Yishu Zhou

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Education

Bachelor of Engineering, Optoelectronic Information Science and Engineering
Huazhong University of Science and Technology, Wuhan, PRC *Sept 2013 to present*
Overall GPA: 92.00/100 (Rank: 3/345)

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, 55, 15864. (**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 **Supervisor: Prof. Jack Sankey**
Department of Physics, McGill University, Canada *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.
  - Collected and analyzed the data for mode imaging of a phononic crystal membrane.
  - Measured the bolometric damping and antidamping for Si_3N_4 nanostrings.
- Project 2: ***Modeling Si_3N_4 MEMS***
  - Analytically calculated and simulated the phononic crystal band structure.
  - Modeled the optically defined localization modes and the localized defect modes.

Research Assistant **Supervisor: Prof. Jun Zhou**
Wuhan National Laboratory for Optoelectronics, PRC *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 **Supervisor: Prof. Guangzhi Zhu**
National Engineering Research Center of Laser Processing, PRC *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), LaTeX.