

Shiyu Zhou

Address: 001, Qiyue street, Soochow 215124, China

Phone: +86 17756200409 Email: syzhou2022@gmail.com

EDUCATION

Master of Materials and Chemical Engineering

Expect in June 2024

College of Nano Science and Technology, University of Science and Technology of China

GPA: 4.0/4.3

Thesis: "Inkjet Printing of PDMS-Based Artificial Eyes with Customizable Optical Features."

Awards: Graduate Academic Scholarship 2022, 2023 (Top 5%)

Bachelor of Material Forming and Control Engineering

June 2020

School of Materials Science and Engineering, Hefei University of Technology

Thesis: "Structure Design of Foundry Ladle Transfer Vehicle in Metal Liquid Transfer System."

Awards: National Encouragement scholarship (Top 5%), Undergraduate Scholarship

RESEARCH EXPERIENCE

Graduate Research Assistant

June 2022 - Present

Key Laboratory of Multifunctional Nanomaterials and Smart Systems, Chinese Academy of Sciences

- Optimized ink formulation and printing parameters to enable large-scale inkjet printing fabrication of PDMS microlens arrays.
- Integrated microfluidic chips with printed microlens arrays to fabricate tunable-focus artificial compound eyes.
- Employed finite element simulation to conduct fluid-structure interaction and ray tracing simulations on artificial compound eyes.
- Constructed an optical system to perform optical characterization of microlens arrays and compound eyes.
- Developed a MATLAB program to extract data from photographs taken by the compound eye and assess their clarity.
- Data analysis and academic manuscript writing.

PUBLICATIONS

[1] S. Zhou, H. Guo, B. Qian, L. Li, X. Shi. Single-step Inkjet Printing PDMS Microlens Arrays for Tunable-Focus Artificial Compound Eyes. (Submitted to journal)

[2] H. Guo, J. Qin, S. Zhou, B. Qian, L. Li, D. Zhu, X. Shi. (2023) A Low-Binder-Content Ink System for 3D Printing High-Density and Small Feature Size 316L Stainless Steel Parts. *Advanced Engineering Materials*. 25 (20), 2300558.

ADDITIONAL SKILL

- 3D Printing: Inkjet 3D Printing, Direct Ink Writing, Micro-Stereolithography, Fused Deposition Modeling.
- Microfluidic, MEMS Fabrication.
- 3D CAD Software: SolidWorks, Blender, Autodesk Inventor.
- FEA Software: COMSOL, Ansys Workbench.
- Data Processing Software: MATLAB, Origin.
- Individual And Team Work Ability.