

## Jun Xi

Associate Teaching Professor, Drexel University, Department of Chemistry  
Phone: (215) 895-2648      E-mail: jx35@drexel.edu

### *Professional Positions*

- Associate Teaching Professor, Drexel University, 2/2013 to present
- Assistant Professor, Drexel University, 9/2007 to 2/2013
- Senior Research Scientist, Corning Inc., Corning, NY, 6/2006 – 8/2007
- Postdoctoral Associate, The Pennsylvania State University, University Park, PA. 12/2001 – 5/2006

### *Education*

- Ph.D., Organic Chemistry, Cornell University, Ithaca, New York, 3/2002  
Thesis title: Study of Sulfur Transfer in Thiamin Biosynthesis and Study of Spore Photoproduct Lyase
- M.S., Bioorganic Chemistry, Tufts University, Medford, MA, 5/1991  
Thesis title: Investigation of Acetyl Coenzyme A Synthetase and Carboxylase
- B.S., Organic Chemistry, Beijing University, Beijing, P. R. China, 7/1988  
Thesis title: Syntheses of Derivatives of Pinene

### *Teaching Experience*

- Advanced organic chemistry II: for graduate students, Drexel University
- Chemistry of biomolecules: for both upper level undergraduate and graduate students, Drexel University
- Organic chemistry lab I: undergraduate course for non-major, Drexel University
- Organic chemistry lab II: undergraduate course for non-major, Drexel University
- Organic chemistry lab II: undergraduate course for major, Drexel University
- Organic chemistry II; undergraduate course for non-major, Drexel University
- Organic chemistry III; undergraduate course for non-major, Drexel University
- Organic chemistry III; undergraduate course for major, Drexel University
- The Drexel Experience: undergraduate course, Drexel University

### *Honors*

- Drexel Career Development Award

- National Institutes of Health Fellowship in Biochemistry, Molecular and Cell Biology
- American Chemical Society Graduate Student Travel Grant
- Dean's Excellence Fund

***Invited Talks (speaker underlined)***

- Ligand induced change in cell adhesion. No301 Hospital, Beijing, China. July 30, 2013. **Xi J.**
- Real-time Sensing at the Biointerfaces. Hong Kong Baptist University. July 25, 2013. **Xi J.**
- Mechanical Sensing for Fundamental Biological Research. Gettysburg College, Gettysburg, PA. Biolin Scientific Inc. March 21, 2013. **Xi J.**
- Webinar: Probing the ligand-induced change in cell adhesion with the dissipation monitoring function of the QCM-D. March 19, 2013. **Xi J.**
- Regional mechanical behavior of an epithelial monolayer in response to EGFR signaling: A QCM-D study. Biolin Scientific Inc., Linthicum, MD. April 10, 2012. **Xi J.**
- Mechanistic insight into cellulase-cellulose interactions. ACS Spring Meeting at San Diego, March 27, 2012. –Biotechnology: Biofuels production-Protein engineering. **Xi J.** Zhao L, Bulhassan A, Nguyen C, Du W, Greer S & Quejada J.
- Mechanical sensors for fundamental biological research. Department of Chemistry, George Mason University, Fairfax, VA. March 8, 2012. **Xi J.**
- Comparative characterization of viscoelastic properties of human epidermoid cells after epidermal growth factor stimulation by atomic force microscopy and quartz crystal microbalance with dissipation. QCM-D World Conference, Boston, MA. Nov 16, 2011. Yang R, Xi N, Lai KWC, Qu C, Fung CKM, Penn LS & **Xi J.**
- Probing cell signaling with quartz crystal microbalance with dissipation monitoring. Biolin Scientific Inc., Linthicum, MD. May 4, 2011. Chen JY, Li M, Penn LS & **Xi J.**
- Understanding biology: A mechanical perspective. Department of Chemistry, State University of New York at Binghamton, Binghamton, NY. March 8, 2011. **Xi J.**
- Real-time characterization of cell signaling on a quartz crystal microbalance with dissipation (QCM-D). QCM-D Scientific Meeting, New York City, NY. Nov 5, 2009. Chen JY, Li M, **Xi J.**
- Dissecting the world of biology: A chemical approach. Dean's seminar, Drexel COAS, Philadelphia, PA. June 4, 2008. **Xi J.**

- Toward the assembly of bacteriophage T4 DNA replisome. Bioseminar series, Department of Biosciences, Drexel University, Philadelphia, PA. January 17, 2008. **Xi J.**

