

Jin LU

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RESEARCH INTEREST

Electrochemistry, electrochemical imaging; Surface plasmon resonance; Single molecule & single cell imaging

EDUCATION

Ph.D. in Chemistry, Tsinghua University, Beijing, China 2007-2013
Arizona State University, Tempe, United States 2010-2012
Thesis: Plasmonic based electrochemical approach and its applications to bioanalysis.
Advisor: Dr. Jinghong Li and Dr. Nongjian Tao

B.S. in Chemistry, University of Science & Technology of China, Hefei, China 2002-2007

RESEARCH EXPERIENCES

Postdoctoral Research Associate

Department of Electrical & Systems Engineering, Washington University in St. Louis 2016-
Advisor: Dr. Matthew Lew

Postdoctoral Research Associate

Department of Chemistry, University of Washington 2014-2016
Advisor: Dr. Bo Zhang

- Single molecule fluorescence-enabled electrochemical microscopy

SELECTED AWARDS AND HONORS

Excellent Doctoral Dissertation of Tsinghua University 2013
Shimadzu Scholarship of Analysis Center, Tsinghua University 2011

CONFERENCE PRESENTATION

26th Chinese Chemical Society Congress, Tianjin, China. 2008
5th International Symposium on Bioanalysis, Biomedical Engineering and Nanotechnology,
Changsha, China. 2012

JOURNAL PUBLICATION

1. **Jin Lu**, Yunshan Fan, Marco D. Howard, Joshua C. Vaughan, Bo Zhang. Single-molecule electrochemistry on a porous silica-coated electrode. *J. Am. Chem. Soc.* **2017**, *139*, 2964-2971.
2. **Jin Lu**, Bo Zhang. Electrostatic ion enrichment in an ultrathin-layer cell with a critical dimension between 5 and 20 nm. *Anal. Chem.* **2017**, *89*, 2739-2746.

3. **Jin Lu**, Yunze Yang, Wei Wang, Jinghong Li, Nongjian Tao, Shaopeng Wang. Label-free imaging of histamine mediated G protein-coupled receptors activation in live cells. *Anal. Chem.* **2016**, *88*, 11498-11503.
4. **Jin Lu**, Jinghong Li. Label-free imaging of dynamic and transient calcium signaling in single cells, *Angew. Chem. Int. Ed.* **2015**, *54*, 13576-13580. (Back cover)
5. **Jin Lu**, Jinghong Li. Charge transfer kinetics from surface plasmon resonance voltammetry. *Anal. Chem.* **2014**, *86*, 3882-3886.
6. **Jin Lu**, Jinghong Li. Monitoring DNA conformation and charge regulations by plasmonic-based electrochemical impedance platform. *Electrochem. Commun.* **2014**, *45*, 5-8.
7. Hongbin Feng, **Jin Lu**, Jinghong Li, Francis Tsow, Erica Forzani, Nongjian Tao. Hybrid mechanoresponsive polymer wires under force activation. *Adv. Mater.* **2013**, *25*, 1729-1733. (Inside front cover)
8. Xin Zhao, Yang Liu, **Jin Lu**, Jianhua Zhou, Jinghong Li. Temperature-responsive polymer/carbon nanotube hybrids: Smart conductive nanocomposite films for modulating the bioelectrocatalysis of NADH. *Chem. Eur. J.* **2012**, *18*, 3687-3694.
9. Xiaonan Shan, Ismael Díez-Pérez, LuoJia Wang, Peter Wiktor, Ying Gu, Lihua Zhang, Wei Wang, **Jin Lu**, Shaopeng Wang, Qihuang Gong, Jinghong Li, Nongjian Tao. Imaging the electrocatalytic activity of single nanoparticles. *Nat. Nanotechnol.* **2012**, *7*, 668-672. (Cover)
10. Qian Zhang, Shuyao Wu, Ling Zhang, **Jin Lu**, Francis Verproot, Yang Liu, Zhiqiang Xing, Jinghong Li, Xi-Ming Song. Fabrication of polymeric ionic liquid/graphene nanocomposite for glucose oxidase immobilization and direct electrochemistry. *Biosen. Bioelectron.* **2011**, *26*, 2632-2637.
11. **Jin Lu**, Jianhua Zhou, Jinghong Li. Tuned chromic process for polydiacetylenes vesicles: the influence of polymer matrices. *Soft Matter* **2011**, *7*, 6529-6531.
12. **Jin Lu**, Wei Wang, Shaopeng Wang, Xiaonan Shan, Jinghong Li, Nongjian Tao. Plasmonic-based electrochemical impedance spectroscopy: Application to molecular binding. *Anal. Chem.* **2011**, *84*, 327-333.
13. Shaopeng Wang, Xiaonan Shan, Urmez Patel, Xinpeng Huang, **Jin Lu**, Jinghong Li, Nongjian Tao. Label-free imaging, detection, and mass measurement of single viruses by surface plasmon resonance. *Proc. Natl. Acad. Sci. USA* **2010**, *107*, 16028-16032.
14. Yueming Li, Xiaojun Lv, **Jin Lu**, Jinghong Li. Preparation of SnO₂-nanocrystal/graphene-nanosheets composites and their lithium storage ability. *J. Phys. Chem. C* **2010**, *114*, 21770-21774.
15. Ying Wang, **Jin Lu**, Longhua Tang, Haixin Chang, Jinghong Li. Graphene oxide amplified electrogenerated chemiluminescence of quantum dots and its selective sensing for glutathione from thiol-containing compounds. *Anal. Chem.* **2009**, *81*, 9710-9715.
16. Ying Wang, Yueming Li, Longhua Tang, **Jin Lu**, Jinghong Li. Application of graphene-modified electrode for selective detection of dopamine. *Electrochem. Commun.* **2009**, *11*, 889-892.
17. Longhua Tang, Ying Wang, Yueming Li, Hongbin Feng, **Jin Lu**, Jinghong Li. Preparation, structure, and electrochemical properties of reduced graphene sheet films. *Adv. Funct. Mater.* **2009**, *19*, 2782-2789.

18. Erica S Forzani, Donglai Lu, Matthew J Leighton, Alvaro Diaz Aguilar, Francis Tsow, Rodrigo A Iglesias, Qian Zhang, **Jin Lu**, Jinghong Li, Nongjian Tao. A hybrid electrochemical-colorimetric sensing platform for detection of explosives. *J. Am. Chem. Soc.* **2009**, *131*, 1390-1391.