

## Wen Wen

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### Education

Candidate, 4<sup>th</sup> year Fall, 2009-Present

Department of Chemistry, University of Michigan, United States

Advisor: Asst. Prof. Stephen Maldonado

Master of Science, Chemistry Fall, 2006-Spring, 2009

Department of Chemistry and Biochemistry, Arizona State University, United States

Thesis: *Study of the Interfacial Effects for Glass-forming Liquids*

Advisor: Assoc. Prof. Ranko Richert

Bachelor of Science, Chemistry Fall, 2002-Spring, 2006

College of Molecules and Engineering, Peking University, Beijing, China

Thesis: *Fabrication of In<sub>2</sub>O<sub>3</sub> octahedron and InN hollow octahedron*

Advisor: Prof. Kai Wu

### Research Experience

University of Michigan: Fall, 2009-Present

- Synthesized Gallium Phosphide nanowires
- Analyzed photoelectrochemical properties of Gallium Phosphide nanowires
- Doped phosphide nanowires

Skills: Chemical Vapor Deposition, Scanning Electron Microscopy, Transmission Electron Microscope, Spectral Response, Raman Spectroscopy, X-ray Diffraction, Photoelectrochemistry,

Arizona State University: Fall, 2006-Spring, 2009

- Modified inner surface of porous gel with hydrophobic functional groups to study the dynamics of supercooled liquid in nanoconfinement
  - Modified the surface of electrodes with mixed self-assembled monolayer to improve the performance of DNA electric biosensor for Urinary Tract Infection and learned related biology
  - Designed electric biosensor for detection of RNase to lower the detection the limit to 4pg/ml by coupling magnetic beads for efficient separation with highly sensitive adsorptive stripping voltammerty
- Skills: Chronoamperometry, Adsorptive Stripping Voltammerty, Cyclic Voltammerty, Scanning Electron Microscope, Transmission Electron Microscope, Optical Microscopy, Solvation Dynamics, Electrochemical Deposition

Peking University: Fall, 2004-Spring, 2006

- Synthesized In<sub>2</sub>O<sub>3</sub> octahedron and InN hollow octahedron and studied the optical properties
  - Prepared Ga<sub>2</sub>O<sub>3</sub>, Al<sub>2</sub>O<sub>3</sub> nanonets and GaN nanowires using alumina templates
- Skills: Chemical Vapor Deposition, Scanning Electron Microscopy, Transmission Electron Microscope, Photoluminescence

### Teaching Experience

Department of Chemistry, University of Michigan

Graduate Student Instructor

Course: *Organic Chemistry lab 216* Winter, 2011

- Instructed students with basic organic knowledge to complete synthesis and characterization.

Course: *General Chemistry lab 125*

- Course: *General Chemistry lab 125* Fall,2010
- Guided students with different science and engineering background to complete experiments.
- Course: *Organic Chemistry lab 216* Winter,2010
- Instructed students with basic organic knowledge to complete synthesis and characterization.
- Course: *General Chemistry lab 125* Fall,2009
- Guided students with different science and engineering background to complete experiments.

Department of Chemistry and Biochemistry, Arizona State University  
Graduate Assistant

- Course: *General Chemistry lab 116* Spring,2009
- Taught an introductory chemistry class to students with different science and engineering background and helped them to complete experiments.
- Course: *Physical Chemistry* Fall,2008
- Designed experiments and tested the results for students education
- Course: *General Chemistry lab 116* Spring,2008
- Taught an introductory chemistry class to students with different science and engineering background and helped them to complete experiments.

## Publications

“**Structural and Photoelectrochemical Properties of GaP Nanowires Annealed in NH<sub>3</sub>**”, Wen Wen, Azhar Carim, Sean M. Collins, Michelle J. Price, Sabrina L. Peczonczyk and Stephen Maldonado, *Journal of Physical Chemistry C*, 115, 22652 (2011)

“**Viscous Nonpolar Liquids in Confinement Studied by Mechanical Solvation**”, Wen Wen and Ranko Richert, *Journal of Chemical Physics*, 131, 084710 (2009)

“**Direct Electrochemical Monitoring of RNase Activity**”, Yongkang Ye, Wen Wen, Yun Xiang, Xiaodong Qi, Jeffrey T. La Belle, Julian J. L. Chen and Joseph Wang, *Electroanalysis*, 20, 919 (2008)

“**Aluminothermal Reaction Approach for Micro/Nanofabrications: Syntheses of In<sub>2</sub>O<sub>3</sub> micro/nanostructures and InN octahedral nanoshells**”, Jiefeng Yu, Yu Wang, Wen Wen, Donghan Yang, Bin Huang, Jianlong Li and Kai Wu, *Advanced Materials*, 22, 1479 (2010)

“**Ga<sub>2</sub>O·11Al<sub>2</sub>O<sub>3</sub> Nanonet Prepared by Interfacial Reaction Growth Approach and Its Further Application in Fabricating GaN Nanowires**”, Yu Wang, Wen Wen, Kai Wu, *Science China Chemistry*, 53, 438 (2010)

## Presentations

222nd Electrochemical Society Meeting, Honolulu, HI. “**Gallium Phosphide Nanowires for Solar Energy Conversion**”, Oct. 10-15, 2012

Vaughan Symposium, Ann Arbor, MI. “**Nitrogen Alloyed Gallium Phosphide Nanowires for Solar Energy Conversion**”, Jul. 28, 2011

Materials Research Society Spring Meeting, San Francisco, CA. “**Gallium Phosphide Nanowires for Photoelectrochemical Solar Energy Conversion**”, Apr. 25-29, 2011

Vaughan Symposium, Ann Arbor, MI. “**Gallium Phosphide and Silicon Nanowires for Solar Energy Conversion**”, Aug. 18, 2010

## **Award**

**Chemistry Department Winter Fellowship**, winter 2013

**Travel Award**, Vaughan Symposium, Aug. 18, 2010

## **Service**

Vaughan Symposium Committee, 2012, 2013

## **Outreach**

Chemistry Demo Day, the Huron Valley American Chemical Society Local Section, **2012**

Chemistry Demo Day, the Huron Valley American Chemical Society Hands on Museum Event, **2011**