

**WEILI ZHANG, Ph.D., F.O.SA**

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**PRESENT POSITION**

Professor  
School of Electrical and Computer Engineering  
Oklahoma State University

**AREAS OF INTEREST**

Terahertz optoelectronics, nano- and micro-structured materials optics, ultrafast phenomena, and semiconductor photonics

**EDUCATION**

Ph.D., Optical Engineering, Tianjin University, P.R. China, 1993  
M.S., Optical Engineering, Tianjin University, P.R. China, 1990  
B.S., Laser Science, Tianjin University, P.R. China, 1987

**PROFESSIONAL EXPERIENCE**

Professor, School of Electrical and Computer Engineering, Oklahoma State University, 2011-present  
Associate Professor, School of Electrical and Computer Engineering, Oklahoma State University, 2002-2005, tenure-track; 2006-2011, tenured  
Visiting Associate Professor, School of Electrical and Computer Engineering, Oklahoma State University, 2000-2001  
Professor & Vice Chairman, Department of Optoelectronics Information Engineering, Tianjin University, P. R. China, 1997-2001  
Visiting Professor, Department of Physics, The Hong Kong University of Science & Technology, Hong Kong, 1998.6-1998.9  
Associate Professor, College of Precision Instruments & Optoelectronics Engineering, Tianjin University, P. R. China, 1995-1997  
Post-Doctoral Research Associate, Department of Physics, The Hong Kong University of Science & Technology, Hong Kong, 1993-1995

**PROFESSIONAL SERVICE**

Associate Editor, *Photonics Insights*, 2021-present  
Associate Editor-in-Chief, *PhotoniX*, 2018-2022  
Editorial Board, *Scientific Reports*, 2014-present; *Materials*, 2021-23  
Primary Guest Editor, *IEEE Journal of Selected Topics in Quantum Electronics*, Special issue: *Terahertz Photonics*, 2017  
Member, Technical Program Committee, 9<sup>th</sup> International Conference on Optical Terahertz Science and Technology (OTST 2022), Budapest, Hungary, 19-24 June 2022  
Adjunct Professor, Tianjin University, 2002-present  
Journal Review (40+ Journals): *Nature*, *Nature Photonics*, *Nature Physics*, *Nature Communications*, *Nature Materials*, *Science Advances*, *Advanced Materials*, *Materials Today*, *Physical Review Letters*, *IEEE Transactions on Terahertz Science and Technology*, *Applied Physics Letters*, *Optics Letters*, etc.

## UNIVERSITY, COLLEGE AND DEPARTMENT SERVICE

Vice Chair, Laser Safety Committee, Oklahoma State University, 2015-present  
Chairman, Cumulative Review Committee, School of Electrical and Computer Engineering, 2015, 2018-21  
Member, Dean Search and Screening Committee, 2023-present  
Graduate Coordinator, School of Electrical and Computer Engineering, 2019-present

## HONORS AND AWARDS

Highly Cited Researcher, Web of Science, 2019, 2020, 2021, 2022, 2023  
Fellow, The Optical Society (OSA), 2015  
Regents Distinguished Research Award, Oklahoma State University, 2015

## PUBLICATIONS

**412** invited or contributed publications in peer-reviewed journals. Citations: Web of Science Citations: **20,209**, h-index: **71**, ESI Highly Cited Papers: **14**; Scopus Citations: **21,568**, h-index: **74**; Google Scholar Citations: **25,335**, h-index: **80**

