

CURRICULUM VITAE

Zhichao Zhang

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1010 W Main St, Urbana, IL, 61801

EDUCATION

- PhD** Mechanical Science and Engineering, University of Illinois at Urbana-Champaign, IL **08/2017-now**
· Current GPA **3.92/4.00**
- MS** Mechanical Engineering, University of Hong Kong, Hong Kong **09/2013-11/2014**
· GPA **3.92/4.00** (Pass with distinction)
- Bachelor Degree** Energy Science and Engineering, Harbin Institute of Technology, China **09/2009-07/2013**
· GPA **90.3/100** (major ranking 2nd)

HONORS

- **Yee Memorial Fund Fellowship** UIUC **2019-2020**
- **Outstanding MSc Student Award** HKU **2014**
- **Special scholarship of Shanghai Boiler Works Ltd.** HIT **2012**
- **First prize of National College Students' Mathematical Modeling Contest** **2011**
- **First-class scholarship of Harbin Institute of Technology** HIT **2011**
- **Individual scholarship in physics** HIT **2010**

RESEARCH EXPERIENCE

- Photodetector based on Organic and 2D materials heterostructures, optical and strain sensing. Decorated graphene field-effect transistor gas sensor. [Nam Research Group](#), UIUC. **09/2017-now**
- Heat transfer, fluid mechanics, interface treatment and crystallization of soft semiconductor materials and their applications in electronic devices (transistors, display, sensors), [Laboratory of Nanoscale Energy Conversion Devices and Physics](#), HKU. **08/2014-08/2017**
- Project on Fluid Flow Simulation: Peristalsis and Peristaltic Pumping, HKU. **10/2013- 07/2014**
- Graduation Design: Calculation and Design of 900MW Steam Generator and 1MW Evaporative Heat Exchanger, China Institute of Atomic Energy, Beijing, China. **02/2013-07/2013**

PUBLICATIONS AND PRESENTATIONS

1. Zhiwen Zhou, Zhichao Zhang (co-first author), Qisheng Wu, Xudong Ji, Jinlan Wang, Xiao Cheng Zeng, Shien-Ping Feng and Paddy KL Chan. "Inch-Scale Grain Boundary Free Organic Crystals Developed by Nucleation Seed-Controlled Shearing Method" ***ACS Applied Materials & Interface*, 2018**, 10(41), 35395-35403.
2. Ke Pei, Xiaochen Ren, Zhiwen Zhou, Zhichao Zhang, Xudong Ji, and Paddy KL Chan, "A High-Performance Optical Memory Array Based on Inhomogeneity of Organic Semiconductors," ***Advanced Materials*, 2018**, 30(13) 1706647.
3. Zhichao Zhang, Boyu Peng, Ke Pei, Xudong Ji, and Paddy KL Chan. "Marangoni-Effect-Assisted Bar-Coating Method for High-Quality Organic Crystals with Compressive and Tensile Strains." ***Advanced Functional Materials*, 2017**, 1703443.
4. Xiaochen Ren, Ke Pei, Boyu Peng, Zhichao Zhang, Shengxi Bai, Zongrong Wang, Xinyu Wang, and Paddy KL Chan. "A Low-Operating-Power and Flexible Active Matrix Organic Transistor Temperature Sensor

Array." *Advanced Materials*, 2016, 28(24), 4832-4838.

5. Zhichao Zhang, Xiaochen Ren, Boyu Peng, Zongrong Wang, Xinyu Wang, Ke Pei, Bowen Shan, Qian Miao, and Paddy KL Chan. "Direct Patterning of Self-Assembled Monolayers by Stamp Printing Method and Applications in High Performance Organic Field-Effect Transistors and Complementary Inverters." *Advanced Functional Materials*, 2015, 25(38), 6112.
6. Ke Pei, Zongrong Wang, Xiaochen Ren, Zhichao Zhang, Boyu Peng, and Paddy KL Chan. "Fully transparent organic transistors with junction-free metallic network electrodes." *Applied Physics Letters*, 2015, 107(3): 033302.
7. Zhichao Zhang, Jianmin Gao. "Calculation and Analysis of Structure and Thermal Hydraulic Characteristics of Evaporative Heat Exchanger." *Energy Conservation Technology*, 2014, 32(3): 219.
8. BB4.08/EM6.09 oral presentations in 2015/2016 MRS (Materials Research Society) Fall Meeting & Exhibit.

SKILLS

➤ **Computer skills:**

Software/Packages: COMSOL, MATLAB, Python, C++, SolidWorks/SolidEdge, 3ds Max, AutoCAD, FLUENT, Abaqus

➤ **Experiment skills:**

Micro/Nano system fabrications (photolithography, thin film depositions by vacuum and solution processes, transfer, anodization, sputtering) and characterizations (AFM, SEM, TEM, POM, XRD, FTIR etc.).