CURRICULUM VITAE (个人简历)

LEI ZHANG (张磊), Ph.D.

Associate Professor
Department of Mechanical Engineering
Dalian University of Technology

OFFICE: Zhifang Building, Room 6136
EMAIL: lei.zhang@dlut.edu.cn
WEBPAGE: HomepageWeb/GoogleScholar/ResearchGate/LinkedIn/Twitter

FAITH IN SCIENCE (科学信念)

The human imagination is finite but the universe is infinite!

- Pursuing the pure science can I understand and make the world better!
- The interest is the best motivation for scientific research!
- Doing science is doing art!
- Never stop challenging!

EDUCATION (教育背景)

- 9/2012-6/2017---Ph.D. in Chemical Engineering (Chemical Process Equipment), Sichuan University, China (Advisor: **Liang-Yin Chu**).
- 9/2008-6/2012---B.S. in Chemical Engineering (Process Equipment and Control Engineering), Sichuan University, China.

RESEARCH INTERESTS (研究方向)

Advanced Surface & Interface Process Intensification (**ASIPI**)

(功能表界面与过程强化)

- Functional Surface Coating **(功能表面涂层)**
- Nanoengineered Surfaces **(纳米结构表面)**
- Stimuli-Responsive Polymer **(智能高分子)**
- Surface-Initiated Chemistry **(表面引发化学)**
- Mussel-Inspired Chemistry **(贻贝仿生化学)**
- Silicone Chemistry **(有机硅化学)**
- Wetting&Droplet Dynamics **(润湿及液滴动力学)**
- Interfacial Forces **(界面力学作用)**
- Microfluidics Technology **(微流体技术)**

ACADEMIC EXPERIENCE (学术经历)

The Dalian University of Technology (大连理工大学) **Dalian, CHINA**

Associate Professor **(副教授)** *December 2021- present*

The University of Texas at Dallas (美国德克萨斯州大学达拉斯分校) **Dallas, USA**

Postdoctoral Researcher **(博士后研究员)** *August 2018 – June 2020*

Research Scientist **(研究科学家)** *June 2020 – December 2020*

- Research projects focused on Interfacial Wetting and Thermal Fluid, in terms of the following aspects:
  - Liquid repellency surface (e.g., superomniphobic surface, liquid-like surface, liquid-infused surface)
  - Self-propulsion of droplet
  - Water harvesting
  - Anti-icing/de-icing
  - Dropwise condensation

Nuclear Power Institute of China (中国核动力研究设计院) **Cheng Du, CHINA**

Assistant Research Fellow **(助理研究员)** *August 2017 – May 2018*

- Research projects focused on Engineered Micro/Nano Sensors, in terms of the following aspects:
  - Ion detection on microfluidic platforms incorporated with microelectrodes.
  - Developing integrated nanowire or nanofilm for hazardous gas detection.

Sichuan University – Prof. Liang-Yin Chu (四川大学) **Cheng Du, CHINA**

Ph.D. student **(博士研究生)** *September 2012 – June 2017*

Thesis Title: Controlled Construction of Thermo-Responsive and Catalytic Nano-structured Surfaces Based on Self-polymerization of Dopamine

- Research topics emphasized on Functional surface and Microfluidics, in terms of the following aspects:
  - Responsive surfaces for controlling interface mechanics.
  - Mussel-inspired polydopamine as a versatile platform for the construction of functional nanointerfaces.
  - Developing smart polymer/metal nanoparticles for self-regulation of high exothermic catalytic reactions preventing overheat and explosion.
  - Construction of Thermo-Responsive 2D/3D surfaces engineered with poly(*N*-isopropylacrylamide) nanogels.
  - Investigation of cell adhesion behaviors and cytotoxicity on stimuli-responsive bio-interfaces.
  - Preparation of active-targeted responsive nanocarrier for combined controlled drug delivery and photothermal therapy.
  - Studying the process for fabrication of glass microfluidic devices based on chemical wet etching and soft lithography technologies.
  - Fabrication of new-kind of catalytic microchannel reactor with metallic nanoparticles immobilized on channel surface for synthesizing drug intermediate.