## ***Publications (corresponding author with an asterisk)***

### ***Journal Articles***

- Examining the Feasibility of A “Top-Down” Approach to Enhancing the Keratinocyte-Implant Adhesion. Chen JY, Pan Y, Collins TJ, Penn LS, Xi N, Xi J (2019) *Experimental Cell Research* 376(2), 105-113. [DOI: [doi.org/10.1016/j.yexcr.2019.01.024](https://doi.org/10.1016/j.yexcr.2019.01.024)]
- On the Measurement of Energy Dissipation of Adhered Cells with the Quartz Microbalance with Dissipation Monitoring. Monemian EA., Zhao W, Chen JY, Huang C, Xi N, Xi J, Yang R (2018) *Analytical Chemistry* 90(17), 10340-10349. [DOI: [10.1021/acs.analchem.8b02153](https://doi.org/10.1021/acs.analchem.8b02153)]
- Quartz crystal microbalance: Sensing cell-substrate adhesion and beyond. Chen JY, Penn LS & Xi J\* (2018) *Biosensors and Bioelectronics* 99, 593-602. [doi: <https://doi.org/10.1016/j.bios.2017.08.032>]
- Quartz Crystal Microbalance in Cell Biology Studies. Xi J\*, Chen JY, Garcia MP & Penn LS (2013) *J Biochip Tissue Chip* S5: 001. [doi:10.4172/2153-0777.S5-001]
- Effects of the expression level of epidermal growth factor receptor on the ligand-induced restructuring of focal adhesions: a QCM-D study. Garcia MP, Shahid A, Chen JY & Xi J\*. (2012) *Analytical and Bioanalytical Chemistry* 405, 1153-1158. [[10.1007/s00216-012-6558-6](https://doi.org/10.1007/s00216-012-6558-6)]
- Evaluating inhibition of the EGF-induced response of mutant MCF10A cells with an acoustic sensor. Garcia MP, Shahid A, Chen JY & Xi J\*. (2012) *Biosensors* 2(4), 448-464. [DOI: [doi:10.3390/bios2040448](https://doi.org/10.3390/bios2040448)]
- A mammalian cell-based nanomechanical biosensor. Han M, Li M, Du W, Ji H & Xi J\*. (2012) *Journal of Nanomedicine & Biotherapeutic Discovery* [DOI: [10.4172/2155-983X.1000106](https://doi.org/10.4172/2155-983X.1000106)]
- Dissipation monitoring for assessing EGF-induced changes of cell adhesion. Chen JY, Shahid A, Garcia MP, Penn LS & Xi J\*. (2012) *Biosensors and Bioelectronics* 38(1), 375-381. [DOI: [10.1016/j.bios.2012.06.018](https://doi.org/10.1016/j.bios.2012.06.018)]
- Characterization of mechanical behavior of an epithelial monolayer in response to epidermal growth factor stimulation. Yang R, Chen JY, Xi N, Lai KWC, Qu C, Fung CKM, Penn LS & Xi J\*. (2012) *Experimental Cell Research* 318(5), 521-526. [DOI: [10.1016/j.yexcr.2011.12.003](https://doi.org/10.1016/j.yexcr.2011.12.003)]

