

チーム名： テラヘルツ光源研究チーム

(1) 原著論文(accept)を含む / Original Papers

1. Shin' ichiro Hayashi, Kouji Nawata, Takunori Taira, Jun-ichi Shikata, Kodo Kawase, Hiroaki Minamide, "Ultrabright continuously tunable terahertz-wave generation at room temperature," SCIENTIFIC REPORTS, Vol. 4, PP. 5045-1-6, DOI: 10.1038/srep05045, (May 2014).
2. Naoki Oda, Iwao Hosako, Tsutomu Ishi, Hiroaki Minamide, Chiko Otani, Norihiko Sekine, "The Need of Terahertz Cameras for Standardizing Sensitivity Measurements," J Infrared Milli Terahz Waves, Vol. 35, No. 5, 20, DOI 10.1007/s10762-014-0073-0, (May 2014).
3. Feng Qi, Shuzhen Fan, Takashi Notake, Kouji Nawata, Takeshi Matsukawa, Yuma Takida and Hiroaki Minamide "An ultra-broadband frequency-domain terahertz measurement system based on frequency conversion via DAST crystal with an optimized phase-matching condition," Laser Phys. Lett., Vol. 11, No. 8, 085403-1-7, doi:10.1088/1612-2011/11/8/085403, (Jun. 2014).
4. Takeshi Matsukawa, Takashi Notake, Kouji Nawata, Shunsuke Inada, Shuji Okada, and Hiroaki Minamide "Terahertz-wave generation from 4-dimethylamino-N'-methyl-4'-stilbazolium p-bromobenzenesulfonate crystal: Effect of halogen substitution in a counter benzenesulfonate of stilbazolium derivatives," Opt. Mater., 36, 1995-1999. (Sep. 2014).
5. J.-L. Coutaz, M. Bernier, F. Garet, S. Joly, a, Y. Miyake, H. Minamide, E. Lheurette, and D. Lippens, "Terahertz time-domain spectroscopy of absorbing materials and of metamaterials," Terahertz Science and Technology, Vol.7, No.2, PP. 53-69, (June 2014).
6. K. Murate, Y. Taira, S. R. Tripathi, S. Hayashi, K. Nawata, H. Minamide, K. Kawase, "A high dynamic range and spectrally flat terahertz spectrometer based on optical parametric processes in LiNbO3", IEEE Transactions on Terahertz Science and Technology, Volume 3, Issue 4 (July 2014).
7. Takashi Notake, Banghong Zhang, Yandong Gong, Hiroaki Minamide, "Development of a Stokes polarimeter system for the wide terahertz frequency region," Japanese Journal of Applied Physics, Vol. 53, 092601, (Sep. 2014).
8. 柴直孝, 伴野裕, 青木誠, 廣本宣久, 瀧田佑馬, 南出 亜, "黒体放射光源に基づくテラヘルツ検出器の感度と雑音等価電力の較正法," レーザー研究, 第42巻第11号, pp. 838-843 (Nov. 2014).
9. 瀧田佑馬, 柴直孝, 野竹孝志, 縄田耕二, 時実悠, 林伸一郎, 廣本宣久, 南出

泰亜, “高出力テラヘルツ波パラメトリック光源を用いたパイロ検出器の感度較正法の確立に向けて,” 電気通信情報学会技術研究報告 (信学技報), 第 114 巻 第 387 号, pp. 33-37 (2014 年).

10. Shuzhen Fan, Feng Qi, Takashi Notake, Kouji Nawata, Yuma Takida, Takeshi Matsukawa, and Hiroaki Minamide, “Diffraction-limited real-time terahertz imaging by optical frequency up-conversion in a DAST crystal,” *Optics Express*, Vol. 23, No. 6, pp. 7611-7618, DOI:10.1364/OE.23.007611, (16 Mar 2015).