Dow Chemical (China) Investment Co., Ltd (陶氏化学) **Shang Hai, CHINA**

R&D Summer Intern **(西南地区高校唯一入选人)** *July 2016 – August 2016*

- Research projects focused on obtaining stable and low coefficient of friction (COF) of polyethylene (PE) Film, in terms of the following aspects:
  - Compounding PE masterbatch with different additives of Erucamide, PEG, Behenamide, PDMS using a twin-screw extruder.
  - COF testing for comparison of various PE films with different additives for improving the consistency of COF.
  - Mechanism study on the changing of COF under long time storage, high temperature, and lamination.

Sichuan University – Prof. Liang-Yin Chu (四川大学) **Cheng Du, CHINA**

Undergraduate Thesis Project **(本科毕设)** *September 2011 – August 2012*

Thesis Title: Monodisperse and Fast-responsive Poly(*N*-isopropylacrylamide) Microgels with Open-Celled Porous Structure

- Studied the process for building 3D-capillary microfluidic devices.
- Microfluidic preparation of temperature-responsive poly(*N*-isopropylacrylamide) microgels with porous structure.
- Characterization of the temperature-responsive rate of porous poly(*N*-isopropylacrylamide) microgels with a high-speed camera.

National Key Laboratory of Biotherapy – Prof. Sheng-Yong Yang **Cheng Du, CHINA**

Team leader and Project student assistant *November 2010 – May 2011*

"Challenge Cup" National Undergraduate Curricular Academic Science and Technology Competition

Thesis Title: Design, Synthesis, and Evaluation of Novel Diarylamines as Selective Inhibitors of Epidermal Growth Factor Receptor (EGFR)

- Designed the synthetic route of the drug molecule.
- Synthesized the small-molecule anti-cancer drugs of SKLB1071.
- Synthesized the novel diarylamines as new selective inhibitors of EGFR.
- Characterization of the structures of the key intermediate and the target molecule.

University of Sichuan University – Senior Lecturer. Xing-Jian Kong **Cheng Du, CHINA**

Project student assistant *May 2010 – December 2011*

Innovation Fund program for Undergraduate of School of Chemical Engineering

Thesis Title: Recognition of Two-component Fluidized Bed Type Based on Wavelet Analysis

- Designed the model fluidized Bed using AutoCAD and built the experimental apparatus.
- Studied the influence of particle size, gas velocity, and bed type on the mixing state in two-component Fluidized Bed.

PARTICIPATED PROJECTS (参与项目)

- Experimental Study of Condensation Enhancement on Durable Slippery Surfaces, supported by the National Science Foundation in the United States (**Award No. 1929677**).
- Young Investigator Program at the Army Research Office (**Award No. W911NF1910416**).
- Mechanism Understanding the Formation of Mesoscale Structure on Particle Interface and the

Controllable Adjustment During the Multiphase Reaction, supported by the National Natural Science Foundation of China (**Award No. 91434202**).

- Microfluidics Fabrication of Microscale Interface and Novel Functional Materials, supported by the Natural Science Foundation of China (**Award No. 21136006**).
- Imitation of Mussel-inspired Adhesion Behavior for Fabrication of Thermo-Responsive Surfaces, supported by the National Natural Science Foundation of China (**Award No. 21506127**).
- Functional Biomedical Polymer Materials, supported by Program for Changjiang Scholars and Innovative Research Team in University (**Award No. IRT1163**).
- Biomedical Polymer Materials, supported by the Program for Changjiang Scholars and Innovative Research Team in University (**Award No. IRT15R48**).
- Fundamental Research on Microfluidic Fabrication of Advanced Polymer Materials, supported by State Key Laboratory of Polymer Materials Engineering (**Award No. sklpme2014-1-01**).