- Real-time and label-free detection of cellular response to signaling mediated by distinct subclasses of epidermal growth factor receptors. Chen JY, Li M, Penn LS & **Xi J\***. (2011) *Analytical Chemistry* 83, 3141-3146. [DOI: [10.1021/ac200160u](https://doi.org/10.1021/ac200160u)]
- Real-time detection of the morphological change in cellulose by a nanomechanical sensor. Zhao L, Bulhassan A, Yang G, Ji H & **Xi J\***. (2010) *Biotechnology and Bioengineering* 107, 190-194. [DOI: [10.1002/bit.22754](https://doi.org/10.1002/bit.22754)]
- Interaction between the T4 helicase loading protein (gp59) and the DNA polymerase (gp43): Unlocking of the gp59-gp43-DNA complex to initiate assembly of a fully functional replisome. **Xi J**, Zhang Z, Zhuang Z, Yang J, Spiering MM, Hammes GG & Benkovic SJ\*. (2005) *Biochemistry* 44, 7747-56. [DOI: [10.1021/bi047296w](https://doi.org/10.1021/bi047296w)]
- Interaction between the T4 helicase-loading protein (gp59) and the DNA polymerase (gp43): a locking mechanism to delay replication during replisome assembly. **Xi J**, Zhuang Z, Zhang Z, Selzer T, Spiering, MM, Hammes GG & Benkovic SJ\*. (2005) *Biochemistry* 44, 2305-2318. [DOI: [10.1021/bi0479508](https://doi.org/10.1021/bi0479508)]
- The oligomeric T4 primase is the functional form during replication. Yang J, **Xi J**, Zhuang Z & Benkovic SJ\*. (2005) *J Biol Chem.* 280, 25416-25423. [DOI: [10.1074/jbc.M501847200](https://doi.org/10.1074/jbc.M501847200)]
- Assembly of the bacteriophage T4 primosome: single-molecule and ensemble studies. Zhang Z, Spiering MM, Trakselis MA, Ishmael FT, **Xi J**, Benkovic SJ\* & Hammes GG. (2005) *Proc Natl Acad Sci U S A.* 102:3254-3259. [DOI: [10.1073/pnas.0500327102](https://doi.org/10.1073/pnas.0500327102)]
- Thiamin biosynthesis in *Escherichia coli*: identification of a ThiF-ThiS thiocarboxylate protein-protein conjugate as the intermediate to thiazole formation. **Xi J**, Ge Y, Maclafferty F & Begley TP\*. (2001) *Proc Natl Acad Sci U S A.* 98:8513-8. [DOI: [10.1073/pnas.141226698](https://doi.org/10.1073/pnas.141226698)]
- Solution structure of ThiS and implications for the evolutionary roots of ubiquitin. Wang C, **Xi J**, Begley TP & Nicholson LK\*. (2001) *Nat Struct Biol.* 8:47-51. [DOI: [10.1038/83041](https://doi.org/10.1038/83041)]
- The enzymology of sulfur activation during thiamin and biotin biosynthesis. Begley TP\*, **Xi J**, Kinsland C, Taylor S & Maclafferty F. (1999) *Curr Opin Chem Biol.* 3:623-9. [DOI: [10.1016/S1367-5931\(99\)00018-6](https://doi.org/10.1016/S1367-5931(99)00018-6)]
- Thiamin biosynthesis in prokaryotes. Begley TP\*, Downs DM, Ealick SE, McLafferty FW, Van Loon AP, Taylor S, Campobasso N, Chiu HJ, Kinsland C, Reddick JJ & **Xi J**. (1999) *Arch Microbiol.* Apr;171(5):293-300. [DOI: [10.1007/s002030050713](https://doi.org/10.1007/s002030050713)]

### **Peer Reviewed Conference Proceeding**

- Nanomechanical Approach for In-Vitro Examination of Cell-Implant Interaction. Chen JY, Penn LS, **Xi N** & **Xi J\***. 2016 *IEEE 10th International Conference on Nano/Molecular Medicine and Engineering, Macau, China, October 30 – November 2, 2016.*

- Kinetics of enzymatic hydrolysis revealed by video rate AFM single molecule analysis. Song B, Xi N, Sun Z, Yang R, Chen L, Zhou Z, Du W & **Xi J**. 2015 *IEEE 15th International Conference on Nanotechnology (IEEE-NANO), Rome, Italy 27-30 July 2015*. [DOI: [10.1109/NANO.2015.7388868](https://doi.org/10.1109/NANO.2015.7388868)].
- Comparative studies of atomic force microscopy (AFM) and quartz crystal microbalance with dissipation (QCM-D) for real-time identification of signaling pathway. Yang R, Xi N\*, Fung CKM, Qu C & **Xi J**. (2010) *Nanotechnology (IEEE-NANO)* 1016 – 1020. [DOI: [10.1109/nano.2010.5697857](https://doi.org/10.1109/nano.2010.5697857)]

