

## Yang ZENG

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### *Education*

<b>M.Sc., Chemistry</b> Department of Chemistry, Université Laval, Canada	<b>2012/09-2015/04</b>
<b>M. Eng., Chemical Technology</b> College of Chemical Engineering and Pharmacy, Wuhan Institute of Technology, China	<b>2009/09-2012/06</b>
<b>B. Eng., Chemical Engineering and Technology</b> College of Chemical Engineering and Pharmacy, Wuhan Institute of Technology, China.	<b>2005/09-2009/06</b>

### *Experience in Laboratory*

#### **Research Assistant: Surface chemistry research by using various analytical techniques.**

- Set and prepared all the instruments, performed experiments on spectroscopy system independently and in cooperation with others.
- Maintained the instruments in the labs.
- Assisted other researchers to carry out specialized experiments and analysis.

#### **M.Sc. Research: Single chiral site studies of heterogeneous enantioselective reactions**

- Mastered the methods combining sub-molecularly resolved dynamic scanning tunneling microscopy measurements, intensive collaborative density functional theory input, in-house surface vibrational spectroscopy, photoemission spectroscopy, and mass spectrometry.
- Conducted fundamental research on the properties of chemical compounds and mechanisms of chemical reactions.
- Supervised junior students in the lab.
- Recorded and analyzed massive amounts of data.

#### **M. Eng. Research: Coumarin-based probes for metal ions: molecular design, synthesis and properties**

- Designed, synthesized and characterized chemical compounds.
- Developed programs of sampling and data collection and analysis to identify properties of products.
- Developed methods to detect the ions in the aqueous and organic solution through some micromolecules.

#### **Research project: A novel perylene diimide-based tetrahedral molecule**

- Synthesized and characterized a novel molecule.
- Supervised junior students in the lab on some synthesis and characterization techniques.

#### **B. Eng. Research: On properties of RH/PE composite materials**

- Modified PE (HDPE) by filling with rice hull flour to prepare rice hull/PE composite.
- Investigated the effect of the content of rice hull flour on the mechanical properties, and flow ability of HDPE.
- Analyzed the dispersion of rice hull flour in Polyethylene.

#### **Research project: Synthesize a series of the benzimidazole-based intermediates**

#### **Internship at Hubei Shuanghuan Technology Incorporated Company**

#### **Internship at Changlian Inc. in Yueyang, a company of Sinopec**

### ***Publications***

1. Demers-Carpentier, V.; Rasmussen, A. M. H.; Goubert, G.; Ferrighi, L.; Dong, Y.; Lemay, J.; Masini, F.; **Zeng, Y.**; Hammer, B.; McBreen, P. H. Stereodirection of an  $\alpha$ -Ketoester at Sub-molecular Sites on Chirally Modified Pt(111): Heterogeneous Asymmetric Catalysis. *J. Am. Chem. Soc.* **2013**, 135, 9999-10002.
2. Li, J.; **Zeng, Y.**; Chen, F.; Gao, Y.; Hu, Q.; Pan, Z. A Fluorescence "Turn-on" Chemodosimeter for  $\text{Cu}^{2+}$  in Aqueous Solution Based on the Ion Promoted Oxidation. *Dalton Trans.* **2012**, 41, 3623-3626.
3. Li, J.; Hu, Q.; **Zeng, Y.**; Yu, X.; Pan, Z. Rhodamine-Based Fluorescent Probes for Cations. *Progress in Chemistry.* **2012**, 24, 823-833.
4. Li, J.; Yu, X.; Liu, X.; Gao, Y.; **Zeng, Y.**; Hu, Q.; Guo, J.; Pan, Z. New Rhodamine-Based Colorimetric Chemosensor: Simple Synthesis and Rapid  $\text{Cu}^{2+}$  Detection. *Sensor Lett.* **2011**, 9, 1331-1341.
5. Li, J.; Hu, Q.; Yu, X.; **Zeng, Y.**; Cao, C.; Liu, X.; Guo, J.; Pan, Z. A Novel Rhodamine-Benzimidazole Conjugate as a Highly Selective Turn-on Fluorescent Probe for  $\text{Fe}^{3+}$ . *J. Fluoresc.* **2011**, 21, 2005-2013.
6. Li, J.; Yu, X.; Fu, J.; Liu, X.; **Zeng, Y.** A novel perylene diimide-based tetrahedral molecule: Synthesis, characterization and self-assembly with gold nanoparticles. *J. Chem. Sci.* **2011**, 122, 839-846.
7. Li, J.; **Zeng, Y.**; Hu, Q.; Yu, X.; Pan, Z. Properties of a Novel Rhodamine B Derivative Colorimetric Sensor for Copper Ion. *Journal of Wuhan Institute of Technology.* **2011**, 33, 1-11. (In Chinese)

### ***Other Experience***

<b>Server in an Italian restaurant</b>	<b>2015-2015</b>
<b>Tourist guide, for international and domestic tourists</b>	<b>2006-2012</b>
<b>Badminton coach</b>	<b>2010-2013</b>

### ***Honors & Awards***

<b>Scholarship Complement from the Centre in Green Chemistry and Catalysis (CGCC)</b>	<b>2014</b>
<b>Excellent Master Graduation Thesis Award</b>	<b>2013</b>
<b>Excellent Graduate Award</b>	<b>2012</b>
<b>Second prize, Badminton Competition at Wuhan Institute of Technology</b>	<b>2010</b>

### ***Hobbies***

Badminton, piano, swimming, basketball, and travel.

### ***Computer Skills & Languages***

CasaXPS, ChemDraw, Origin Lab, Photoshop, Science-Finder, OPUS, Office English, Chinese, French (intermediate)