

## **Anhong Zhou**

Utah State University

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### **Education**

PhD, College of Chem & Chem Eng, Hunan University, 2000.

Major: Biosensors

MS, College of Chem & Chem Eng, Hunan University, 1997.

Major: Electrochem Corros.

BS, Xiangtan University, 1994.

Major: Applied Chemistry

### **Professional Memberships**

Society of Toxicology. (2010 - Present).

The International Society for Optical Engineering. (2009 - Present).

American Society for Engineering Education. (2004 - Present).

Institute of Biological Engineering. (2004 - Present).

Materials Research Society. (2004 - Present).

American Chemical Society. (2003 - Present).

Biomedical Engineering Society. (2002 - Present).

Electrochemical Society. (2002 - Present).

## **ACADEMIC INSTRUCTION**

### **Teaching Experience**

#### **Utah State University**

5910, Introduction to Biosensors, 1 course.

BENG 3000, Instrumentation for Biological Systems, 1 course.

BENG 6910, Introduction to Biosensors, 1 course.

### **Directed Student Learning**

Master's Committee Chair, Biological Engineering. (January 2014 - Present).

Advised: Sherissa Ward

Master's Committee Chair, Biological Engineering. (January 2014 - Present).

Advised: Spencer Williams

Postdoc, Biological Engineering. (September 2013 - Present).

Advised: Wen Zhang

Postdoc, Biological Engineering. (August 2013 - Present).

Advised: Abdul Parchur

Master's Committee Chair, Biological Engineering. (January 1, 2013 - Present).

Advised: Neil Draper

Doctoral Advisory Committee Chair, Biological Engineering. (August 2011 - Present).

Advised: Lifu Xiao

Doctoral Advisory Committee Chair, Biological Engineering. (August 2011 - Present).

Advised: Qifei Li

Doctoral Advisory Committee Member, Biological Engineering. (2011 - Present).

Advised: Andrew Deceuster

Doctoral Advisory Committee Member. (2011 - Present).

Advised: Bo Zhao

Doctoral Advisory Committee Member, Biological Engineering. (2011 - Present).

Advised: Gabrielle Gladstone

Doctoral Advisory Committee Member, Biological Engineering. (2011 - Present).

Advised: Swathi Swaminathan

Major Professor (Non-Grad Student), Biological Engineering. (January 2013 - December 2014).

Advised: Renny Fernandez

## **RESEARCH & OTHER CREATIVE ACTIVITIES**

### **Presentations Given**

Li, Q., Tang, M., Wu, Y., Chen, Q., Zhou, A., 2011 Western regional conference, "Diesel exhaust particles induced alterations of cell bio-mechanics and cytoarchitectures in human lung carcinoma epithelial A549 cells," Institute of Biological Engineering, Logan, UT. (October 28, 2011 - Present).

Xiao, L., Wu, Y., Chen, Q., Zhou, A., 2011 Western regional conference, "Simultaneous topographic and single molecule recognition imaging of epidermal growth factor receptor (EGFR) on single human breast cancer cells," Institute of Biological Engineering, Logan, UT. (October 28, 2011 - Present).

### **Contracts, Grants and Sponsored Research**

#### **Grant**

Zhou, Anhong, "Development of a 'Lab-on-a-chip' for Cryptosporidium DNA Detection," Sponsored by USDA-UAES, Federal, \$90,000.00. (October 1, 2011 - September 30, 2016).

Zhou, Anhong (Principal), Gilbertson, Timothy A. (Co-Principal), "A combined TERS and functional cellular imaging approach to explore receptor function," Sponsored by National Science Foundation, Federal, \$300,000.00. (July 1, 2013 - June 30, 2016).

Edwards, Boyd (Principal), Zhou, Anhong (Co-Principal), "Tunable On-Demand Microfluidic Separations Using Traveling-Wave Electrophoresis," Sponsored by National Science Foundation, Federal, \$238,137.00. (January 2013 - December 2014).

### **Sponsored Research**

Zhou, Anhong, "Lab-on-a-chip –Development of Ion-Selective Sensor for Salinity monitoring," Sponsored by Utah Water Research Laboratory, Utah State University, \$169,000.00. (July 1, 2013 - June 30, 2014).

### **Research in Progress**

"A combined TERS and functional cellular imaging approach to explore receptor function" (On-Going)

This is a NSF funded project. The primary objective of this project is to explore the use of nanotechnology (e.g., nanoparticles and nanoscale imaging instrument) to understand the interaction mechanisms between the fatty acid and responsive receptors expressed on cells.

"Crypto DNA biosensor" (On-Going)

This is UAES supported multi-state project. The objective of this project is to develop highly specific and sensitive DNA biosensor system with ability of multiple detection of different (3-5) genotypes of Cryptosporidium at the same time.

"Lab-on-a-chip device for ion sensing and DNA detection" (On-Going)

This is a UWRL supported research. There are two main goals of this project- development of a portable instrument integrated with our patented mini-electrochemical analyzer and disposable sensor chip that is capable of detection of multiple ions in water as well as the DNA of waterborne pathogen.

