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EDUCATION

- 2001.09-2006.07 Ph. D. in Applied Chemistry, Dalian University of Technology (DUT), China.
Supervisor: Prof. Xuhong Qian (Member of CAE)
- 1997.09-2001.07 B. S. in Applied Chemistry, Dalian University of Technology (DUT), China

PROFESSIONAL EXPERIENCE

- 2011.08- Present Professor, Dalian Institute of Chemical Physics, CAS
- 2008.10-2011.09 Herchel Smith Postdoctoral Research Fellow, University of Cambridge, UK.
Supervisor: Professor David R. Spring
- 2006.08-2008.09 Postdoc, Ewha Womans University, Korea.
Supervisor: Prof. Juyoung Yoon

CURRENT RESEARCH

- New Fluorophore Design and Structure-Fluorescence Relationship.
- Protein Labeling and Sensing
- Fluorescent Probes.
- Super-Resolution Fluorescent Imaging.

HONORS/AWARDS

- 2018 MSMLG Czarnik Emerging Investigator Awards 2017 & 2018
- 2018 National High-level personnel of special support program (Ten Thousand Talents Plan)
- 2017 Dalian leading talent plan (City of Dalian, ¥4M)
- 2017 Youth Science and Technology Innovation Leader (Ministry of Science and Technology of China)
- 2017 Most Cited Chinese Researchers (Elsevier)
- 2016 Most Cited Chinese Researchers (Elsevier)
- 2015 The Second Batch of "One Million Project" "Hundred" Level (Liaoning Province, ¥1M)
- 2014 NSFC Award for Excellent Young Scholar (¥1M)
- 2014 Dalian City Award for Distinguished Young Scholar Cultivation (¥1M)
- 2012 100 Talents Program of CAS (¥2.6M)

CURRENT SCIENTIFIC ACTIVITIES

- 2017-Present Early Career Board; Coordination Chemistry Reviews

- 2017-Present Associate editor; Chinese Chemical Letters (CCS)
- 2015-Present Member of the Youth League of CAS
- 2014-Present Editorial Advisory Board; Scientific Reports (Nature Publishing Group)
- 2012-Presnet Member of the Young Academic Committee of China Association for Instrumental Analysis

PUBLICATIONS (Citation: 6500; H-index: 33)