PROFESSIONAL ACTIVITIES (专业活动)

- **Funding Applications (基金申请)**
  - "Sustainable Anti-Icing on Quasi-Liquid Coated Wind Turbine Blades", at University of Texas at Dallas, 2020. (**Co-Investigators**)
  - "Glycocalyx-on-a-Chip for Fundamental Study of Biotransport", at University of Texas at Dallas, 2020. (**Co-Investigators**)
  - "Microfluidics Technology for Real-Time Ions Detection", at Nuclear Power Institute of China, 2017. (**Principal Investigator**)
  - "Mussel-inspired Adhesion for Design of Stimuli-Responsive Coating", at Sichuan University, 2016. (**Co-Investigators**)
- **Invited Reviewer for (独立审稿)**
  - "*Materials*"
  - "*MNHMT"*
  - "*Langmuir*"
  - "*Molecules*"
  - "*Biosensors*"
  - "*RSC Advances*"
  - "*Applied Sciences*"
  - "*Materials Horizons*"
  - "*ACS Applied Bio Materials*"
  - "*Journal of Materials Chemistry* "
  - "*Mechanical Sciences and Engineering*"
- **Sub-Reviewer for (其他审稿)**
  - "*Small*"
  - "*Science Advances*"
  - "*Advanced Materials*"
  - "*Chemical Communications*"
  - "*Advanced Energy Materials*"
  - "*Journal of Membrane Science*"
  - "*Chemical Engineering Science*"

- "*Advanced Functional Materials*"
- "*Chemical Engineering Journal*"
- "*ACS Applied Materials & Interfaces*"
- "*Chinese Journal of Chemical Engineering*"

LEADERSHIP ACTIVITIES (领导活动)

- **Team Leader (团队负责)** for the case presentation entitled "Developing Super Hydrophobic Glass Painting for Industrial Production of Self-cleaning Windows", Dow Chemical Investment Co., Ltd, 2016 (First Prize).
- **Technical Manager (技术经理)** for UTDesign Team 953 with the project "Design and Manufacture Surface Coating to Remove Ice on Wind Turbines", the University of Texas at Dallas, 2019.
- **Organizing Committee (学术会议)** for "2014 Symposium on Microfluidics and Functional Materials", Sichuan University, 2014.
- **Mentor (毕设指导)** for undergraduate students for thesis
  - Hao Sun, "Preparation of Thermo-Responsive Surfaces for controlled cell detachment and adhesion", Sichuan University, 2016.
  - Luyue Liu, "Preparation and Characterization of Thermo-Responsive Surfaces based on Biomimetic Materials", Sichuan University, 2015.

TEACHING EXPERIENCE (教学经历)

- **Technical Manager** for BMEN4389-Senior Design Project II (Spring 2020), University of Texas at Dallas.
- **Technical Manager** for BMEN4388-Senior Design Project I (Fall 2019), University of Texas at Dallas.
- **Invited Guest Lecture** for MECH5373-Thermal Management of Microelectronics (Fall 2019), University of Texas at Dallas.
- **Invited Guest Lecture** for MECH6375-Boiling Heat Transfer and Two-Phase Flow (Fall 2018), University of Texas at Dallas.

SELECTED SKILLS (实验技能)

- **Experiments (实验方法)**
  - For surface modification: e.g., Organosilicon chemistry for surface modification, Mussel-inspired surface modification, ATRP for surface coating, i-CVD for surface coating, ALD for surface coating.
  - For micro/nano fabrication: e.g., Soft lithography, Wet/Dry etching, Black silicon/nanowire fabrication.
  - For liquid repellent surface: e.g., Superhydrophobic surface preparation, Superomniphobic