### Selected Journal Publications

1. Jianqiang Gu, Xiaolin Zhuang, Wei Zhang, Kemeng Wang, Yangfan Gu, Youwen An, Xueqian Zhang, Dan Luo, Jiaguang Han, **Weili Zhang**, "Active Terahertz Beam Steering Based on Mechanical Deformation of Liquid Crystal Elastomer Metasurface," *Light: Science & Applications* **12**, 14 (2023).
2. Qingwei Wang, Xueqian Zhang, Quan Xu, Xi Feng, Yongchang Lu, Li Niu, Eric Plum, Jianqiang Gu, Quanlong Yang, Ming Fang, Zhixiang Huang, Shuang Zhang, Jiaguang Han, and **Weili Zhang**, "Nonlinear terahertz generation: chiral and achiral meta-atom coupling," *Advanced Functional Materials* **33**, 2300639 (2023).
3. Yi Xu, Jianqiang Gu, Yufei Gao, Quanlong Yang, Wanying Liu, Zhibo Yao, Quan Xu, Jiaguang Han, and **Weili Zhang**, "Broadband Achromatic Terahertz Metalens Constituted by Si-SiO<sub>2</sub>-Si Hybrid Meta-atoms," *Advanced Functional Materials* **33**, 2302821 (2023).
4. Quan Xu, Yuanhao Lang, Xiaohan Jiang, Xinyao Yuan, Yuehong Xu, Jianqiang Gu, Zhen Tian, Chunmei Ouyang, Xueqian Zhang, Jiaguang Han, and **Weili Zhang**, "Meta-Optics Inspired Surface Plasmon Devices," *Photonics Insights* **2**(1), R02 (2023). (*Invited Paper*)
5. Xiaohan Jiang, Quan Xu, Yuanhao Lang, Wanying Liu, Xieyu Chen, Yuehong Xu, Hang Ren, Xibin Wang, Su Xu, Xueqian Zhang, Chunmei Ouyang, Zhen Tian, Jianqiang Gu, Jiaguang Han, and **Weili Zhang**, "Geometric Phase Control of Surface Plasmons by Dipole Sources," *Laser & Photonics Reviews* **17**, 2200948 (2023).
6. Xi Feng, Xieyu Chen, Yongchang Lu, Qingwei Wang, Li Niu, Quan Xu, Xueqian Zhang, Jiaguang Han, and **Weili Zhang**, "Direct Emission of Focused Terahertz Vortex Beams Using Indium-Tin-Oxide-Based Fresnel Zone Plates," *Advanced Optical Materials* **11**, 2201628 (2023).
7. Xinyao Yuan, Quan Xu, Yuanhao Lang, Xiaohan Jiang, Yuehong Xu, Xieyu Chen, Jie Han, Xueqian Zhang, Jiaguang Han, and **Weili Zhang**, "Tailoring spatiotemporal dynamics of plasmonic vortices," *Opto-Electronic Advances* **6**, 220133 (2023). (*Invited Paper*)
8. Tong Wu, Quan Xu, Xueqian Zhang, Yuehong Xu, Xieyu Chen, Xi Feng, Li Niu, Fan Huang, Jiaguang Han, and **Weili Zhang**, "Spin-Decoupled Interference Metasurfaces for Complete Complex-Vectorial-Field Control and Five-Channel Imaging," *Advanced Science* **2022**, 2204664 (2022).

9. Jie Han, Yuehong Xu, Huifang Zhang, Yuanhao Lang, Xiaohan Jiang, Xieyu Chen, Xi Feng, Li Niu, Yanfeng Li, Xueqian Zhang, Quan Xu, Quan Li, Jiaguang Han, and **Weili Zhang**, “Tailorable Polarization-Dependent Directional Coupling of Surface Plasmons,” *Advanced Functional Materials* **32**, 2111000 (2022).
10. Yuehong Xu, Quan Xu, Xueqian Zhang, Xi Feng, Yongchang Lu, Xixiang Zhang, Ming Kang, Jiaguang Han, and **Weili Zhang**, “Stereo Metasurfaces for Efficient and Broadband Terahertz Polarization Conversion,” *Advanced Functional Materials* **32**, 2207269 (2022).
11. Liwen Jiang, Ke Zhang, Yixin Yao, Shuai Li, Jiao Li, Zhen Tian, and **Weili Zhang**, “Terahertz optoacoustic detection of aqueous salt solutions,” *iScience* **25**, 104668 (2022). (*Invited paper*)
12. Yi Liu, Chunmei Ouyang, Quan Xu, Xiaoqiang Su, Jiajun Ma, Jing Zhao, Yanfeng Li, Zhen Tian, Jianqiang Gu, Liyuan Liu, Jiaguang Han, and **Weili Zhang**, “Negative refraction in twisted hyperbolic metasurfaces,” *Nanophotonics* **11**, 1977-1987 (2022). (*Invited paper*)
13. Quan Xu, Xiaoqiang Su, Xueqian Zhang, Lijuan Dong, Lifeng Liu, Yunlong Shi, Qiu Wang, Ming Kang, Andrea Alù, Shuang Zhang, Jiaguang Han, and **Weili Zhang**, “Mechanically reprogrammable Pancharatnam-Berry metasurface for microwaves,” *Advanced Photonics* **4**, 016002 (2022).
14. Yuanhao Lang, Quan Xu, Xieyu Chen, Jie Han, Xiaohan Jiang, Yuehong Xu, Ming Kang, Xueqian Zhang, Andrea Alù, Jiaguang Han, and **Weili Zhang**, “On-chip Plasmonic Vortex Interferometers,” *Laser & Photonics Reviews* **16**, 2200242 (2022).
15. Tong Wu, Xueqian Zhang, Quan Xu, Eric Plum, Kaiji Chen, Yuehong Xu, Yongchang Lu, Huifang Zhang, Ziyang Zhang, Xieyu Chen, Guanhua Ren, Li Niu, Zhen Tian, Jiaguang Han, and **Weili Zhang**, “Dielectric metasurfaces for complete control of phase, amplitude and polarization,” *Advanced Optical Materials* **2022**, 2101223 (2022).
16. Longqing Cong, Jiaguang Han, **Weili Zhang**, and Ranjan Singh, “Temporal loss boundary engineered photonic Cavity,” *Nature Communications* **12**, 6940 (2021).
17. Jiao Li, Yixin Yao, Liwen Jiang, Shuai Li, Zhihao Yi, Xieyu Chen, Zhen Tian, and **Weili Zhang**, “Time-domain terahertz optoacoustics: manipulable water sensing and dampening,” *Advanced Photonics* **3**, 026003 (2021).
18. Yuehong Xu, Huifang Zhang, Quan Li, Xueqian Zhang, Quan Xu, Wentao Zhang, Cong Hu, Xixiang Zhang, Jiaguang Han, and **Weili Zhang**, “Generation of terahertz vector beams using dielectric metasurfaces via spin-decoupled phase control,” *Nanophotonics* **9**, 3393-3402 (2020). (*Invited paper*)
19. Xueqian Zhang, Quan Xu, Lingbo Xia, Yanfeng Li, Jianqiang Gu, Zhen Tian, Chunmei Ouyang, Jiaguang Han, and **Weili Zhang**, “Terahertz surface plasmonic waves: a review,” *Advanced Photonics* **2**, 014001 (2020). (*Invited paper*)
20. Yuping Yang, Hailing Liu, Menghan Yang, Bin Cui, and **Weili Zhang**, “Dielectric sphere-coupled THz super-resolution imaging,” *Applied Physics Letters* **113**, 031105 (2018).
21. Ningning Xu, Ranjan Singh, and **Weili Zhang**, “High-Q lattice mode matched structural resonances in terahertz metasurfaces,” *Applied Physics Letters* **109**, 021108 (2016).
22. Ranjan Singh, Wei Cao, Ibraheem Al-Naib, Longqing Cong, Withawat Withayachumnankul, and **Weili Zhang**, “Ultrasensitive THz sensing with high-Q Fano resonances in metasurfaces,” *Applied Physics Letters* **105**, 171101 (2014).
23. Ranjan Singh, Ibraheem Al-Naib, Wei Cao, Carsten Rockstuhl, Martin Koch, and **Weili Zhang**, “The Fano resonance in symmetry broken terahertz metamaterials,” *IEEE Transactions on Terahertz Science and Technology* **3**, 820-826 (2013). (*Invited paper*)
24. Wei Cao, Ranjan Singh, Ibraheem A. I. Al-Naib, Mingxia He, Antoinette J. Taylor, and **Weili Zhang**, “Low-loss ultra-high-Q dark mode plasmonic Fano metamaterials,” *Optics Letters* **37**, 16, 3366-3368 (2012).

