Yan-Ru Lin

1902 Dartmouth St Apt R6, College Station, TX 77840 (936)349-7325 yrlin29@gmail.com

OBJECTIVE

To obtain a Summer 2014 internship in Process Safety

EDUCATION

Ph.D., Chemical Engineering, Texas A&M University, College Station, TX *July 2015 (expected)*
GPA: 4.0 Advisor: Dr. M. Sam Mannan

M.S., Chemical Engineering, National Taiwan University, Taiwan *June 2008*
GPA: 4.0, Rank: 2nd out of 80 Advisor: Dr. Ben-Zu Wan

B.S., Chemical Engineering, National Taiwan University, Taiwan *June 2006*
Major GPA: 3.95, Overall GPA: 3.73, Rank: 6th out of 97

TECHNICAL SKILLS

Hazard Identification: What If; Checklist; HAZOP
Risk Analysis: Fault tree; Event tree; Layer of Protection; DOW F&E; Genie; AgenaRisk
Consequence Modeling: PHAST; Canary; FLACS
Laboratory Instruments: Gas Chromatography; UV-Visible Diffuse Reflectance Spectroscopy; Atomic Absorption Spectroscopy; Temperature Programmed Oxidation/Desorption/Reduction; X-Ray Diffraction; TG-DTA; Viscometer; Malvern Laser Diffraction Particle Analyzer; Electrospray; Hot wire
Numerical Tools: MATLAB; COMSOL
Other Software: MS Office; Visio; Origin; AutoCAD; JMP
Language: English, Chinese (Native)

RESEARCH

Mary Kay O'Connor Process Safety Center, Texas A&M University
Graduate Research Assistant *February 2012–present*
Topic: Flammability of Aerosols (Mists) Generated by Electrospray

- Modified electrospray device to achieve higher quality aerosols (smaller, denser and more uniform)
- Performed aerosol flame speed versus droplet size
- Reviewed on empirical equations and theoretical models to compile data

Department of Chemical Engineering, National Taiwan University
Graduate Research Assistant *September2006–June 2008*
Topic: Application of Au/CeO_2 over Water-Gas Shift Reaction

- Improved catalyst activity by 30% than general treatment
- Composed possible mechanisms based on characterization of catalyst

WORK EXPERIENCES AND PROJECTS

Mary Kay O'Connor Process Safety Center, Texas A&M University

- Department of Health and Human Services, CDC/NIOSH *July 2013–present*
  Developed proposal about chemical spill on border transportation
- Physical Hazards Banding, CDC/NIOSH *June 2013–present*
  Adapted a comprehensive system to provide hazard banding for emergency response
- HMCRP HM-18 Proposal development (accepted), TRB *September 2013–October 2013*
  Topic: Evaluation of Small Quantities of Class 3 and Class 9 Hazmat Materials in Transportation
- Book writing: Apply Multi-Scale Model to Process Safety Problem *August 2013*
  Sub-chapter: Application of CFD in QRA

- Development of an Effective Framework for Shift Handover *June 2013–July 2013*
  Analyzed questionnaires to propose recommendations for effective shift handover
- Formaldehyde vapor pressure study *November 2012–January 2013*
  Designed a prospective equipment to diagnose formaldehyde vapor pressure and wrote the safety report
- Book writing: Appendix of Lees' Process Safety Essentials *September 2012–November 2012*

Achem Technology Corporation, Taiwan

- Main products: Solvent-based pressure sensitive adhesive without benzene *August 2009–June 2011*
  - Invented excellent properties (same unit glue cost, 160% of bonding strength and longer duration)
  - Originated better properties (86% of glue cost, 130% of bonding strength and longer duration)
  - Founded better properties and low cost (82% of glue cost, 115% of bonding strength and longer duration)
  - Reduced total cost by higher solid content, shorter processing time, thinner coating and cheaper monomer
- Safety Investigation on Polymerization Reactors *October 2009–January 2010*
  - Inspected heat exchangers and cooler system to determine the suppression capability of runaway reaction
  - Propose advices to eliminate possible accidents

PUBLICATIONS

- **Lin, Y.,** Chen, H., Cheng, Z., Mannan, S. *Flame Propagation Speed of Hydrocarbon Aerosols Generated by Electrospray*, 10th Global Congress on Process Safety (AIChE 2014 Spring Meeting, accepted)
- Kao, T., Lin, Y., Wan, B. *Pretreatment Effects on Au/CeO_2 Catalyst for Water-Gas-Shift Reaction*, 27th Taiwan Symposium of Catalysis and Reaction Engineering, 2009
- Tsai, Y., Lin, Y., Wan, B. *Application of Au/CeO_2 Over Water-Gas Shift Reaction*, 26th Taiwan Symposium of Catalysis and Reaction Engineering, 2008

TEACHING EXPERIENCES

Teaching Assistant**,** Department of Chemical Engineering, Texas A&M University

- Chemical Engineering Thermodynamics I *Spring semester 2014*
- Chemical Engineering Heat Transfer Operations *Spring semester 2013*
- Risk Analysis in Safety Engineering *Fall semester 2012*

HONORS AND AWARDS

- Presidential Award, National Taiwan University, 2004-2006
- Memorial Scholarship for Mr. Zong, Zhuo-Zhang, 2006
- AZ Electronic Materials Scholarship, 2005
- Memorial Scholarship for Mr. Xu, Yuan-Dong, 2004
- Farmer’s Association of Caotun Township Scholarship for Outstanding College Students, 2004-2006
- Caotun Township Scholarship for Outstanding College Students, 2004-2006
- Scholarship for Zheng-De, 2003

WORK ELIGIBILITY

Eligible for Practical Training in U.S. (Visa Status: F1)