### ***Invited Book Chapters***

- Use of the Quartz Crystal Microbalance with Dissipation Monitoring for Pharmacological Evaluation of Cell Signaling Pathways Mediated by Epidermal Growth Factor Receptors. Chen JY, Garcia MP, Penn LS and **Xi J** (2015) In *Label-Free Biosensor Methods in Drug Discovery* (Fang, Y., ed.). pp. 253-268, Springer New York, New York, NY. [DOI: [10.1007/978-1-4939-2617-6\\_14](https://doi.org/10.1007/978-1-4939-2617-6_14)]
- Developing a Dynamics Model for Epidermal Growth Factor (EGF)-Induced Cellular Signaling Events. Xi N\*, Yang R, Song B, Lai KWC, Chen H, Chen JY, Penn LS, **Xi J** (2013) in *Modeling and Control for Micro/Nano Devices and Systems*. Xi N, Zhang M, Li G, Eds. CRC Press: 2013; pp 69-86. [DOI: [10.1201/b16071-6](https://doi.org/10.1201/b16071-6)].
- Dynamic mechanical response of epithelial cells to epidermal growth factor. **Xi J\***, Penn LS, Xi N, Chen JC & Yang R. (2012) in *Viscoelasticity - from theory to biological applications*. Juan de Vicente, Ed., InTech Publisher, Rijeka, Croatia. [DOI: [10.5772/49977](https://doi.org/10.5772/49977)].
- Probing the interaction between cellulose and cellulase with a nanomechanical sensor. **Xi J\***, Du W & Zhong L. (2012) in *Cellulose I/Book I*, Theo G.M. van de Ven & John F Kadla, Ed., InTech Publisher, Rijeka, Croatia. [DOI: [10.5772/50285](https://doi.org/10.5772/50285)].

### ***Patents***

- Cell culture article and methods thereof. Fang Y, Gagnon P Jr., Goodrich T, Lahiri J, Peanasky J, Wang H & **Xi J**. (2011) *US patent 7923241*, 4-12-2011.
- Chemiluminescent energy transfer conjugates and their uses in labels in binding assays. Jiang Q, **Xi J**, Natrajan A, Sharpe D, Baumann M, Hilfiker R, Schmidt E, Senn P, Thommen F, Waldner A, Alder A & Law SJ. (2009) *US patent 06165800*, 12-26-2000.
- Long emission wavelength chemiluminescent compounds and their use in tests assay. Law SJ, Jiang Q, Fischer W, Unger JT, Krodel EK & **Xi J**. (1999) *US patent 05879894*, 03-09-1999.

### ***Patent Applications***

- Surfaces and methods for biosensor cellular assays. Fang Y, Ferrie A, Tran E & **Xi J.** (2012) US20120061258
- Cell culture article especially for cell culture surface modified biosensors. Fang Y, Gagnon P, Goodrich T Jr., Lahiri J, Peanasky J, Wang H & **Xi J.** (2009) *PCT Int. Appl.*, WO 2009048567 A1 20090416.
- Biosensor analysis of a live cell functional response to antibodies. Fang Y, Tran E & **Xi J.** (2009) *PCT Int. Appl.*, WO 2009029187 A1 20090305.
- Surfaces and methods for biosensor cellular assays for measuring ligand-induced cell activity. Fang Y, Ferrie A, Tran E & **Xi J.** (2009) *PCT Int. Appl.* WO 2008106048 A1 20080904.

***Meeting Abstracts (presenter underlined)***

- Dissection of the Multiplicity of the GPCR Mediated Signaling. **Chen JY**, Pan Y, Penn LS, Xi J\*. (2018 *The 62nd Biophysical Society Annual Meeting, San Francisco, CA, February 17-21, 2018.*
- A novel approach for characterizing the cell-implant adhesion. **Chen JY**, Pan, Y, Penn LS, Xi N & Xi J\*. *57th ASCB National Meeting, Philadelphia, PA, United States, December 2-6, 2017.*
- Assessing G-protein receptor induced cell signaling with dissipation monitoring of the QCM-D. Pan Y, Chen JY, Penn LS & **Xi J\***. *2017 American Chemical Society Middle Atlantic Regional Meeting, Hershey, PA, June 3-5, 2017.*
- Surface analysis of fibronectin-coated QCM-D sensors by atomic force microscopy. Collins TJ & **Xi J\***. *2017 American Chemical Society Middle Atlantic Regional Meeting, Hershey, PA, June 3-5, 2017.*
- Assessing Cell-substrate Interaction with Dissipation Monitoring Function of the QCM-D. Chen JY, Penn LS, Xi N & **Xi J\***. *The 61st Biophysical Society Annual Meeting, New Orleans, LA, February 11-16, 2017.*
- Nanomechanical Approach for In-Vitro Examination of Cell-Implant Interaction. Chen JY, Penn LS, Xi N & **Xi J\***. *2016 IEEE 10th International Conference on Nano/Molecular Medicine and Engineering, Macau, China, October 30 – November 2, 2016.*
- Dissipation Monitoring of the QCM-D to Study Ligand-induced Cell Signaling. Chen JY, Penn LS & **Xi J\***. *252nd ACS National Meeting. Philadelphia, PA, August 21-25, 2016.*
- Assessing Ligand-induced GPCR Cell Signaling with Dissipation Monitoring of the QCM-D. Chen JY, Penn LS & **Xi J\***. *44th ACS Mid-Atlantic Regional Meeting. Riverdale, NY, June 9-12, 2016.*

