

Bing Fu

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| CONTACT INFORMATION | 83 Tat Chee Ave., Kowloon Tong Kowloon, Hong Kong, China Website: https://www.bingfu-lab.org/ | bingfu@cityu.edu.hk +852 3442 2045 |
| EMPLOYMENT | City University of Hong Kong Assistant Professor, Biomedical Engineering, July 2023 - present | |
| PROFESSIONAL PREPARATION | Cornell University, Ithaca, U.S., June 2017 - June 2023 Postdoctoral Associate Advisor: Peng Chen Research: Live-cell fluorescence imaging University of Michigan, Ann Arbor, U.S. Ph.D. in Chemistry, May 2017 Advisor: Julie S. Biteen Dissertation: <i>Interactions between Fluorescent Molecules and Plasmonic Nanoparticles: A Super Resolution Study</i> Shandong University, Jinan, China B.A. in Chemistry, July 2012 | |
| HONORS AND AWARDS | Honorable mention, Graduate Women in Science National Fellowship Program, U.S., 2022 Karle symposium travel award, Department of Chemistry, University of Michigan, 2016 Rackham Graduate School Summer Awards, University of Michigan, 2016 Departmental fellowship, Department of Chemistry, University of Michigan, 2015-2016 Florence Fenwick Outstanding Graduate Student Instructor Award, Department of Chemistry, University of Michigan, 2015 Rackham Graduate Student Research Grant, 2014-2015 Outstanding Summer Camp Members, Peking University, 2011 Second Grade Scholarship for Excellent Students, Shandong University, 2009-2010 Outstanding Student for Academic Achievements, School of Chemistry and Chemical Engineering, Shandong University, 2010 | |
| PUBLICATIONS | † equal contribution, * corresponding author [1] Bing Fu [†] , Xianwen Mao [†] , Youngchan Park, Zhiheng Zhao, Tianlei Yan, Won Jung, Danny Duckworth, Wenjie Li, Brooke Pian, Farshid Salimijazi, Mokshin Suri, Tobias Hanrath, Buz Barstow, and Peng Chen*. Single-cell multimodal imaging uncovers energy conversion pathways in biohybrids. <i>Nature Chemistry</i> 15 , 1400–1407 (2023). [2] Bing Fu [†] , Kushal Sengupta [†] , Lauren A Genova [†] , Ace George Santiago, Won Jung, Lukasz Krzemiński, Udit Kumar Chakraborty, Wenyao Zhang, and Peng Chen*. Metal-induced sensor mobilization turns on affinity to activate regulator for metal detoxification in live bacteria. <i>Proceedings of the National Academy of Sciences</i> 117 (24), 13248–13255 (2020). [3] Feifan Wang and Bing Fu . 4 - Anion-exchange membranes for direct methanol alkaline fuel cells. In Kingshuk Dutta, editor, <i>Direct Methanol Fuel Cell Technology</i> , pages 71–106. Elsevier, (2020). [4] Lauren A Genova [†] , Melanie F Roberts [†] , Yu-Chern Wong, Christine E Harper, Ace George Santiago, Bing Fu , Abhishek Srivastava, Won Jung, Lucy M Wang, Lukasz Krzemiński, Xianwen Mao, Xuanhao Sun, Chung-Yuen Hui, Peng Chen*, and Christopher J Hernandez*. | |

Mechanical stress compromises multicomponent efflux complexes in bacteria. *Proceedings of the National Academy of Sciences* **116**(51), 25462–25467 (2019).

- [5] **Bing Fu**, Benjamin P Isaacoff, and Julie S Biteen*. Super-Resolving the Actual Position of Single Fluorescent Molecules Coupled to a Plasmonic Nanoantenna. *ACS Nano* **11**(9), 8978–8987 (2017).
- [6] **Bing Fu**, Jessica D Flynn, Benjamin P Isaacoff, David J Rowland, and Julie S Biteen*. Super-Resolving the Distance-Dependent Plasmon-Enhanced Fluorescence of Single Dye and Fluorescent Protein Molecules. *The Journal of Physical Chemistry C* **119**(33), 19350–19358 (2015).
- [7] Esther Wertz, Jessica D Flynn, Courtney N Talicska, **Bing Fu**, Benjamin P Isaacoff, and Julie S Biteen*. Plasmon-enhanced fluorescence permits super-resolution imaging in vitro and in cells. *Laser Science* page LTh3H.6 (2013).