surface preparation, Liquid-infused surface preparation, Liquid-like surface preparation.
    - For microfluidics technology: e.g., 3D capillary microfluidic devices, 2D plane microfluidic devices (e.g., glass, PDMS), Microfluidic droplets generation, Microfluidic microcapsule preparation.
    - For nanogel synthesis: e.g., Synthesizing micro/nano gels by precipitation polymerization, Synthesizing micro/nano gels by emulsion polymerization.
    - Others: e.g., Trans-membrane filtration and diffusion test, Fog-harvesting/condensation test.
- **Characterizations (表征手段)**
    - For chemical components: e.g., XPS, EDX, XRD, UV-vis, FT-IR, ICP-AES.
    - For physical morphology: e.g., SEM, TEM, AFM, DLS, CLSM, Optical and Fluorescence Microscope, High-Speed Camera, Infrared Camera, and SLR Camera.
    - For thermodynamics: e.g., TGA, DSC.
    - For thin film: e.g., Nanospec, Ellipsometer, and Profilometer.
    - For wetting dynamics: e.g., Goniometer.
    - Other: e.g., 3D Printer, Micropipette Puller, Broken Needle Gauge, Microflow System.
- **Software (掌握软件)**
    - For scheme drawing: e.g., 3ds Max, KeyShot, AutoCAD, ChemDraw, Photoshop, PPT.
    - For video editing: e.g., Corel Video Studio, Adobe Premiere Pro.
    - For data analyzing: e.g., Endnote, DigitalMicrograph, Origin, OMNIC Specta, IRsolution, NanoScope Analysis, Drop Shape Analysis System, MakerWare.

SELECTED AWARDS & HONORS (获奖荣誉)

- 2019 Best Poster Award in IMECE2019 Conference, USA.
- 2018 Gold Prize in Innovation and Entrepreneurship Competition for Youth College Students, China.
- 2018 Silver Prize in Fourth Internet + Innovation and Entrepreneurship Competition, China.
- 2017 Most Innovative Student Award of MSFM Group, Sichuan University.
- 2016 Certificate of Achievement for Completing Dow Chemical 2016 Summer Internship Program, Dow Chemical (China) Investment Co., Ltd.
- 2016 Best Team Performance Honor of Dow Chemical 2016 Summer Internship Program (Team leader), Dow Chemical (China) Investment Co., Ltd.
- 2016 Certificate of Participation in the 8th International Symposium on Microchemistry and Microsystems as an Oral report, University of Hong Kong.
- 2016 Invited Report Award of the Sixth Symposium on Interdisciplinary Biological Materials, National Engineering Research Center for Biomaterials.
- 2015 Most Innovative Student Award of MSFM Group, Sichuan University.
- 2015 Excellent Ph.D. Student Award, Sichuan University.
- 2015 AIChE Membership, American Institute of Chemical Engineers.
- 2012-2017 National Ph.D. Scholarship, Ministry of Education of P.R. China.
- 2012 Outstanding Graduation Thesis, Sichuan University.
- 2010 Excellent Student Award, Sichuan University.
- 2009-2011 National Scholarship of China, Sichuan University.

PEER-REVIEWED PUBLICATIONS (论文成果)

19. Sarma, J.; Zhang, L.; Guo, Z.; Dai, X. Sustainable icephobicity on durable quasi-liquid surface. *Chem. Eng. J.* **2021**.

18. Pu, X.-Q.; Ju, X.-J.; Zhang, L.; Cai, Q.-W.; Liu, Y.-Q.; Peng, H.-Y.; Xie, R.; Wang, W.; Liu, Z.; Chu, L.-Y. Novel Multifunctional Stimuli-Responsive Nanoparticles for Synergetic Chemo−Photothermal Therapy of Tumors. *ACS Appl. Mater. Interfaces* **2021**.

17. Chen, Z.-H.; Liu, Z.; Zhang, L.; Cai, Q.-W.; Hu, J.-Q.; Wang, W.; Ju, X.-J; Xie, R.; Chu, L.-Y. Functional Graphene Oxide Nanosheets Modified with Cyclodextrins for Removal of Bisphenol A from Water. *Chin. J. Chem. Eng.* **2021**.

