Mingwei Tang

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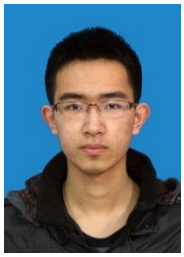

Website: https://www.researchgate.net/profile/Mingwei-Tang

Expected position: Postdoctoral/Assistant Research Fellow

Education background

2012-2016	B.S., Optoelectronic Information Engineering, Nanjing University of Science and Technology
2015-2016	Visiting student, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences
2016-2021	Ph.D., Optical Engineering, Zhejiang University (Director: Qing Yang, Xu Liu)

Research interests

- **Micro-/nanophotonic**, including optical waveguides, nanowire, plasmonics, hyperbolic metamaterials.
- **On-chip devices**, including MEMS, on-chip sources, on-chip modulator and their applications in imaging and sensing.
- **Computational imaging**, including superresolution imaging, deep learning assisted imaging and quantum imaging.
- **Optofluidic**
- **Quantum sensing and computation**

Technical skills

1. **Chip fabrication and characterization**: photolithography, magnetron sputtering, electron beam deposition, focused ion beam (FIB); scanning electron microscope (SEM), optical microscope, step profiler, spectrometers, and atomic force microscopy (AFM).
2. **Optical engineering**: microscope imaging system building, optical detection system building, SLM, galvanometer scanning system building.
3. **Simulation software**: FDTD, COMSOL for designing and optimizing micro-/nanophotonic and plasmonic devices.
4. **Computational imaging algorithm**: reconstruction of structured light illumination microscopy (SIM), Fourier ptychographic microscopy (FPM), and random SIM.

Publications

1. **Mingwei Tang,** Xiaowei Liu, Zhong Wen, Feihong Lin, Chao Meng, Xu Liu*, Yaoguang Ma*, Qing Yang*, Far-field superresolution Imaging via spatial frequency modulation. *Laser Photon. Rev.* 2020, 14, 1900011. (IF= 13.138)
2. **Mingwei Tang**, Pengfei Xu, Zhong Wen, Xing Chen, Chenlei Pang, Xuechu Xu, Chao Meng, Xiaowei Liu, He Tian, Nagarajan Raghavan and Qing Yang*. Fast response CdS-CdS_xTe_{1-x}-CdTe core-shell nanobelt photodetector. *Sci. Bull.* 2018, 63, 1118. (IF= 11.780)
3. **Mingwei Tang**, Yubing Han, Dehao Ye, Qianwei Zhang, Chenlei Pang, Xiaowei Liu, Weidong Shen, Yaoguang Ma, Wei Chen, Clemens F. Kaminski, Xu Liu*, and Qing Yang*, Scalable and universal tunable virtual-wavevector spatial frequency shift super-resolution imaging.2021. (arXiv: 2103.09321)
4. **Mingwei Tang#**, Qianwei Zhang#, Weizhou Luo, Xu Liu, and Qing Yang*, Deep learning enables deep spatial frequency shift imaging with gaps in spatial frequencies. In preparation.
5. **Mingwei Tang,** Zhen Mu, Xu Liu, and Qing Yang*, Large FOV and high-resolution microfluidic chip imaging with spatial frequency shift method. In preparation.
6. Xiaowei Liu#, **Mingwei Tang#**, Chao Meng, Chenlei Pang, Cuifang Kuang, Wei Chen, Clemens F. Kaminski, Qing Yang*, and Xu Liu*, Chip-compatible wide-field 3D nanoscopy through tunable spatial frequency shift effect, *Sci. China-Phys. Mech. Astron.* 2021, 64, 294211. (IF= 5.122)
7. Dehao Ye, **Mingwei Tang**, Xiaowei Liu, Yaocheng Shi, Yaoguang Ma, Xu Liu, and Qing Yang*, Low loss and omnidirectional Si_3N_4 waveguide for label-free spatial frequency shift super-resolution imaging. *J. Phys. D: Appl. Phys.* 2021, 54, 315101. (IF = 3.207)
8. Qing Yang*, Yubo Wang, **Mingwei Tang**, Pengfei Xu, Yingke Xu* and Xu Liu. Micro-/nanoscale multi-field coupling in nonlinear photonic devices. *Semiconductor Science and Technology* 2017, 32, 083004. (IF= 2.352)
9. Pengfei Xu, Shibing Liu, **Mingwei Tang**, Xuechu Xu, Xing Lin, Wu, Z., Minghua Zhuge, Ren, Z., Wang, Z., Liu, X., Zongyin Yang, Nagarajan Raghavan and Qing Yang*. Highly polarized single mode nanobelt laser. *Appl. Phys. Lett.* 2017, 110, 201112. (IF= 3.791)
10. Chenlei Pang, Jingxi Li, **Mingwei Tang**, Jianpu Wang, Ioanna Mela, Florian Ströhl, Lisa Hecker, Weidong Shen, Qiulan Liu, Xiaowei Liu, Yinan Wang, Hao Zhang, Meng Xu, Xinghong Zhang, Xu Liu*, Qing Yang*, and Clemens F Kaminski. On-chip super-resolution imaging with fluorescent polymer films. *Adv. Funct. Mater.* 2019, 29, 1900126. (IF= 18.808)
11. Xiaowei Liu, Chao Meng, Xuechu Xu, **Mingwei Tang**, Chenlei Pang, Qing Yang*,

Applications of nanostructures in wide-field, label-free super resolution microscopy. *Chin. Phys. B* 2018, 27, 118704. (IF= 1.494)

 # These authors contributed equally to this work.

Academic Conferences

1. **Mingwei Tang**, "Fast response CdS-CdTe hybrid nanobelt photodetector", SPIE Photonics West 2018 (OPTO), Invited talk, 2018. 1.27-2018.2.1, San Francisco, USA.
2. **Mingwei Tang**, Qing Yang, Xu Liu, Waveguide chip-based label-free superresolution imaging, SPIE/COS Photonics Asia 2019, Oral, 2019.10.22-23, Hangzhou, China
3. **Mingwei Tang**, Xiaowei Liu, Qing Yang, Xu Liu, Chip-based wide-field 3D nanoscopy through tunable spatial-frequency-shift effect, SPIE/COS Photonics Asia 2020, Oral, 2020.10.12-16, Beijing, China (online)
4. **Mingwei Tang**, Xiaowei Liu, Qing Yang, Xu Liu, Deep spatial frequency shift enabled chip-based sub-wavelength-resolution imaging, IEEE-NEMS 2021, Poster, 2021.04.25-29, Xiamen, China.
5. **Mingwei Tang**, Xiaowei Liu, Qing Yang, Xu Liu, Gallium phosphide waveguide-based wide-field 3D nanoscopy through tunable spatial frequency shift effect, World Conference on Nanotechnology and Materials 2021, Poster, 2021.07.30-08.02, Kunming, China
6. **Mingwei Tang**, Qianwei Zhang, Muchun Lin, Yubing Han, Qing Yang, Xu Liu, Tunable and deep spatial frequency shift chip for super-resolution imaging, SPIE/COS Photonics Asia 2021, Oral, 2021.10.10-12, Nantong, China

Participated Project

Tunable deep frequency shift based optoelectronic integrated super-resolution chip and its applications to study amyloid aggregation in live cells, Key projects of international cooperation（6202010600），2021.01-2024.12 (With University of Cambridge)