

Zhenyi Luo

Ph.D. candidate
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University of Central Florida
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Orlando, FL 32816-2700

EDUCATION

- 08/2021 - Present **Optics and Photonics Ph.D. Candidate**
College of Optics and Photonics, University of Central Florida, the U.S.
Supervisor: Prof. Shin-Tson Wu
- 09/2018 - 09/2020 **Master of Science**
Department of Chemistry, Graduate School of Science, The University of Tokyo,
Japan
- 09/2014 - 07/2018 **Bachelor of Engineering**
Department of Precision Instrument, Tsinghua University, China
- 07/2017 - 09/2017 **Visting Student**
College of Optics and Photonics, University of Central Florida, the U.S.
Supervisor: Prof. Shin-Tson Wu

AWARDS & HONORS

- 01/2024 First Place of SPIE Photonics West AR/VR/MR Optical Design Challenge
- 01/2024 Facebook Reality Labs Liquid Crystal Research Diamond Award (1st place)
- 05/2023 SID Distinguished Student Paper Award
- 05/2022 SID Distinguished Student Paper Award
- 09/2021 ORCGS Doctoral Fellowship, University of Central Florida
- 2015, 2016, 2017 Scholarship for Excellent Academic Performances, Tsinghua University

PUBLICATIONS

- Y. Ding, **Z. Luo**, G. Borjigin, and S. T. Wu, “Breaking the optical efficiency limit of virtual reality with a nonreciprocal polarization rotator,” *Opto-Electron Adv.* 7(3), 230178 (2024).
- **Z. Luo**, Y. Li, J. Semmen, Y. Rao, and S. T. Wu, “Achromatic diffractive liquid-crystal optics for virtual reality displays,” *Light Sci. Appl.* 12, 230 (2023).
- (Distinguished student paper) **Z. Luo**, Y. Ding, Y. Rao, and S. T. Wu, “High-efficiency folded optics for near-eye displays,” *J. Soc. Inf. Disp.* 31(5), 336-343 (2023)
- J. Zou, **Z. Luo**, E. Zhao, Y. Rao, and S. T. Wu, “Ultracompact virtual reality system with a Pancharatnam–Berry phase deflector,” *Opt. Express* 30(22), 39652-39662 (2022).
- **Z. Luo**, J. Zou, E. Zhao, Y. Rao, and S. T. Wu, “Correcting the wavelength-induced phase

deviation of Pancharatnam-Berry lenses,” Opt. Express 30(20), 36644-36650 (2022).

- (Distinguished student paper) J. Zou, **Z. Luo**, and S. T. Wu, “Pupil steerable Maxwellian AR display with gaze matching,” J. Soc. Inf. Disp. 30, 373-380 (2022).
- (Cover) Y. Li, **Z. Luo**, and S. T. Wu, “High-precision beam angle expander based on polymeric liquid crystal polarization lenses for LiDAR applications,” Crystals 12, 349 (2022).
- T. H. Xiao, Z. Cheng, **Z. Luo**, et al, “All-dielectric chiral-field-enhanced Raman optical activity,” Nature communications, 12(1), 1-7 (2021).
- N. Chen, T. H. Xiao, **Z. Luo**, et al, “Porous carbon nanowire array for surface-enhanced Raman spectroscopy,” Nature communications, 11(1), 1-8 (2020).

RESEARCH EXPERIENCE

08/2021 - Present

Advanced near-eye displays & Novel liquid crystal devices

College of Optics and Photonics, University of Central Florida, the U.S.

Supervisor: Prof. Shin-Tson Wu

- Liquid crystal planar optics for AR/VR display system
- Ultracompact VR system
- Gaze matching of Maxwellian AR display system

09/2018 - 09/2020

Enhanced Raman scattering with carbon materials

Department of Chemistry, Graduate School of Science, The University of Tokyo, Japan

Supervisor: Prof. Keisuke Goda

LEADERSHIP & SERVICES

10/2022 - 06/2023

President of Society for Information Display (SID) UCF Student Branch

10/2021 - 10/2022

Treasurer of Society for Information Display (SID) UCF Student Branch