- Study of ligand-induced cell signaling through the use of dissipation monitoring of the QCM-D. Chen JY, Garcia MP, Penn LS & **Xi J\***. *The 250th ACS National Meeting, Boston, MA, August 16-20, 2015.*
- Use microcantilever technique and AFM surface imaging to examine the time-dependent decrystallization of cellulose by cellulase. Du W & **Xi J\***. *The 250th ACS National Meeting, Boston, MA, August 16-20, 2015.*
- Acoustic sensing in real-time cell analysis. Chen JY, Garcia MP, Penn LS, Xi N, Yang R & **Xi J\***. *The 248th ACS National Meeting, San Francisco, CA, August 10-14, 2014.*
- Use Nanomechanical Sensor to Detect Cellulase Activities Including Enzymatic Decrystallization. Du W, Zhao L, Nguyen C, & **Xi J\***. *The Biophysical Society 57th Annual Meeting, Philadelphia, PA, United States, February 2 - 6, 2013.*
- Non-Invasive Real-Time Study of Cell Adhesion using Dissipation Monitoring of the QCM-D. Chen JY, Garcia MP, Penn LS & **Xi J\***. *The Biophysical Society 57th Annual Meeting, Philadelphia, PA, United States, February 2 - 6, 2013.*
- Real-Time, Label-Free Sensing of Epidermal Growth Factor-Induced Changes of Cell Adhesion. Chen JY, Garcia MP, Yang R, Shahid A, Xi N & **Xi J\***. *The Biophysical Society 57th Annual Meeting, Philadelphia, PA, United States, February 2 - 6, 2013.*
- Using nano mechanical approach to study enzyme catalysis. Du W, Zhao L, Nguyen C, Zhao K & **Xi J\***. *244th ACS National Meeting, Philadelphia, PA, United States, August 19-23, 2012.* BIOL-144.
- Dissipation monitoring for assessing changes of cell adhesion. Chen JY, Garcia MP, Penn LS & **Xi J\***. *244th ACS National Meeting, Philadelphia, PA, United States, August 19-23, 2012.* ANYL-046.
- Role of epigallocatechin-3-gallate as an anticancer agent in A431 cells. Garcia MP, Fagnani DE, Penn LS & **Xi J\***. *244th ACS National Meeting, Philadelphia, PA, United States, August 19-23, 2012.* MEDI.
- Investigating structural changes to green tea extract (EGCG) by monitoring the effect on cells using QCM-D. Fagnani DE, Garcia MP, Chen JY, Penn LS & **Xi J\***. *244th ACS National Meeting, Philadelphia, PA, United States, August 19-23, 2012.* CHED-169.
- Real-time sensing of the restructuring of cell adhesion. Chen JY, Shahid A, Garcia MP, Penn LS & **Xi J\***. *Gordon Research Conference: Bioanalytical Sensors, Salve Regina University, Newport, RI, United States, June 17-20, 2012.*
- Assessing changes of cell adhesion using dissipation monitoring. Chen JY, Shahid A, Garcia MP, Penn LS & **Xi J\***. *43rd Middle Atlantic Regional Meeting of the American Chemical Society, Baltimore, MD, United States, May 31-June 2, 2012.* MARM-80.
- Mechanistic insight into cellulase-cellulose interaction. **Xi J\***, Greer S, Du W, Quejada, JR, Nguyen C, Zhao L & Bulhassan A. *243rd ACS National Meeting & Exposition, San Diego, CA, United States, March 25-March 29, 2012.* BIOT-213.