16. Guo, Z.; Zhang, L.; Monga, D.; Stone, H.A.; Dai, X. Hydrophilic Slippery Surface Enabled Coarsening Effect for Rapid Water Harvesting. *Cell Rep. Phys. Sci.* **2021**, 2, 100387.

15. Zhang, L.; Guo, Z.; Sarma, J.; Zhao, W.; Dai, X. Gradient Quasi-Liquid Surface Enabled Self-Propulsion of Highly Wetting Liquids. *Adv. Funct. Mater.* **2021**, 2008614.

14. Zhang, L.; Guo, Z.; Sarma, J.; Dai, X. Passive Removal of Highly Wetting Liquids and Ice on Quasi-Liquid Surfaces. *ACS Appl. Mater. Interfaces* **2020**, 12, 20084.

13. Zhang, L.; Liu, Z.; Liu, L.-Y.; Pan, J.-L.; Luo, F.; Yang, C.; Xie, R.; Ju, X.-J.; Wang, W.; Chu, L.-Y. Nanostructured Thermoresponsive Surfaces Engineered via Stable Immobilization of Smart Nanogels with Assistance of Polydopamine. *ACS Appl. Mater. Interfaces* **2018**, 10, 44092.

12. Zhang, L.; Liu, Z.; Wang, Y.; Xie, R.; Ju, X.-J.; Wang, W.; Lin, L.-G.; Chu, L.-Y. Facile immobilization of Ag nanoparticles on microchannel walls in microreactors for catalytic applications. *Chem. Eng. J.* **2017**, 309, 691.

11. Yan, P.-J.; He, F.; Wang, W.; Zhang, S.-Y.; Zhang, L.; Li, M.; Liu, Z.; Ju, X.-J.; Xie, R.; Chu, L.-Y. Novel Membrane Detector Based on Smart Nanogels for Ultrasensitive Detection of Trace Threat Substances. *ACS Appl. Mater. Interfaces* **2018**, 10, 36425.

10. Wang, Y.; Liu, Z.; Peng, H. Y.; He, F.; Zhang, L.; Faraj, Y.; Wang, W.; Ju, X. J.; Xie, R.; Chu, L. Y. A Simple Device Based on Smart Hollow Microgels for Facile Detection of Trace Lead (II) Ions. *ChemPhysChem* **2018**, 19, 2025.

9. Wu W.; Zhu H.C.; Xie R.; Zhang L.; Luo F.; Ju X.J.; Wang W.; Liu Z.; Chu L.Y. Effect of Size Ratio of Smart Microgels Gates to Membrane Pores on the Responsibility of Smart Membranes. *Chem. Ind. & Eng. Pro.* **2018**, 37, 223.

8. Deng, K.; Liu, Z.; Hu, J.; Liu, W.; Zhang, L.; Xie, R.; Ju, X.; Wang, W.; Chu, L. Composite bilayer films with organic compound-triggered bending properties. *Chin. J. Chem. Eng.* 2018.

7. Zhang, L.; Liu, Z.; Wang, Y.; Xie, R.; Ju, X.-J.; Wang, W.; Lin, L.-G.; Chu, L.-Y. Facile immobilization of Ag nanoparticles on microchannel walls in microreactors for catalytic applications. *Chem. Eng. J.* **2017**, 309, 691.

6. Zhang, L.; Liu, Z.; Liu, L.-Y.; Ju, X.-J.; Wang, W.; Xie, R.; Chu, L.-Y. Novel smart microreactors equipped with responsive catalytic nanoparticles on microchannels. *ACS Appl. Mater. Interfaces* **2017**, 9, 33137.

5. Yang, C.; Liu, Z.; Chen, C.; Shi, K.; Zhang, L.; Ju, X.-J.; Wang, W.; Xie, R.; Chu, L.-Y. Reduced graphene oxide-containing smart hydrogels with excellent electro-response and mechanical properties for soft actuators. *ACS Appl. Mater. Interfaces* **2017**, 9, 15758.

