commission for Optics (ICO-23), Santiago de Compostela, Spain, Aug. (2014). Keynote talk
12. K. Midorikawa, “Probing ultrafast molecular dynamics with intense attosecond pulses,” The 19th International Conference on Ultrafast Phenomena, Okinawa, July (2014).
13. K. Midorikawa, “Nuclear reaction by laser induced proton recollision,” International Workshop on Status and Prospects of High Energy Density Science by Giant Lasers, Tokyo, June (2014).
14. K. Midorikawa, “Nuclear reaction induced by proton recollision,” The 5th Shanghai Tokyo Advanced Research Symposium on Ultrafast Intense Laser Science, Miyazaki, May (2014).
15. K. Sugioka, J. Xu, D. Wu, and K. Midorikawa, “Ship-in-a-bottle biochips fabricated by hybrid femtosecond laser processing”, The 5th Shanghai-Tokyo Advanced Research Symposium on Ultrafast Intense Laser Science (STAR5), Miyazaki, May (2014).
16. Y. Nabekawa, Y. Furukawa, T. Okino, A. Amani Eilanlou, E. J. Takahashi, K. Yamanouchi, and K. Midorikawa, “Applications of intense sub-10-fs XUV harmonic fields to reveal ultrafast dynamics of simple molecules,” Annual meeting / international symposium of Spectroscopical Society of Japan 2014, Saitama, Japan, May (2014).
17. K. Midorikawa, “The next generation of coherent XUV and attosecond light sources”, The 9th Asian Pacific Laser Symposium, Yokohama, April (2014).
18. K. Sugioka, S. Wu, and K. Midorikawa, “Double-pulsed ultrashort laser welding of glasses toward multifold enhancement of process efficiency”, 1st Samrt Laser Processing Conf. (SLPC 14), Yokohama, April (2014).
19. 沖野友哉、“アト秒非線形フーリエ分光による超高速分子ダイナミクスの実時間追跡”、第

26 回先端光量子科学アライアンスシンポジウム、横浜、3 月 (2015).

20. 沖野友哉、“高強度アト秒パルス光源を用いた超高速分子ダイナミクスの実時間観測”、電気学会専門委員会：ナノメディシンに向けた光・量子ビーム応用技術調査専門委員会、東京、3 月 (2015).
21. 緑川克美、“理研における光量子工学研究”、第 4 回電子光技術シンポジウム「超短パルスレーザーの応用とポータブルセンサの未来」、秋葉原、2 月 (2015).
22. 鍋川康夫、“高強度アト秒パルス列を用いた量子波束の観測”、第 7 回超高速時間分解光計測研究会、浜松、2 月 (2015).
23. 神田夏輝、アマニ・イランル、今銚友洋、住吉哲実、鍋川康夫、五神真、緑川克美、“共振器内高次高調波発生に向けた Yb:YAG Thin Disk 高強度超短パルス発振器の開発”、レーザー学会学術講演会第 35 回年次大会、東京、1 月 (2015).
24. 高橋栄治、“二波長合成レーザー場を用いた単一アト秒パルスの高出力化”、第 6 回超高速光エレクトロニクス研究会、柏市、1 月 (2015).
25. 高橋栄治、“ギガワット級単一アト秒パルスの発生”、レーザー学会学術講演会第 35 回年次大会、東京、1 月 (2015).
26. 磯部圭佑、緑川克美、“試料をより深く、より細かく観察する技術”、応用物理学会・量子エレクトロニクス研究会「バイオ・メディカルフォトンクス II～量子エレクトロニクスはいかに医生物学に貢献できるか～」、軽井沢、12 月 (2014).
27. 高橋栄治、“高出力アト秒パルス光源の現状と今後”、レーザー学会第 469 回研究会、喜多方市、12 月 (2014).
28. 緑川克美、“光量子工学研究”、理化学研究所と親しむ会第 20 回セミナー、東京、11 月 (2014).
29. 沖野友哉、“アト秒フーリエ非線形分子分光”、分光セミナー：超高速分子分光の新展開：気相～固相、東京、11 月 (2014).
30. 神田夏輝、“共振器内高次高調波発生のための Yb:YAG Thin Disk モード同期発振器”、第 5 回超高速光エレクトロニクス研究会、熱海、11 月 (2014).
31. 緑川克美、“アト秒科学の展望”、京都大学化学研究所先端ビームナノ科学センター「ビーム科学・高エネルギー科学」講演会、京都、10 月 (2014).

特許出願 / Patent Applications

1. 磯部圭佑、緑川克美、“波面歪み量測定装置、波面補償装置、光学測定装置、および方法”、特願 2014-266374、2014 年 12 月 26 日.

会議、シンポジウム、セミナー主催 / Meetings, Symposiums and Seminars

1. エクストリームフォトンクスセミナー (第 5 回) “Electronic processes in molecules driven by strong laser fields”、Dr. Markus Kitzler (Photonics Institute, Vienna University of Technology)、和光、1 月 29 日 (2015).
2. エクストリームフォトンクスセミナー (第 4 回) “Artificial Photosynthesis Producing Solar Fuels”、Prof. Hideki Hashimoto (Osaka City University)、“Nonequilibrium state driven by 1.5-cycle, 7 fs infrared pulse in strongly correlated organic metal”、Prof. Shinichiro Iwai (Tohoku University)、和光、11 月 20 日 (2014).
3. エクストリームフォトンクスセミナー (第 3 回) “Probing Atomic Structure through Electron Rescattering in Optical Few-Cycle Pulses with Control over the Carrier-Envelope Phase”、Dr. Henning Geiseler (The Institute for Solid State Physics, The University of Tokyo)、和光、10 月 3 日 (2014).
4. エクストリームフォトンクスセミナー (第 2 回) “First-order corrections in the weak-field asymptotic theory of tunneling ionization by static electric field”、Mr. Trinh Hoai Vinh (The University of Electro-Communication)、和光、7 月 31 日 (2014).

5. Spectroscopical Society of Japan & RIKEN International Symposium on “The Forefront of Ultrafast Spectroscopy”, Wako, May 27 (2014).
6. エクストリームフォトニクスセミナー（第 1 回）“Controlled Growth of ZnO Nano/Micro-Crystals and Their Application as Building Blocks for Light Emitting Devices”、Prof. Tatsuo Okada (Kyushu University)、和光、4 月 9 日 (2014).