

SHIYU LI

Curriculum Vitae

Ming Hsieh Department of Electrical and Computer Engineering
University of Southern California
✉ lishiyu@usc.edu

Education

- 2021–present **PhD, Electrical Engineering**, *University of Southern California (USC)*.
2017–2020 : **Master of Engineering, Optical Engineering**, *Huazhong University of Science and Technology (HUST)*.
2013–2017 : **Bachelor of Engineering, Optoelectronic Information Science and Engineering**, *Huazhong University of Science and Technology (HUST)*.

Publications

Under preparation

- 2021 **Shiyu Li**, Chia Wei Hsu. Fundamental thickness bounds for wide-field-of-view metalenses, *under preparation*.

Journal Articles

- 2020 Chaobiao Zhou, **Shiyu Li**, Menghui Fan, Xinfeng Wang, Yanli Xu, Weiwei Xu, Shuyuan Xiao, Mingzhe Hu, and Jiangtao Liu. Optical radiation manipulation of Si-Ge₂Sb₂Te₅ hybrid metasurfaces. *Optics Express*, volume 28, pages 9690–9701. OSA, 2020, (**Impact Factor:3.894**).
- 2020 Xinfeng Wang, **Shiyu Li**, and Chaobiao Zhou. Polarization-independent toroidal dipole resonances driven by symmetry-protected BIC in ultraviolet region. *Optics Express*, volume 28, pages 11983–11989. OSA, 2020, (**Impact Factor:3.894**).
- 2019 Chaobiao Zhou, **Shiyu Li** (co-first author), Yi Wang, and Mingsheng Zhan. Multiple toroidal dipole Fano resonances of asymmetric dielectric nanohole arrays. *Physical Review B*, volume 100, page 195306. APS, 2019, (**Impact Factor:4.036**).
- 2019 **Shiyu Li**, Chaobiao Zhou, Tingting Liu, and Shuyuan Xiao. Symmetry-protected bound states in the continuum supported by all-dielectric metasurfaces. *Physical Review A*, volume 100, page 063803. APS, 2019, (**Impact Factor:3.14**).
- 2019 **Shiyu Li**, Chaobiao Zhou, Guoxun Ban, Hong Wang, Hong Lu, and Yi Wang. Active all-dielectric bifocal metalens assisted by germanium antimony telluride. *Journal of Physics D: Applied Physics*, volume 52, page 095106. IOP, 2019, (**Impact Factor:3.207**).
- 2019 Guoxun Ban, Cheng Gong, Chaobiao Zhou, **Shiyu Li**, Regis Barille, Xiaojun Liu, and Yi Wang. Fano-resonant silicon photonic crystal slab for efficient third-harmonic generation. *Optics Letters*, volume 44, pages 126–129. OSA, 2019, (**Impact Factor:3.776**).
- 2018 Chaobiao Zhou, Guoqin Liu, Guoxun Ban, **Shiyu Li**, Qingzhong Huang, Jinsong Xia, Yi Wang, and Mingsheng Zhan. Tunable fano resonator using multilayer graphene in the near-infrared region. *Applied Physics Letters*, volume 112, page 101904. AIP, 2018, (**Impact Factor:3.791**).

In Conference Proceedings

- 2019 **Shiyu Li**, Chaobiao Zhou, Hong Wang, and Yi Wang. Toroidal dipole response supported by silicon metasurface in the near-infrared region. In *Terahertz Science and Applications, 2019 International Photonics and Optoelectronics Meetings (POEM)*, pages JW4A–65. OSA, 2019.

Research Experience

University of Southern California (USC)

2021 – present ***Metalenses with wide field-of-view.***

Developing the fundamental thickness bounds for wide-field-of-view metalenses.

Advisor : **Dr. Chia Wei Hsu**, *Assistant Professor, Ming Hsieh Department of Electrical and Computer Engineering*

Huazhong University of Science and Technology (HUST)

2018 – 2020 ***Optical Resonances Supported by Metasurfaces.***

Analyzing optical resonances supported by metasurfaces, such as toroidal dipole responses, anapoles and bound states in the continuum.

Advisor : **Dr. Yi Wang**, *Associate Professor, Wuhan National Laboratory for Optoelectronics*

2017 – 2019 ***Metalenses with diffraction-limited focusing.***

Designing a dynamically tunable bifocal metalens that can realize simultaneous and continuous intensity modulations of the two focuses

Advisor : **Dr. Yi Wang**, *Associate Professor, Wuhan National Laboratory for Optoelectronics*

Honors & Awards

2019 ***Merit Scholarship*** at HUST

2019 ***First-class Postgraduate Academic Scholarship*** at HUST

2018 ***First-class Postgraduate Academic Scholarship*** at HUST

2017 ***First-class Postgraduate Academic Scholarship*** at HUST

2017 ***2017 HUST Outstanding Graduate*** at HUST

2016 ***Science and Technology Innovation Scholarship*** at HUST

2015 ***Merit Scholarship*** at HUST

2014 ***Self-improvement Scholarship*** at HUST

Teaching Assistantship & Student Mentoring

Summer, 2021 : **Mentor Ryan Sandoval (undergraduate student) in SURE 2021 program, USC.**

Spring, 2018 : **TA of Electrodynamics, HUST.**

Service Activities

Nov 2018 : **Volunteers in 2018 International Photonics and OptoElectronics Meetings (POEM).**