4. Wei, Y. Y.; Liu, Z.; Luo, F.; Zhang, L.; Wang, W.; Ju, X. J.; Xie, R.; Chu, L. Y. A Novel Poly (*N*-Isopropylacrylamide-*co*-acryloylamidobenzo-12-crown-4) Microgel with Rapid Stimuli-Responsiveness for Molecule-Specific Adsorption of *γ*-Cyclodextrin. *Macromol. Chem. Phys.* **2017**, 218, 1700216.

3. Yan, S.; Wan, L. Y.; Ju, X. J.; Wu, J. F.; Zhang, L.; Li, M.; Liu, Z.; Wang, W.; Xie, R.; Chu, L. Y. K^+-Responsive Block Copolymer Micelles for Targeted Intracellular Drug Delivery. *Macromol. Biosci.* **2017**, 17, 1700143.

2. Zhang, L.; Wang, W.; Ju, X.-J.; Xie, R.; Liu, Z.; Chu, L.-Y. Fabrication of glass-based microfluidic devices with dry film photoresists as pattern transfer masks for wet etching. *RSC Adv*. **2015**, 5, 5638.

1. Mou, C.-L.; Ju, X.-J.; Zhang, L.; Xie, R.; Wang, W.; Deng, N.-N.; Wei, J.; Chen, Q.; Chu, L.-Y. Monodisperse and fast-responsive poly (*N*-isopropylacrylamide) microgels with open-celled porous structure. *Langmuir* **2014**, 30, 1455.

GRANTED PATENTS (授权专利)

7. Zhang L., Sarma J., Guo Z.Q., Dai X.M. "A Semiliquid Surface with Liquid and Solid Repellence". US Patent, PCT. WO2020/256995. **2021**.

6. Xie R., Guo S.F., Chu L.Y., Luo F., Zhang L., Liu Z., Ju X.J., Wang W. "Preparation of Thermo-Responsive Polyether Sulfone Catalytic Membrane and Its Applications" Chinese Patent No. ZL201810082547.9. **2021**.

5. Zhang L., Chu L.Y., Liu Z., Xie R., Ju X.J., Wang W., Liu L.Y., Yang, C. "A Polydopamine-assisted Approach for One-pot Coating to Thermo-Responsive Surfaces." Chinese Patent No. ZL201710349054.2. **2020**.

4. Zhang L., Chu L.Y., Liu Z., Xie R., Ju X.J., Wang W., Liu L.Y. "A Method for Fabrication of Thermo-Responsive Cell Culture Container" Chinese Patent No. ZL201710349645.X. **2020**.

3. Zhang L., Chu L.Y., Liu Z., Xie R., Ju X.J., Wang W., Liu L.Y. Luo F. "A Method for Fabrication of Thermo-Responsive Composite Gating Membrane" Chinese Patent No. ZL201710348441.4. **2020**.

2. Zhang L., Chu L.Y., Liu Z., Xie R., Ju X.J., Wang W. "A Method for On-wall Immobilization of Metal Nanocatalysts in Microreactors". Chinese Patent No. ZL201610321271.6. **2018**.

1. Zhang L., Chu L.Y., Wang W., Ju X.J., Xie R., Liu Z. "A Method for Fabrication of Glass-based Microfluidic Devices with Dry Film Photoresist as Wet Etching Mask". Chinese Patent No. ZL201410416124.8. **2015**.

ACADEMIC & CONFERENCE PRESENTATIONS (学术会议)

14. Zhang L., Guo Z.Q., Sarma J., Dai X.M.* Multifunctional Semi-Liquid Surfaces with Durable Liquid Repellency [C]. *2019 MRS Fall Meeting & Exhibit*, December 1-6, **2019**, Boston, USA.

13. Zhang L., Guo Z.Q., Sarma J., Dai X.M.* Nanoscale Semi-Liquid Coating with Durable Liquid Repellency Even to Highly-Wetting Fluids [C]. *IMECE2019*, November 11-14, **2019**, Salt Lake City, USA (**Best Poster Awards**).