"Tunable On-Demand Microfluidic Separations Using Traveling Wave Electrophoresis" (On-Going)

This is a NSF funded project (I am the Co-PI). The objective of this project is to design, fabricate, and test a novel electrophoretic microfluidic device that is capable of separation of biomolecules on chip.

## **SERVICE**

### **General Service**

#### **College**

Dept. Representative, College of Engineering Undergrad Research Advisory Committee, USU, 2009.

Major Tutor, Session "Biosensor for fun" for Engineering State at College of Engineering, USU, June 2004.

#### **Department**

Participating Faculty, BIE Student Clubs.

Committee Member, Assistant Professor Promotion and Tenure Committee (Daniel Hyduke), October 2013.

Committee Chair, Assistant Professor Promotion and Tenure Committee (Elizabeth Vargis),  
October 2013.

Committee Member, Department Curriculum Committee, 2012.

Committee Member, Graduate Admission Committee, January 2012.

Committee Member, "Marketing" committee, BIE Department, January 2009.

Committee Member, BIE ABET Curriculum Improvement Committee, 2004.

### **Professional/Public**

Reviewer, Journal Article, ACS Applied Materials & Interfaces

Reviewer, Journal Article, Acta Biomaterialia

Reviewer, Journal Article, American Society of Agricultural and Biological Engineers

Reviewer, Journal Article, Analytical and Bioanalytical Chemistry

Reviewer, Journal Article, Biomacromolecules

Reviewer, Journal Article, Biomedical Engineering Online

Reviewer, Journal Article, Biosensors and Bioelectronics

Reviewer, Journal Article, Biotechnology Progress

Reviewer, Journal Article, Cell Motility and the Cytoskeleton

Reviewer, Journal Article, Chemical Engineering Journal

Reviewer, Journal Article, Colloid and Surface A: Physicochemical and Engineering Aspects

Reviewer, Journal Article, Electrochemical communication

Reviewer, Journal Article, Experimental Gerontology

Reviewer, Journal Article, Food Chemistry

Reviewer, Journal Article, Journal of American Chemical Society

Reviewer, Journal Article, Journal of Applied Electrochemistry

Reviewer, Journal Article, Journal of Biological Engineering

Reviewer, Journal Article, Journal of Biomechanics

Reviewer, Journal Article, Journal of Hazardous Materials

Reviewer, Journal Article, Journal of Nanoparticle Research

Reviewer, Journal Article, Journal of Physical Chemistry, B

Reviewer, Journal Article, Langmuir

Reviewer, Journal Article, Materials Chemistry and Physics

Reviewer, Journal Article, Materials Letters

Reviewer, Journal Article, Materials Science and Engineering C

Reviewer, Journal Article, Measurement Science and Technology

Reviewer, Journal Article, Metallurgical and Materials Transactions B

Reviewer, Journal Article, Micron

Reviewer, Journal Article, Molecular Biology Report

Reviewer, Journal Article, Molecular Pharmaceutics

Reviewer, Journal Article, Nanomedicine: Nanotechnology, Biology, and Medicine

Reviewer, Journal Article, Pure and Applied Chemistry

Reviewer, Journal Article, Sensors

Reviewer, Journal Article, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy

Reviewer, Journal Article, Surface and Coatings Technology

Reviewer, Journal Article, The Open Biomedical Engineering Journal

Reviewer, Journal Article, Ultramicroscopy

Editorial Review Board Member, Journal of Petroleum & Environmental Biotechnology

Reviewer, Grant Proposal, NIH Study session ZRG1 IMST-G 10

Editor, Associate Editor, International Journal of Biotechnology Applications

Editorial Review Board Member, Journal of Biosensors and Bioelectronics

Exploratory Team Member, Research Challenge in Enhanced Sensor Detection Technology, Water Environment Research Foundation (WERF)

Exploratory Team member, Research Challenge in Enhanced Sensor Detection Technology, Water Environment Research Foundation (WERF)

Reviewer, Grant Proposal, William R. Wiley Environmental Molecular Sciences Laboratory (EMSL), Pacific Northwest National Laboratory (PNNL)

Reviewer, Ad Hoc Reviewer, USDA Nanoscale Engineering program & SBIR/STTR program

NSF grant review panel (biosensor/biomaterials)

Member, NSF grant review panel (Nano-biosensing)

**Utah State University**

Committee Member, Selection Committee, ORAU Ralph E. Powe Junior Faculty Enhancement Award, 2013.

## **Promotion and Tenure Committees**

### **3-Year Pre Tenure Review**

Zhou, A. (Ombudsperson).

### **Promotion Committee**

Zhou, A., Baktur, R., Britt, D. W., Lewis, R., Zhan, J.

### **Tenure Review**

Zhan, J. (Committee Chair), Zhou, A. (Committee Member), Britt, D. W. (Committee Member), Agblevor, F. (Committee Member), Hinton, H. S. (Outside Member).