(2) 著書・解説など / Book Editions, Review Papers

1. (Invited Paper) Hiromasa Ito, “Terahertz wave Photonics Breakthrough 2013,” *IEEE Photonics Journal*, Vol. 6, No. 2, 2309648-1-6, (Apr. 2014).
2. (総説) 南出泰亜, “高出力テラヘルツ波光源の最先端と広がる応用”, 電子情報通信学会誌 Vol. 97, No. 11 pp.924-930, (Nov. 2014).

(3) 招待講演 / Invited Talks

1. (Invited) Hiroaki Minamide, “High-peak-power Terahertz-wave generation and sensitive detection using second nonlinear optical effect,” [9135-39], *Photonics Europe, SQUARE Brussels Meeting Centre, Brussels, Belgium*, Apr. 17, (2014). [Oral] 14-17
2. (Invited) Shin' ichiro Hayashi, Kouji Nawata, Kodo Kawase, and Hiroaki Minamide, “High-peak-power, Single-longitudinal-mode, Continuously Tunable Terahertz-wave Generation Pumped by a Microchip Nd: YAG Laser,” BIT's 3rd Annual conference and EXPO of AnalytiX-2014, Terahertz Technology based Spectroscopy (Part I), Dalian International Convention Center, Dalian, China (April 25-28, 2014). [oral]
3. (Invited) K. Kawase, K. Murate, S. Hayashi, H. Minamide “Parametric generation and amplification of THz-waves,” 5th workshop on Terahertz Science and Technology, Elba island, Italy (July 6-10, 2014). [oral]
4. (Invited) K. Kawase, K. Murate, S. Hayashi, H. Minamide “THz parametric amplifier using LiNbO3 crystal,” OSA Optics and Photonics Congress on Advanced Photonics (SENSORS), SeTh4B. 2, Crowne Plaza Barcelona Fira Center, Barcelona, Spain (July 27-31, 2014). [oral]
5. (Invited) Shin' ishiro Hayashi, Kouji Nawata, Kodo Kawase, and Hiroaki Minamide, “Terahertz parametric oscillator sources,” *Advanced Solid-State*

Lasers (ASSL) 2014, AW2A. 1, Hilton Shanghai Hongqiao, Shanghai, China, 16 - 21 November, (2014) [oral]

6. (Invited) Hiroaki Minamide, Feng Qi, and Shuzhen Fan, "Real-time terahertz-wave imaging using nonlinear up-conversion detection, " The Fifth International Symposium on Terahertz Nanoscience (TeraNano V), Martinique, France, Dec.1-5 (2014) [oral]
7. (Invited) K. Kawase, K. Murate, S. Hayashi, H. Minamide "THz-wave parametric amplifier," The Fifth International Symposium on Terahertz Nanoscience (TeraNano V), Martinique, France. (Dec. 1-5, 2014). [oral]

(4) 会議、シンポジウム、セミナー主催 / Meeting, Symposiums and Seminars

1. 理研セミナー, " テラヘルツテクノロジーフォーラム 平成26年度 第1回 テラヘルツ技術セミナー", 仙台, 6月20日, (2014)
2. 理研セミナー, " 連続螺旋位相板を用いた単色テラヘルツ光渦の発生", 仙台, 10月3日, (2014)
3. 理研セミナー, "Millimeter-Wave Non-Invasive Monitoring of Glucose in Anesthetized Rats", 仙台, 11月10日, (2014)
4. 理研セミナー, "UV 発生のための高性能系非線形光学結晶", 仙台, 12月9日, (2014)
5. 理研セミナー, "産業応用が見えてきたテラヘルツ波センシング 実用化への道のりと苦難への挑戦", 仙台, 12月17日, (2014)
6. 理研セミナー, "フェムト秒レーザーとホログラフィ", 仙台, 2月4日, (2014)
7. 理研シンポジウム, " 第2回理研-NICT 合同テラヘルツ研究交流会", 仙台, 2月10日, (2014)

(5) 特許出願 / Patent Applications

1. 縄田耕二、南出泰亜、范書振、祁峰、伊藤弘昌, " 光応答計測装置および光応答計測方法" 特願番号 2014-207559 (2014/10/8)