25. Ranjan Singh, Ibraheem A. I. Al-Naib, Martin Koch, and **Weili Zhang**, “Sharp Fano resonances in THz metamaterials,” *Optics Express* **19**, 6312-6319 (2011).
26. Xinchao Lu, Jianguang Han, and **Weili Zhang**, “Transmission field enhancement of terahertz pulses in plasmonic, rectangular coaxial geometries,” *Optics Letters* **35**, 904-906 (2010).
27. Shuang Zhang, Yong-Shik Park, Jensen Li, Xinchao Lu, **Weili Zhang**, and Xiang Zhang, “Negative refractive index in chiral metamaterials,” *Physical Review Letters* **102**, 023901 (2009).
28. John F. O’Hara, Ranjan Singh, Igal Brener, Evgenya Smirnova, Jianguang Han, Antoinette J. Taylor, and **Weili Zhang**, “Thin-film sensing with planar terahertz metamaterials: sensitivity and limitations,” *Optics Express* **16**, 1786-1795 (2008).
29. **Weili Zhang**, Abul K. Azad, Jianguang Han, Jingzhou Xu, Jian Chen, and X.-C. Zhang, “Direct observation of a transition of a surface plasmon resonance from a photonic crystal effect,” *Physical Review Letters* **98**, 183901 (2007).
30. Abul K. Azad, J. Dai, and **Weili Zhang**, “Transmission properties of terahertz pulses through subwavelength double split-ring resonators,” *Optics Letters* **31**, 634-636 (2006).
31. D. Qu, D. Grischkowsky, and **Weili Zhang**, “Terahertz transmission properties of thin, subwavelength metallic hole arrays,” *Optics Letters* **29**, 896-898 (2004).
32. **Weili Zhang**, A. Azad, and D. Grischkowsky, “Terahertz studies of carrier dynamics and dielectric response of n-type, freestanding epitaxial GaN,” *Applied Physics Letters* **82**, 2841-2843 (2003).
33. **Weili Zhang**, J. Zhang, and D. Grischkowsky, “Quasi-optic dielectric terahertz cavity - Coupled through optical tunneling,” *Applied Physics Letters* **78**, 2425-2427 (2001).
34. **Weili Zhang**, K. S. Wong, H. Wang, Z. K. Tang, G. K. L. Wong, and R. K. Jain, “Magnitude and dynamics of third-order optical nonlinearity in ZnO microcrystallite thin films,” *Applied Physics Letters* **75**, 3321-3323 (1999).
35. **Weili Zhang**, N. Cue, and K. M. Yoo, “Emission linewidth of laser action in random gain media,” *Optics Letters* **20**, 961-963 (1995).