Yulei ZHANG

No.38 Zheda Rd, Hangzhou, China
+86-157-0009-7691 | 3210101040@zju.edu.cn

SUMMARY

- Demonstrated ability to work collaboratively in multidisciplinary research teams.
- Strong analytical skills with a focus on experimental design and data analysis.
- Extensive experience in light path construction and related experimental techniques.
- Committed to advancing knowledge in the field of optoelectrical engineering through innovative research and practical applications.
- Research interests include light field manipulation, biophotonics, and imaging.

EDUCATION

BS in Optoelectrical Information Science and Engineering, Zhejiang University, Sep 2021 – present

- GPA: 3.95/4

PUBLICATIONS

Zhang, Y., Wang, Z., Pian, S. & Ma, Y., *Compact hyperspectral camera with enhanced robustness to coherent, polarization state and aperture angle*, **Light: science and application**, Manuscript submitted for publication.

Zhang, Y., & Ma, Y., *Protocol to fabricate colored Janus fabric for dynamic thermal management*, **Star Protocols**, Manuscript submitted for publication.

Gao, M., Guo, D., Wang, J., Tan, Y., Liu, K., Gao, L., **Zhang, Y.**, Ding, Z., Ying, G., & Li, P., **Biomedical Optics Express** *2.1*(2024): 991-1003.

Zhan, H., Chen, Q., Pian, S., Gao, Y., Lu, C., Wang, Z., Gao, Y., **Zhang, Y.** & Ma, Y., *Single snap-shot based miniaturized mid-infrared spectrometer with dielectric metasurface*, **Journal of the Optical Society of America B**.

PATENTS

Y.Ma, Y.Zhang and Z.Wang. *Coding element and speckle spectrometer based on micro-nano optical fiber and scattering medium substrate*. CN202311095643.4, January 2, 2024.

Y.Ma, Z.Wang and Y.Zhang. *Scattering device and speckle spectrometer based on scattering medium sheet*. CN202311093274.5, January 5, 2024.

Y.Ma, Z.Wang and Y.Zhang. *Scattering medium optical fiber and speckle spectrometer*. CN202311093823.9, January 5, 2024.

RESEARCH EXPERIENCE

Research Assistant, Professor Yaoguang Ma Group, Zhejiang University, Aug 2023 – present

- Collaborating with Prof. Ma and the research team in the development of a compact speckle-based computational hyperspectral camera, with findings submitted for publication.
- Designing and implementing experimental setups, optimizing imaging algorithms, and manipulating diverse light field parameters to minimize their effect on the deformation of speckle patterns, thus ensuring the precise spectral detection.
- Selecting randomized metamaterials to ensure robust reconstruction against varying polarization states of the incident beam.
- Designing pinhole array structures to enable spatially incoherent light to generate interference speckles, facilitating hyperspectral imaging for beams with arbitrary coherence under corresponding calibrations.
- Participating in the fabrication and characterization experiments of the colored Janus fabric and authored a protocol article detailing the related experimental procedures.

Research Assistant, Professor Peng Li Group, Zhejiang University, Oct 2022 – Sep 2023

- Participated in Prof. Li's research on noninvasive continuous glucose monitoring using blood scattering signals, resulting in a published paper.
- Investigated the linear relationship between blood glucose concentration and the optical scattering coefficient measured by OCT.
- Developed methodologies for high-accuracy noninvasive continuous glucose monitoring based on OCT findings.

SKILLS

Laboratory: Light path building, optical and thermal characterization, fiber related techniques, thin-film deposition and device fabrication
Programming: Python, MATLAB
Software: SolidWorks, Zemax, Lumerical