

Yishu Zhou

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Education

Bachelor of Engineering, Optoelectronic Information Science and Engineering

Huazhong University of Science and Technology, Wuhan, PRC

Overall GPA: 92.00/100 (Rank: 3/345)

Sept 2013 to present

Publications

- [1] Liu, K.[†], **Zhou, Y.[†]**, Yuan, F., Mo, X., Yang, P., Chen, Q., Li, J., Ding, T., and Zhou, J. "Self-powered Multimodal Temperature and Force Sensor Based on a Liquid Droplet". *Angew. Chem.*. 2016, doi:10.1002/ange.201609088 (**Co-first authors**[†], IF = 11.709)
- [2] Yang, P., Liu, K., Chen Q., Mo, X., **Zhou, Y.**, Li, S., Feng, G., and Zhou, J. "Wearable Thermocells Based on Gel Electrolytes for the Utilization of Body Heat". *Angew. Chem.*. 2016, 128, 12229.
- [3] Liu, K., Ding, T., Mo, X., Chen, Q., Yang, P., Li, J., Xie, W., **Zhou, Y.**, and Zhou, J. "Flexible Microfluidics Nanogenerator Based on the Electrokinetic Conversion". *Nano Energy*. 2016, 30, pp. 684-690. (IF = 11.553)

Research Experience

Research Intern

Department of Physics, McGill University, Canada

Supervisor: Prof. Jack Sankey

Jul 2016 to Nov 2016

- Project 1: **Automation and Measurement with UHV Fiber Interferometer**
 - Automated the mode imaging system based on ultra high vacuum fiber interferometer and MEMS.
 - Data collection and analysis for mode imaging of a phononic crystal membrane.
 - Measured the bolometric damping and antidamping for Si₃N₄ nanostrings.
- Project 2: **Modeling Si₃N₄ MEMS**
 - Analytically calculated and simulated the phononic crystal band structure.
 - Modeled the optically defined localization modes and the localized defect modes.

Research Assistant

Wuhan National Laboratory for Optoelectronics, PRC

Supervisor: Prof. Jun Zhou

Dec 2014 to Jun 2016

- Major project: **Liquid Droplet as Self-powered Temperature and Force Sensor**
 - Proposed a novel low-cost, self-powered, and multimodal sensor.
 - Designed and performed the experiments to test the droplet sensor performance.
 - Fitted the data to separate temperature and force stimuli sensing.
 - Designed an integral system for artificial intelligence system application demonstration.

Research Assistant

National Engineering Research Center of Laser Processing, PRC

Supervisor: Prof. Guangzhi Zhu

Apr 2015 to Dec 2015

- Project: **Graphene as Saturable Absorber for Mode-locking Lasers**
 - Used the split-step Fourier transform to obtain the numerical solution of the Haus Master Equation.
 - Compared graphene and SESAM as a saturable absorber.

Honors and Awards

National Scholarship (Three times)

Top 1% among all undergraduates, awarded by the Ministry of Education of PRC

2014, 2015, 2016

Pacemaker to Merit Students

Top 20 out of 32000 undergraduates, the highest honor for undergraduates

Nov 2016

"Optical System Design" Summer Camp Scholarship

Awarded by ITMO University, Russia

Sept 2015

Honorable Mention in Mathematical Contest in Modeling of America

Awarded by COMAP, Inc.

Feb 2016

Skills

Programming: C, Python, Objective C, Matlab.

Industry Software: COMSOL, Mathematica, Origin.

Experiment: Ultrahigh Vacuum Systems, Lock-in Detection, MEMS, Fiber Interferometry, Automated Data Acquisition and Analysis, Solder.

Other: Altium Designer (Electronics Design), Zemax (Optical Design), L^AT_EX.