12. Guo Z.Q., Zhang L., Dai X.M.* Meniscus-Mediated Spontaneous Droplet Coalescence for Condensation [C]. *IMECE2019*, November 11-14, **2019**, Salt Lake City, USA.

11. Pu X.Q., Ju X.J.*, Zhang L., Peng H.Y., Liu Z., Wang W., Xie R., Chu L.Y.* Tumor-Targeted Responsive Nanocarriers for Combined Photothermo Therapy and Controlled Drug Release [C]. *The 257th ACS National Meeting & Exposition*. March 31-April 4, **2019**, Orlando, USA.

10. Zhang L., Liu Z.*, Liu L.Y., Ju X.J., Wang W., Xie R., Chu L.Y.* Smart Thermo-Responsive Nanocatalysts for Self-Regulation of High Exothermic Reactions [C]. *The 253rd ACS National Meeting*, April 2-6, **2017**, San Francisco, USA.

9. Wang Y., Liu Z.*, Peng H.Y., Zhang L., Wang W., Ju X.J., Xie R., Chu L.Y.* Smart microgels as functional valves for detection of Pb^{2+} [C]. *The 253rd ACS National Meeting*, April 2-6, **2017**, San Francisco, USA.

8. Yang C., Liu Z., Chen C., Shi K., Zhang L., Ju X.J., Wang W., Xie R., Chu L.Y.* Reduced Graphene Oxide-Containing Smart Hydrogels with Excellent Electro-Response and Mechanical Property for Soft Actuators [C]. *The 17th Congress of the Asian-Pacific Confederation of Chemical Engineering (APCChE 2017)*, August 23-27, **2017**, Hong Kong, China.

7. Zhang L**.** Stimuli-Responsive Surface for Interface Regulation [C]. *The 1st PhD Academic Salon of Frontier Interdisciplinary at Sichuan University*. Nov 18, **2016**, Chengdu, China. (**Invited Oral Presentation**)

6. Zhang L., Liu Z.*, Wang Y., Xie R., Ju X.J., Wang W., Lin L.G., Chu L.Y.* Facile On-wall Immobilization of Ag Nanoparticles in Microreactors for Catalytic Applications [C]. *The 14th International Microreaction Technology Conference (IMRET14)*, September 12-14, **2016**, Beijing, China.

5. Zhang L., Liu Z.*, Ju X.J., Xie R., Wang W., Chu L.Y.* Smart Responsive Catalytic Nanoparticles for Chemical Self-regulation [C]. *The 9th Chinese Society of Particuology Symposium on Particle Technology Across Taiwan Strait*, August 12-14, **2016**, Cheng Du, China.

4. Zhang L. Thermo-Responsive Surfaces and Its Potential Bio-Applications [C]. *The 5th Symposium on Frontier Interdisciplinary of Biological Materials at Sichuan University*, June 13, **2016**, Chengdu, China. (**Invited Oral Presentation**)

3. Zhang L., Liu Z.*, Wang W., Xie R., Ju X.J., Chu L.Y.* A Smart Microreactor Equipped with Responsive Catalytic Nanoparticles on Microchannels [C]. *The 8th International Symposium on Microchemistry and Microsystems (ISMM 2016),* May 30-June 1, **2016**, Hong Kong, China.

2. Zhang L., Liu Z.*, Wang W., Xie R., Ju X.J., Chu L.Y.* 2016. Facile On-wall Immobilization of Ag

Nanoparticles in Microchannel Reactors for Catalytic Applications [C]. *The 8th International Symposium on Microchemistry and Microsystems (ISMM 2016)*, May 30-June 1, **2016**, Hong Kong, China.

1. Zhang L., Wang W., Ju X.J., Xie R., Liu Z., Chu L.Y.* Fabrication of Glass-based Microfluidic Devices with Dry Film Photoresists as Pattern Transfer Masks for Wet Etching [C]. *2015 AIChE Annual Meeting*, November 8-13, **2015**, Salt Lake City, USA.