- Real-time measurement of cell signaling: A quartz crystal microbalance with dissipation monitoring (QCM-D) study on MCF-10A cells. Garcia MP, Chen J, Shahid A, Penn LS, Reginato M & Xi J\*. *43rd Middle Atlantic Regional Meeting of the American Chemical Society, Baltimore, MD, United States, May 31-June 2, 2012*. MARM-28.
- Using nano mechanical approach to study enzyme catalysis. Du W, Zhao L, Nguyen C, Zhao K & Xi J\*. *43rd Middle Atlantic Regional Meeting of the American Chemical Society, Baltimore, MD, United States, May 31-June 2, 2012*. MARM-315.
- Cytochrome c unfolding in the presence of cardiolipin bound phospholipid vesicles. Greer S, Xi J\*, Schweitzer-Stenner R & Soffer J. *42nd Middle Atlantic Regional Meeting of the American Chemical Society, College Park, MD, United States, May 21-24, 2012*. MARM-383.
- Comparative characterization of viscoelastic properties of human epidermoid cells after epidermal growth factor stimulation by atomic force microscopy and quartz crystal microbalance with dissipation. Yang R, Xi N, Lai K, Qu C, Fung CKM, Penn LS & Xi J\*. *QCM-D World Conference, Nov 16, 2011*.
- Investigation of the enzymatic decrystallization activity of cellulase. Nguyen C, Bulhassan A, Zhao L & Xi J\*. *Gordon Research Conference: Cellulosomes, Cellulases & Other Carbohydrate Modifying Enzymes, Stonehill College, Easton, MA, United States, July 24-29, 2011*.
- Real-time and label-free characterization of cytoskeleton remodeling in response to signaling mediated by epidermal growth factor receptors. Chen JC, Penn LS & Xi J\*. *Frontiers in Cell Migration & Mechanotransduction, Bethesda, MD, United States, May 24-26, 2011*. Adhesion & Cytoskeleton Section.
- Assessing the rapid responses of high-affinity epidermal growth factor receptor in A431 cells. Chen JC, Li M, Penn LS & Xi J\*. *50th ASCB National Meeting, Philadelphia, PA, United States, December 11-15, 2010*. New and Emerging Technologies for Cell Biology.
- Comparative studies of atomic force microscopy (AFM) and quartz crystal microbalance with dissipation (QCM-D) for real-time identification of signaling pathway. Yang R, Xi N\*, Fung CKM, Qu C & Xi J, *IEEE Conference on Nanotechnology, 10th, Ilsan, Republic of Korea, Aug. 17-20, 2010*. P997-1001.
- Quartz crystal microbalance with dissipation for real-time characterization of ligand-induced cellular response. Li M, Garcia MP & Xi J\*. *240th ACS National Meeting, Boston, MA, United States, August 22-26, 2010*. ANYL-300.
- Real-time measurement of cell signaling: A quartz crystal microbalance with dissipation (QCM-D) study. Garcia MP, Li M, Chen JC & Xi J\*. *240th ACS National Meeting, Boston, MA, United States, August 22-26, 2010*. ANYL-162.
- Real-time characterization of cell signaling on a quartz crystal microbalance with dissipation (QCM-D). Chen J, Li M & Xi J\*. *QCM-D World Conference, Nov 5, 2009*.



- Cytochrome c: A protein folding kinetics experiment. Greer SM, Xi J\*, Schweitzer-Stenner R & Hagarman A. *238th ACS National Meeting, Washington, DC, United States, August 16-20, 2009*. CHED-152.
- Real-time characterization of cell signaling events by quartz crystal microbalance with dissipation (QCM-D). Xi J\* & Li M. *238th ACS National Meeting, Washington, DC, United States, August 16-20, 2009*. ANYL-065.
- Detecting changes of the cellulose structure in response to salt and enzyme treatment with the microcantilever technique. Zhao L, Yang G & Xi J\*. *Gordon Research Conference: Cellulosomes, Cellulases & Other Carbohydrate Modifying Enzymes, Proctor Academy, Andover, NH, United States, July 26-31, 2009*.
- Exploring the dynamic actions of cellulolytic enzymes in a heterogeneous system with micro-cantilever technology. Zhao L, Yang G & Xi J\*. *The Biophysical Society 53rd Annual Meeting, Boston, MA, United States, February 28 - March 4, 2009*. Biotechnology & Bioengineering-B455.
- A novel cellulase assay with AFM microcantilevers. Zhao L, Xi J & Yang G\*. *236th ACS National Meeting, Philadelphia, PA, United States, August 17-21, 2008*. BIOT-129.
- Studying the swelling and degradation of cellulose films with a micro-cantilever technique. Zhao L, Yang G & Xi J\*. *The Biophysical Society 52rd Annual Meeting, Long Beach, CA, United States, February 2 - 8, 2008*.
- Biosynthesis of the thiazole moiety of thiamin in Escherichia coli: Identification of a novel acyldisulfide linked protein-protein conjugate that is functionally analogous to the ubiquitin/E1 complex. Xi J, Ge Y, Maclafferty F & Begley TP\*. *222nd ACS National Meeting, Chicago, IL, United States, August 26-30, 2001*. BIOL-037.