60. Qi, Q.; Li, C.; Liu, X.; Jiang, S.; Xu, Z.; Lee, R.; Zhu, M.; Xu, B.* and Tian, W. "Solid-State Photoinduced Luminescence Switch for Advanced Anticounterfeiting and Super-Resolution Imaging Applications", *J. Am. Chem. Soc.*, **2017**, *139*, 16036-16039.
59. Chi, W.; Yin, W.; Qi, Q.; Qiao, Q.; Lin, Y.; Zhu, Z.; Vijayan, S.; Hashimoto, M.; Udayakumar, G.; Xu, Z. * and Liu, X.* "Ground-State Conformers Enable Bright Single-Fluorophore Ratiometric Thermometers with Positive Temperature Coefficients", *Mater. Chem. Front.*, **2017**, DOI: 10.1039/C7QM00345E.
58. Qiao, Q.; Liu, W.; Chen, J.; Zhou, W.; Yin, W.; Miao, L. ;* Cui, J.* and Xu, Z.* "A naphthalimide-derived fluorogenic probe for SNAP-tag with a fast record labeling rate", *Dyes Pigm.*, **2017**, *147*, 327-333.
57. Leng, S.; Qiao, Q.; Gao, Y.; Miao, L.* , Deng, W.* and Xu, Z.* "SNAP-tag fluorogenic probes for wash free protein labeling", *Chin. Chem. Lett.*, **2017**, doi.org/10.1016/j.ccllet.2017.03.034.
56. Liu, X.* , Cole, J.M.* and Xu, Z.* "Substantial Intramolecular Charge Transfer Induces Long Emission Wavelengths and Mega Stokes Shifts in 6-Aminocoumarins", *J. Phys. Chem. C*, **2017**, *121*, 13274-13279.
55. Leng, S.; Qiao, Q.; Miao, L.* , Deng, W.* , Cui, J.* and Xu, Z.* " A wash-free SNAP-tag fluorogenic probe based on the additive effects of quencher release and environmental sensitivity ", *Chem. Commun.*, **2017**, *53*, 6448-6451
54. Feng, W.; Qiao, Q.; Leng, S.; Miao, L.; Yin, W.; Wang, L.* and Xu, Z.* "A 1,8-naphthalimide-derived turn-on fluorescent probe for imaging lysosomal nitric oxide in living cells", *Chin. Chem. Lett.*, **2016**, *27*, 1554-1558.
53. Liu, Y.; Qiao, Q.; Zhao, M.; Yin, W.; Miao, L.; Wang, L. and Xu, Z. * "Cd²⁺-triggered amide tautomerization produces a highly Cd²⁺-selective fluorescent sensor across a wide pH range", *Dyes Pigm.*, **2016**, *133*, 339-344.
52. Liu, X.* , Qiao, Q.; Tian, W.; Liu, W.; Chen, J.; Lang, M.J. and Xu, Z.* "Aziridinyl fluorophores demondtrate bright fluorescence and superior photostability by effectively inhibiting twisted intramolecular chage transfer", *J. Am. Chem. Soc.*, **2016**, *138*, 6960-6963.
51. Dai, L.; Wu, D.; Qiao, Q.; Yin, W.; Yin, J.* and Xu, Z.* "A naphthalimide-base fluorescent sensor for halogenated solvents", *Chem. Commun.*, **2016**, *52*, 2095-2098.
50. Zhao, M.; Li, H.; Li, H.; Qiao, Q.; Cao, C. and Xu, Z.* "A turn-on fluorescent probe for hydrogen sulfide and its application in living cells", *RSC Adv.*, **2015**, *5*, 86355-86358.
49. Lee, M.; Jo, S.; Lee, D.; Xu, Z.*; Yoon, J.* "A New Naphthalimide Derivative as a Selective Fluorescent and Colorimetric Sensor for Fluoride, Cyanide and CO₂", *Dye Pig.*, **2015**, *12*, 288-292.
48. Zou, X.; Lee, S.; Xu, Z.*; Yoon, J.* "Recent Progress on the Development of Chemosensors for gases", *Chem. Rev.*, **2015**, *115*(15), 7944-8000.
47. Mao, D.; Liu, X.; Qiao, Q.; Yin, W.; Zhao, M.; Cole, J. M.*; Cui, J.*; Xu, Z.* "Coumarin 545: an emission reference dye with a record-low temperature coefficient for ratiometric fluorescence based temperature measurements", *Analyst*, **2015**, *14*, 1008-1013.
46. Qian, X.*; Xu, Z.* "Fluorescence Imaging of Metal Ions Implicated in Diseases", *Chem. Soc. Rev.*, **2015**, *44*, 4487-4493.
45. Cao, C.; Liu, X.*; Qiao, Q.; Zhao, M.; Yin, W.; Mao, D.; Zhang, H*.; Xu, Z.* "A twisted-intramolecular-charge-transfer (TICT) based ratiometric fluorescent thermometer with a mega-Stokes shift and a positive temperature coefficient", *Chem. Commun.*, **2014**, *50*, 15811-15814.
44. Zou, C.; Qiao, Q.; Zhao, M.; Mao, D.; Wang, D.; Feng, L.; Cui, J.*; Xu, Z.* "A ratiometric fluorescent probe for fluoride ion based on naphthoimidazolium receptor", *RSC Adv.*, **2014**, *4*, 43746-43751.
43. Liu, X.; Mao, D.; Jacqueline, C.*; Xu, Z.* "Temperature Insensitive Fluorescence Intensity in a Coumarin Monomer-Aggregate Coupled System", *Chem. Commun.*, **2014**, *50*, 9329-9332.
42. Liu, H.; Zhao, M.; Qiao, Q.; Lang, H.; Xu, J.*; Xu, Z.* "Fluorescein-derived fluorescent probe for cellular hydrogen sulfide imaging", *Chin. Chem. Lett.*, **2014**, *25*, 1060-1064.

