

# Luo Mi

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## EDUCATION:

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June. 2014 – UCLA, Los Angeles, CA  
Postdoc Fellow under **Prof. James. C. Liao**  
Concentration in Metabolic Engineering and Synthetic Biology

Sept. 2008 – April.2014 University of Washington, Seattle, WA  
Ph.D. in Chemical Engineering under **Prof. Shaoyi Jiang**  
Concentration in Computation-Assisted Biomaterial and Small Molecule Design

June 2003 – June 2007 Fudan University, Shanghai, China  
B.A. in Biology

## AWARDS:

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**Inaugural Recipient of the Faculty Lecture Award**, Univ. of Washington 2013  
Annually awarded to single top Ph.D. student in UW Chemical Engineering Department in recognition of his/her academic accomplishments

## COMPUTER SKILLS:

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Fluent in data analysis and machine learning with **R** and **Python**, with working knowledge in **HTML5** and **CSS3**.

## PUBLICATIONS

(9 first/co-first author papers with 750 total citations as of 06/2017)

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J. Liao, **L. Mi**, S. Pontrelli & S. Luo, Fueling the future: microbial engineering for the production of sustainable biofuels, *Nature Reviews Microbiology* **14**, 288-304 (2016). ([Cover Article](#)) (Journal IF 23.6)

P. Lin\*, **L. Mi**\*, A. Morioka, K. Yoshino, S. Konishi, S. Xu, B. Papanek, L. Riley, A. Guss & J. Liao, Consolidated bioprocessing of cellulose to isobutanol using *Clostridium thermocellum*, *Metabolic Engineering*, **31**, 44(2015) \*equal contribution, same below (Journal IF 6.8)

P. Lin\*, **L. Mi**\* & J. Liao, High titer isobutanol production in *Clostridium thermocellum* via enzymatic and molecular diagnostic tools. (In preparation)

L. Soh, W. Mak, P. Lin, **L. Mi**, R. Damoiseaux, J. Siegel & J. Liao, Engineering a thermostable keto acid decarboxylase using directed evolution and computationally directed protein design, *ACS Synthetic Biology* **6**, 610-618 (2017). (Journal IF 6.0)

C.Wong, **L. Mi** & J. Liao, Microbial production of butanols, *Industrial Biotechnology: Products and Processes*, ISBN: 978-3-527-34181-8 (Book Chapter)

**L. Mi** & S. Jiang, Integrated antimicrobial and nonfouling properties of zwitterionic polymers and their derivatives, *Angewandte Chemie*, **53**, 1746 (2014) (Journal IF 11.3)

**L. Mi**, H. Xue, Y. Li & S. Jiang, A Thermoresponsive antimicrobial wound dressing hydrogel based on a cationic betaine ester, *Advanced Functional Materials*, **21**, 4028 (2011). (Journal IF 11.8)

**L. Mi**, A. White, Q. Shao, P. Setlow, Y. Li & Jiang, Chemical insights into dodecylamine spore lethal germination *RSC Chemical Science*, **5**, 3320 (2014) (Journal IF 9.8)

**L. Mi**, G. Licina & S. Jiang, Nonantibiotic-based *Pseudomonas aeruginosa* biofilm inhibition with osmoprotectant analogues, *ACS Sustainable Chemistry and Engineering*, **2**, 2448 (2014) (Highlighted by *ACS Chemical and Engineering News*) (Journal IF 4.6)

**L. Mi** and S. Jiang, Synchronizing nonfouling and antimicrobial properties in a zwitterionic hydrogel, *Biomaterials*, **33**, 8928 (2012) (Journal IF 8.6)

**L. Mi\***, M. Bernards\*, Q. Yu, G. Cheng & S. Jiang, Tunable and highly effective mixed charge polymer brushes to repel or release microorganisms and biomolecules, *Biomaterials*, **31**, 2919 (2010). (Journal IF 8.6)

**L. Mi\***, M. Giarmarco\*, Q. Shao & S. Jiang, Divalent cation-mediated polysaccharide interactions with zwitterionic surfaces, *Biomaterials*, **33**, 2001 (2012). (Journal IF 8.6)

**L. Mi**, G. Licina & S. Jiang, Concoction of an antispore cocktail, *ACS Sustainable Chemistry and Engineering*, **2**, 1734 (2014) (Journal IF 4.6)

Q. Shao, **L. Mi**, X. Han, T. Bai, S. Liu, Y. Li and S. Jiang, Differences in cationic and anionic charge densities dictate zwitterionic associations and stimuli responses, *Journal of Physical Chemistry B*, **118**, 6956 (2014)

C. J. Huang, **L. Mi**, and S. Jiang, Interactions of alginate-producing and-deficient *Pseudomonas aeruginosa* with zwitterionic polymers, *Biomaterials*, **33**, 3626 (2012)

Z. Cao, **L. Mi**, J. Mendiola, J.-R. Ella-Menye, L. Zhang, H. Xue, & S. Jiang, Reversibly switching the function of a surface between attacking and defending against bacteria, *Angew. Chem. Int. Ed.* **50**, 1 (2012)

G. Cheng, **L. Mi**, Z. Cao, H. Xue, Q. Yu, L. Carr & S. Jiang, Functionalizable and ultra-stable zwitterionic nanogels, *Langmuir*, **26**, 6883 (2010)

L. Zhang, J. Xu, **L. Mi**, H. Gong, S. Jiang & Q. Yu, Multifunctional magnetic-plasmonic nanoparticles for fast concentration and sensitive detection of bacteria using SERS, *Biosensors and Bioelectronics*, **31**, 130 (2012)

#### **PATENTS:**

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S. Jiang, H. Xue, Y. Li, **L. Mi** & G. Cheng, Integrated antimicrobial and low fouling materials (United States US20100904341)

**L. Mi** and J. Liao, Selective amino acid catabolism and metabolism (provisional patent filed by UCLA)

#### **CONFERENCE PRESENTATIONS:**

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**L. Mi** & S. Jiang Integrated antimicrobial and nonfouling properties of zwitterionic polymers and their derivatives. American Institute of Chemical Engineers (San Francisco, CA, 2013)

**L. Mi** & S. Jiang A thermo-responsive antimicrobial wound dressing hydrogel based on a cationic betaine ester. American Institute of Chemical Engineers (Pittsburgh, PA, 2012).

**L. Mi** & S. Jiang A nonfouling zwitterionic polymer with built-in antimicrobial functions. American Institute of Chemical Engineers (Pittsburgh, PA, 2012).

**L. Mi**, M. Bernards, G. Cheng, H. Xue and S. Jiang New surface strategies to resist, remove and recover bacteria. American Institute of Chemical Engineers (Nashville, TN, 2009)

**L. Mi**, M. Bernards, G. Cheng, H. Xue and S. Jiang New surface strategies to resist, remove and recover bacteria. Chemical and Biological Defense Science and Technology Conference (Dallas, TX, 2009) (Student Scholarship)

**TEACHING:**

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**Teaching Assistant, Thermodynamics,** Univ. of Washington Winter 2013

- Held recitation lectures and weekly office hours for the course
- Graded weekly homework

**Teaching Assistant, Thermodynamics,** Univ. of Washington Spring 2010

- Guest lectured three full class periods covering the first law of thermodynamics
- Held weekly office hours and graded homework

**Teaching Assistant, Thermodynamics,** Univ. of Washington Winter 2010

- Held recitation lectures and weekly office hours for the course
- Graded weekly homework and quizzes
- Maintained the course website

**REFERENCES:**

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Available upon request