

## フォトン操作機能研究チーム / Innovation Photon Manipulation Research Team

## (1) 原著論文 (accept) を含む / Original Papers

1. Tanaka, T., Yano, T., and Kato, R.: “Nanostructure-enhanced infrared spectroscopy”, *Nanophotonics* (published online) (2021).
2. Olaya, C., Hayazawa, N., Balois-Oguchi, M., Hermosa, N., and Tanaka, T.: “Molecular Monolayer Sensing Using Surface Plasmon Resonance and Angular Goos-Hänchen Shift”, *Sensors* 21, 4593 (2021).
3. Luo, Y., Chu, C., Vyas, S., Kuo, H., Chia, Y., Chen, M., Shi, X., Tanaka, T., Misawa, H., Huang, Y., and Tsai, D.: “Varifocal Metalens for Optical Sectioning Fluorescence Microscopy”, *Nano Letters* 21, 5133-5142 (2021).
4. Katsumata, S., Tanaka, T., and Kubo, W.: “Metamaterial perfect absorber simulations for intensifying thermal gradient across a thermoelectric device”, *Optics Express* 29, 16396-164065 (2021).
5. Jung, W., Jung, Y., Pikhitsa, P., Feng, J., Yang, Y., Kim, M., Tsai, H., Tanaka, T., Shin, J., Kim, K., Choi, H., Rho, J., and Choi, M.: “Threedimensional nanoprinting via charged aerosol jets”, *nature* 592, 54-59 (2021).

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

1. 田中拓男, “メタマテリアル吸収体と赤外分光”, *光アライアンス*, 32, 37-41 (2021).
2. Yoon, G., Tanaka, T., Zentgraf, T., Rho, J., “Recent progress on metasurfaces: applications and fabrication”, *Journal of Physics D: Applied Physics*, 54, 383002 (2021).
3. 田中拓男, “光メタマテリアル”, *日本ファインセラミックス協会 Fine Ceramics Report (FCReport)*, 39, 55-59 (2021).
4. 田中拓男, “光メタマテリアルとその応用”, *オプトニュース テクノロジートレンド*, 15 (2021).

## (3) 招待講演 / Invited Talks

1. Tanaka, T., “Metamaterials for IR spectroscopy”, *Global Nanophotonics 2022 (Core-to-Core Symposium GNP2022)*, Osaka, March (2022).
2. Kato, R., Yano, T., Tanaka, T., “Visualizing Optical Fields of Dielectric-Based Metamaterials via Mid-Infrared Photothermal Imaging”, *Global Nanophotonics 2022*

(Core-to-Core Symposium GNP2022), Osaka, March (2022).

3. Yano, T., Kato, R., Tanaka, T., “Ultrasensitive plasmonic sensing of single biomolecular complexes”, Global Nanophotonics 2022 (Coreto-Core Symposium GNP2022), Osaka, March (2022).
4. Balois-Oguchi, M., Hayazawa, N., Tanaka, T., “Analyzing sub-nanometer strain in monolayer graphene via tip-enhanced Raman spectroscopy”, Global Nanophotonics 2022 (Core-to-Core Symposium GNP2022), Osaka, March (2022).
5. 田中拓男, “メタマテリアルと赤外分光”, 日本分光学会 赤外・ラマン分光部会シンポジウム『超高感度振動分光の最前線』, 徳島, 12月17日 (2021).
6. Tanaka, T., “Ultrasensitive IR spectroscopy inspired by metamaterials”, The International Chemical Congress of Pacific Basin Societies 2021 (PacifiChem 2021), USA, December (2021).
7. Tanaka, T., “Ultrasensitive and Selective Gas Molecule Detection using Vertically Oriented Metamaterial Absorber”, 2021 MRS Fall Meeting, USA, November (2021).
8. Tanaka, T., “Optical metamaterial absorber and its application for ultrasensitive spectroscopy”, The 10th International Workshop on Advanced Materials Science and Nanotechnology (IWAMSN 2021), Vietnam, November (2021).
9. Tanaka, T., “Metamaterial enhanced ultrasensitive vibrational spectroscopy techniques”, SPIE Optics+Photonics 2021, USA, August (2021).
10. Yano, T., Tanaka, T., “Plasmon-enhanced vibrational nanoscopy for molecular imaging and analysis”, SPIE Optics+Photonics 2021, USA, August (2021).
11. Tanaka, T., “Metasurface enhanced high-sensitive IR spectroscopy”, The 11th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META2021), Poland, July (2021).
12. Tanaka, T., “Optical metamaterial absorber and its application for spectroscopy”, International Conference on Nano-photonics and Nano-optoelectronics (ICNN2021), Japan, September (2021).