41. Liu, T.; Liu, X.; Spring, D. R.; Qian, X.; Cui, J.;* Xu, Z.* "Quantitatively Mapping Cellular Viscosity with Detailed Organelle Information via a Designed PET Fluorescent Probe", *Sci. Rep.*, **2014**, *4*, 5418.
40. Qiao, Q.; Zhao, M.; Lang, H.; Mao, D.; Cui, J.;* Xu, Z.* "A turn-on fluorescent probe for imaging lysosomal hydrogen sulfide in living cells", *RSC Adv.*, **2014**, *4*, 25790-25794.
39. Liu, X.; Xu, Z.;* Cole, J. M.* "Molecular Design of UV-vis Absorption and Emission Properties in Organic Fluorophores: towards Larger Bathochromic Shifts, Enhanced Molar Extinction Coefficients and Greater Stokes Shifts", *J. Phys. Chem. C* **2013**, *117*, 16584-16595.
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37. Zheng, Y.; Zhao, M.; Qiao, Q.; Liu, H.; Lang, H.; Xu, Z.* "A near-infrared fluorescent probe for hydrogen sulfide in living cells", *Dyes Pigm.*, **2013**, *98*(3), 367-371.
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34. Liu, T.; Xu, Z.*; Spring, D. R.; Cui, J. "A Lysosome-Targetable Fluorescent Probe for Imaging Hydrogen Sulfide in Living Cells", *Org. Lett.*, **2013**, *15*, 2310-2313.
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32. Xu, Z.*; Liu, X.; Pan, J.; Spring, D. R.* "Coumarin-Derived Transformable Fluorescent Sensor for Zn²⁺", *Chem. Commun.*, **2012**, *48*, 4764-4766.
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21. Xu, Z.; Yoon, J.; Spring, D. R. "Fluorescent Chemosensors for Zinc Ion", *Chem. Soc. Rev.* **2010**, *39*, 1996-2006.
20. Xu, Z.; Yoon, J.; Spring, D. R. "A Selective and Ratiometric Cu²⁺ Fluorescent Probe Based on Naphthalimide Excimer", *Chem. Commun.*, **2010**, *46*, 2563-2565.
19. Xu, Z.; Yoon, J.; Spring, D. R. "Induction-Driven Stabilization of the Anion-π Interaction in Electron-Rich Aromatics as the Key to Fluoride Inclusion in Imidazolium-Cage Receptors", *Chem. Eur. J.*, **2011**, *17*, 1163-1170.

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16. Xu, Z.; Baek, K.; Kim, H.; Cui, J.; Qian, X.; Spring, D. R.; Shin, I.; Yoon, J. "Zn²⁺-Triggered Amide Tautomerization Produces a Highly Zn²⁺-Selective, Cell-Permeable and Ratiometric Fluorescent Sensor", *J. Am. Chem. Soc.*, **2010**, *132*, 601-610.
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2. Xu, Z.; Xiao, Y.; Qian, X.; Cui, J.; and Cui, D. "Ratiometric and Selective Fluorescent Sensor for Cu(II) Based on Internal Charge Transfer (ICT)", *Org. Lett.* **2005**, *7*, 889-892.
1. Jin, S.; Xu, Z.; Chen, J.; Liang, X.; Wu, Y.; and Qian, X. "Determination of Organophosphate and Carbamate Pesticides Based on Enzyme Inhibition Using a pH Sensitive Fluorescence Probe", *Analytica Chimica Acta* **2004**, *523*, 117-123.