

Resume

Personal Profile

Name: Fang Ling
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Research Interests: Metamaterials; Terahertz Waves



Education Background

Sichuan University 2015/Jun.-2021/Sep. Major: Optics Ph.D. (Supervisor: Bin Zhang)
University of Rochester 2019/Nov.-2021/Jul. Major: Optics Visiting Student (Supervisor: Xi-Cheng Zhang)
Yibin University 2011/Sep.-2015/Jul. Major: Physics B.S.

Work Experience

Post-doctor Fellowship, Sichuan University, 2021-2022
Lecture, Sichuan University of Science & Engineering, 2022-Present
Visiting Scholar, The Hong Kong University of Science and Technology (Guang Zhou), 2023-Present

Research

◆ Project:

1. Project Name: The Key Mathematical Problems and Applications in Terahertz Medical Imaging and Diagnostic Systems
Project Source: The National Key Research and Development Program of China
Responsible part: Measure the reflection spectrum of teeth using photoconductor antenna THz-TDS
2. Project Name: The Design and Image Processing Algorithm of Terahertz Dental Imaging System
Project Source: The Key Projects of Sichuan Provincial Department of Science and Technology
Responsible part: Implementation of terahertz super-resolution imaging using metasurfaces

◆ Patent:

1. CN Patent #201810954538.4, Granted
2. CN Patent #201910034941.X, Granted
3. CN Patent #202110292944.0, Granted
4. CN Patent #202011358644.X, Granted

◆ Publications:

- Co-authored more than 20 papers
- Academic Activities:
 - Keynote presentation and talk (the 46th IRMMW-THz 2021 Conference)
 - Oral presentation (the 45th IRMMW-THz 2020 Conference)
 - Oral presentation (SPIE 2016 Conference)
- Published Paper list:
 1. **Fang Ling**, Zheqiang Zhong, Yuan Zhang, Renshuai Huang, and Bin Zhang. Broadband negative-refractive index terahertz metamaterial with optically tunable equivalent-energy level. *Optics Express* 2018, 26(23): 30085-30099.
 2. **Fang Ling**, Zheqiang Zhong, Bin Zhang. Cavity-based magnetic metamaterials available from microwave to optical wave by tailoring structural parameters. *Journal of the Optical Society of America B* 2020, 37(9): 2768-2772.

3. **Fang Ling**, Zheqiang Zhong, Renshuai Huang, and Bin Zhang. Dynamic-Shift Single-and Double-Negative Refractive Index in a Novel Three-Dimensional Metamaterial. *Plasmonics* 2018: 1-7.
4. **Fang Ling**, Zheqiang Zhong, Renshuai Huang, and Bin Zhang. A broadband tunable terahertz negative refractive index metamaterial. *Scientific Reports* 2018, 8(1): 9843. 5.
5. **Fang Ling**, Qinglong Meng, Renshuai Huang, and Bin Zhang. The characteristics of thermally tunable multi bands terahertz modulator. *Spectroscopy and Spectral Analysis* 2017, 37(5): 1334-1338.
6. **Fang Ling**, Yiwen E, Steven Fu, and X-C. Zhang. Sideway terahertz emission from a flowing water line. In 2021 46th International Conference on Infrared, Millimeter and Terahertz Waves (IRMMW-THz), pp. 1-2. IEEE.
7. **Fang Ling**, Yiwen E, Kareem J. Garriga Francis, Bin Zhang, and X.-C. Zhang. Investigation on THz generation from Influences of gold nanoparticles in water solution. *Infrared, Millimeter-Wave, and Terahertz Technologies VII*. Vol. 11559. International Society for Optics and Photonics, 2020.
8. **Fang Ling**, Renshuai Huang, Qinglong Meng, and Bin Zhang. Study on Thermally Control Terahertz Narrow Bandpass Filter. *ICopen* 2016, Proc. Of SPIE, 2016.9, Chengdu.
9. Yuan Zhang, **Fang Ling**, Renshuai Huang R, Zheqiang Zhong, and Bin Zhang. The characteristics of a terahertz filter with three-layer stacked structure. *Optik*, 2018, 168: 847-852.
10. Yuan Zhang, **Fang Ling**, Renshuai Huang R, and Bin Zhang. Simple structure THz metamaterial with broadband double-negative refraction. *Optical Materials Express* 2018, 8(12): 3729-3737.
11. Hang Wang, **Fang Ling**, and Bin Zhang. Tunable metasurfaces for independent control of linearly and circularly polarized terahertz waves. *Optics Express* 2020, 28(24): 36316-36326.
12. Hang Wang, **Fang Ling**, Yuan Zhang, Renshuai Huang, Nianchun Sun, and Bin Zhang. Broadband and efficient metasurface for beam bending and superresolution focusing. *Superlattices and Microstructures* 2019, 130: 512-518.
13. Heng Zhang, **Fang Ling**, Yuan Zhang, Hang Wang, and Bin Zhang. A water hybrid graphene metamaterial absorber with broadband absorption. *Optics Communications* 2020, 463: 125394.
14. Heng Zhang, **Fang Ling**, and Bin Zhang. Broadband tunable terahertz metamaterial absorber based on vanadium dioxide and Fabry-Perot cavity. *Optical Materials* 2021, 112: 110803.
15. Chunyu Zhang, **Fang Ling**, and Bin Zhang. Switchable metamaterials for broadband absorption and generation of vector beams. *Journal of Optics* (2022).
16. Yiwen, E, Yuqi Cao, **Fang Ling**, Alexander P. Shkurinov, Yiming Zhu, and X.-C. Zhang. Broadband THz Wave Generation from Flowing Liquid Nitrogen. 2020 45th International Conference on Infrared, Millimeter, and Terahertz Waves (IRMMW-THz). IEEE.
17. Yiwen E, Jin Qi, Jianming Dai, Yuqi Cao, **Fang Ling**, Kaia Williams, Mervin Lin Pac Chong, Gregoire Leir, Kareem J. Garriga Francis, Anto N. Tcypkin, Liangliang Zhang, Cunlin Zhang, and X.-C. Zhang, 2020, October. THz liquid photonics and beyond. In *Infrared, Millimeter-Wave, and Terahertz Technologies VII* (Vol. 11559, p. 1155902). International Society for Optics and Photonics.
18. Yiwen E, Yuqi Cao, **Fang Ling**, and X.-C. Zhang. Flowing cryogenic liquid target for terahertz wave generation. *AIP Advances* 2020, 10:105119.
19. Yiwen, E, Yuqi Cao, **Fang Ling**, Alexander P. Shkurinov and X.-C. Zhang. Broadband THz Wave Generation from Flowing Liquid Nitrogen. 2020 45th International Conference on Infrared, Millimeter, and Terahertz Waves (IRMMW-THz). IEEE.
20. Francis Kareem Garriga, Yuqi Cao, E. Yiwen, **Fang Ling**, Mervin Lim Pac Chong, and Xi-Cheng Zhang. Forward terahertz wave generation from liquid gallium in the non-relativistic regime. 2021, 38(12): 3639-3645.
21. Qiuxia Wu, **Fang Ling**, Chunyu Zhang, et al. Water-based metamaterials absorber with broadband absorption in terahertz region[J]. *Optics Communications*, 2023, 526: 128874.