### ***Professional Societies***

- American Chemical Society
- American Nano Society
- Biophysical Society
- American Society for Cell Biology

### ***Service Activities***

- Professional activities:
  - Reviewer for Acta Biomaterialia, Applied Biochemistry and Biotechnology, Langmuir, Biointerfaces, Journal of Biotech Research, Biomedical Engineering Letters, Bioorganic & Medicinal Chemistry, Bioorganic & Medicinal Chemistry Letters, Biosensors and Bioelectronics, Biotechnology Journal, Electrochimica Acta, Journal of Nanomedicine & Biotherapeutic Discovery, Langmuir,

Pharmaceuticals, Physical Biology, Sensors & Actuators B Chemical, RSC  
Advances, Scientific Report

- Panel and ad hoc reviewer for the National Science Foundation
- Educational and outreach activity:
  - Recruited students from underrepresented groups for research
  - Served as a judge for University Research Day
  - Served on organizing committee for College Research Day for the College of Arts and Sciences
  - Chair the Maryanoff First-Year Undergraduate Summer Research Program at Drexel University
  - Served on Departmental graduate recruiting committee
  - Serve on Departmental undergraduate affair committee

### *Collaborators*

- Current collaborators:
  - Prof. Frank Ji, Department of Chemistry, Drexel University, Philadelphia, PA
  - Prof. Lynn S. Penn, Department of Chemistry, Drexel University, Philadelphia, PA
  - Prof. Reinhard Schweitzer-Stenner, Department of Chemistry, Drexel University, Philadelphia, PA
  - Prof. Linghao Zhong, Department of Chemistry, The Penn State University at Mont Alto, PA
  - Prof. Mauricio Reginato, Department of Biochemistry and Molecular Biology, Drexel University, Philadelphia, PA
  - Prof. David Wilson, Department of Molecular Biology and Genetics, Cornell University, Ithaca, NY
  - Prof. Ning Xi, Department of Electrical and Computer Engineering, University of Hong Kong, HK
  - Prof. Ruiguo Yang, Department of Mechanical and Materials Engineering, University of Nebraska-Lincoln, Lincoln, Nebraska 68588
- Past collaborators:
  - Prof. Gordon G. Hammes, Department of Biochemistry, Duke University Medical Center, Durham, NC
  - Prof. Linda K. Nicholson, Department of Molecular Biology and Genetics, Cornell University, Ithaca, NY
  - Dr. Ye Fang, Department of Biochemical Technologies, Corning Inc., Corning, NY
- Graduate and postdoctoral advisors:
  - PhD advisor: Prof. Tadhg P. Begley, Department of Chemistry and Chemical Biology, Cornell University, Ithaca, NY
  - Postdoctoral advisor: Prof. Stephen J. Benkovic, Department of Chemistry, Penn State University, University Park, PA

- Postdoctoral student / Visiting scholar advised:
  - Dr. Minghong Li
  - Dr. He Liu
  - Dr. Jennifer Chen
- Students advised:
  - Graduate students: Chi Nguyen, Marcela Garcia, Wenjian Du, and Jennifer Chen
  - Undergraduate students: Asad, Baig, Ahmed Bulhassan, Jennifer Chen, Tuck James Collins, Joshua Derrer, Danielle Fagnani, Erica Frankel, Marcela Garcia, Sylvester Greer, Jessica Heilman, Yuliya Karpovitch, Zhuoxi Ke, Ajit Kohli, Malena Marandola, Tracy Ng, Amy Nguyen, Hieu Nguyen, Yue Pan, Isabella Pincay, Jose Rafael Quejada, Ammar Shahid, Isabel Sierra, Stephanie Shore, Jackie Tang, Pardes Vahidi, Jacy Wang, Caraline Young, Kevin Zhao
  - Others: Eva-Iro Soultogianni, Hao Chau