PRESENTATIONS

“Seeing bacteria beyond diffraction limit: Application of single-molecule super-resolution imaging in studying molecular mechanisms in microbes”, Invited talk, SusTech, School of Environmental Science Engineering, Shenzhen, March. 2024

“Electron Transfer Mechanism at the Microbe-Semiconductor Interface with Single-cell Resolution”, Invited talk, The 2024 International Conference on Bacteria and Global Health, Shenzhen, Jan. 2024

“Single-molecule study of copper regulation two-component system CusS-CusR in *E. coli*”, Best Poster Award, Annual Academic Meeting of Chinese Society for Microbiology, Shanghai, China, Oct. 2023

“Dissecting the signal transduction dynamics for copper homeostasis in live *E. coli*”, Invited talk, American Chemical Society (ACS) National Meeting and Exposition, Chicago, IL, USA, Aug. 2022

“Proteins are smart: A single-molecule study of metal homeostasis signal transduction in *E. coli*”, Invited talk, University of Chicago Future Faculty Conference, Chicago, IL, USA, May 2022

“Proteins are smart - a single molecule study of CusRS system for efficient Cu homeostasis in *E. coli*”, Oral presentation, 5th Annual Cornell Biophysics Symposium, Ithaca, NY, USA, Nov. 2019

“Single Molecule super-resolution study of distance-dependent plasmonic fluorescence enhancement and emission mislocalization”, Oral presentation, 253rd American Chemical Society (ACS) National Meeting and Exposition, San Francisco, CA, USA, Apr. 2017

“Single-molecule super-resolution microscopy study of the distance-dependent interaction between a fluorescent molecule and a nano-antenna”, Oral presentation, 252nd American Chemical Society (ACS) National Meeting and Exposition, Philadelphia, PA, USA, Aug. 2016

“Study of the Distance-Dependent Interaction between Fluorescent Molecule and Nano-Antennas by Single-Molecule Super-Resolution Microscopy”, Poster presentation, Gordon Research Conference, South Hadley, MA, USA, June, 2016

“Single-molecule super-resolution microscopy study of the distance-dependent interaction between a fluorescent molecule and a nano-antenna”, Oral presentation, 47th ACS Central Regional Meeting, Covington, KY, USA, May 2016

“Super-Resolution Study of the Distance Dependence of Single-Molecule Plasmon-Enhanced Fluorescence”, Oral presentation, Materials Research Society (MRS) Spring Meeting and Exhibit, San Francisco, CA, USA, April 2015

“Distance-Dependent Plasmon-Induced Fluorescence Enhancement of Single Molecules on a Gold Nanoparticle Substrate”, Oral presentation, Victor C. Vaughan Symposium, Ann Arbor, MI,

USA, Aug. 2014

“Distance-Dependent Plasmon-Induced Fluorescence Enhancement of Single Molecules on a Gold Nanoparticle Substrate”, Poster presentation, Gordon Research Conference, South Hadley, MA, USA, June, 2014

TEACHING AND
MENTORING

Department of Chemistry, University of Michigan
Graduate Student Instructor

CHEM 125 - General Chemistry lab, Sept. 2012 - Dec. 2013

CHEM 130 - General Chemistry, June 2013 - Aug. 2013

CHEM 125 - General Chemistry lab, June 2014 - Aug. 2014

Graduate Student Administrator

CHEM 125 - General Chemistry lab, Sept. 2014 - Dec. 2015

Mentored 2 undergraduates, 6 graduate students, 3 postdocs

SERVICE AND
OUTREACH

Chemical & Biomedical Imaging, Early Career Advisory Board Member, 2023-present
BMEMat, Youth Editorial Board Member, 2023-present

Graduate Women in Science Membership, 2021-2022

Discussion leader, Responsible Conduct of Research Symposium, Cornell University, 2019

American Chemical Society Member, 2016-2017

Sponsored AAAS/Science Membership, nominated by Department Chair, 2015-2017

Poster judge at Vaughan Symposium, University of Michigan, 2014

Scientific Content Reviewer, reviewed more than 30 publications in journals including:

Nature Methods

ACS Photonics

ACS Sensors

ACS Nano

Journal of the American Chemistry Society

Nano Letters

Angewandte Chemie International Edition

Journal of Physical Chemistry Letters

Scientific Reports

ChemPhysChem