Yan Wang

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EDUCATION BACKGROUND

Rutgers University, New Jersey, USA Sep. 2016 – present

- PhD candidate, School of Engineering
- Advisor: Professor Manish Chhowalla, Associate Department Chair of Materials Science and Engineering Department, m.chhowalla@gmail.com

Peking University - Shenzhen, P.R. China Sep. 2013 – July 2016

- M.S., Microelectronics and Solid State Electronics
- **Rank: 1 / 73 GPA:3.9, 92.7 / 100,**
- Advisor: Assoc. Prof. Hang Zhou, zhouh81@pkusz.edu.cn

Rutgers University, New Jersey, USA Jan. 2016 – Apr. 2016

- Visiting student, School of Engineering
- Advisor: Professor Manish Chhowalla, Associate Department Chair of Materials Science and Engineering Department, m.chhowalla@gmail.com

Jiangnan University – Wuxi, P.R. China Sep. 2009 - July 2013

- B.S., Microelectronics
- GPA : 3.74, 88.5 /100

SLELECTED HONORS AND AWARDS

- Sep. 2015~ Jul. 2016 **Excellent graduate student, Peking City (Top1%)**
- Sep. 2015~ Jul. 2016 **Excellent graduate student, Peking University (Top5%)**
- Sep. 2014~ Jul. 2015 **National Scholarship, Peking University (Top2%)**
- Sep. 2014~ Jul. 2015 **Exceptional Award for Academic Innovation, Peking University, (Top4%)**
- Sep. 2014~ Jul. 2015 **Merit Student, Peking University, (Top8%)**
- Sep. 2013~ Jul. 2014 **Merit Student, Peking University, (Top8%)**
- Sep. 2013~ Jul. 2014 **May Fourth Scholarship, Peking University, (Top4%)**

RESEARCH EXPERIENCE

Thin Film Transistor and Advanced Display Lab, School of Electronic and Computer Engineering
Advisor: Assoc. Prof. Hang Zhou

Photodetectors based on perovskite and nanocrystalline graphite **Apr.2015-Jan.2016**

- Opened up this new research area and discovered inserting nanocrystalline graphite which is proposed by us firstly improves performance of perovskite photodetectors;
- Fabricated high performance perovskite photodetectors based on simple solution method and researched various parameters to explore optical and electrical properties of the hybrid films and elucidated their mechanisms;

Simulation of perovskite solar cells with inorganic HTMs **Apr.2014-Jan.2015**

- Investigated various parameters to explore their influence on the performance of the perovskite solar cells;

The Nano-materials & Devices Group, School of Engineering, Rutgers University
Advisor: Manish Chhowalla

2D material(MoS_2)/Perovskite heterojunction photodetector **Jan.2016-Apr.2016**

- Research on two phase of MoS2(metallic and semiconducting) and their effect on MoS_2/Perovskite photodetectors
- Research on thickness of MoS_2 to optimize the performance of MoS_2/Perovskite photodetectors

Institute of networking engineering
Advisor: Prof. Chuanjie Zhong

Research on the model and simulation of double gate MOSFET **Feb. 2013-Jun. 2013**

- Established a double gate MOSFET model using Silvaco;
- Investigated how different parameters influence the outputs of the device theoretically;

ACQUIRED SKILLS

- ✓ Computer & data processing: Microsoft Office, Adobe, Origin, Jade
- ✓ Simulation software: AMPS, Silvaco, Sentaurus, Hspice
- ✓ Test: SEM, UV-Vis, XRD, XPS, Raman, PL, Contact Angle, Hall, Step Profiler, Agilent B1500, Keithley 4200
- ✓ Film deposition: Thermal vaporation, Magnetron sputter, Spin-coating, Photolithography, PECVD, Annealing, Lift-off, etc.
- ✓ Basic synthesis, solution preparation, glove box technique

TEACHING EXPERIENCE

Teaching Assistant, School of Electronic and Computer Engineering, Peking University
Course: Fabrication and testing of semiconductor photovoltaic devices **Spring 2014**

PUBLICATIONS

[J1] **Yan Wang**, Zhonggao Xia, Jun Liang, Xinwei Wang, Yiming Liu, Chuan Liu, Shengdong Zhang and Hang Zhou, "Towards printed perovskite solar cells with cuprous oxide hole transporting layers: a theoretical design", ***Semiconductor Science and Technology***. 30**,** 054004, 2015 **(one of the Semiconductor Science and Technology Highlights of 2015)**

[J2] **Yan Wang**, Zhonggao Xia, Songnan Du, Fang Yuan, Zigang Li, Zhenjun Li , Qing Dai, Haolan Wang, Shiqiang Luo, Shengdong Zhang, Hang Zhou "Solution-Processed Photodetectors based on Organic-inorganic Hybrid Perovskite and Nanocrystalline Graphite", ***Nanotechnology*****,** 27, 175201, 2016.

[C3] **Yan Wang**, Zhonggao Xia, Yiming Liu, Hang Zhou, "Simulation of perovskite solar cells with inorganic hole transporting materials", ***42th IEEE Photovoltaic Specialist Conference***, June 14-19, New Orleans, 2015.