Arash Mirjalili

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HIGHLIGHTS

- Master of Science in Chemistry, Texas A&M University-Commerce, Commerce, Texas
- 2 Publications
- 5 Presentations
- REU Program Mentor
- Characterized Catalysts with Altamira Instrument (H_2-TPR, H_2 Pulse Chemisorption), HR-STEM Images, Atomic Adsorption, GC, TGA-DTGA, DSC, UV-Vis Absorption, MS, BET.

EDUCATION

MS, Chemistry, Texas A&M University-Commerce, Commerce, Texas 2016
Advisor: Dr. Ben W. L. Jang, Regents Professor, Texas A&M University System
Research Area: Synthesis and Characterization of Heterogeneous Bimetallic Catalysis in Selective Hydrogenation of Acetylene in Excess Ethylene

MS, Physical Chemistry, Iran University of Science and Technology, Tehran, Iran 2010
Advisor: Dr. Seyyed Abolfazl Seyyedsadjadi, Professor of Chemistry, IUST
Thesis: Synthesis of Colloidal Solution of Co-Ni Nanoparticles, Identification, and its Thermodynamic Properties Study

BS, Pure Chemistry, Shahid Beheshti University, Tehran, Iran 2007
Research Project: Fundamentals of Voltammetry and its Use in Analytical Chemistry

WORK EXPERIENCE

Texas A&M University – Commerce, Commerce, TX 2014-Present

Research Assistant (Summer 2015 & 2014 - Spring 2014)

- Synthesized Mono and Bimetallic Catalysts Using Different Supports
- Characterized Catalysts with Altamira Instrument (H_2-TPR, H_2 Pulse Chemisorption), HR-STEM Images, Atomic Adsorption, GC, TGA-DTGA, DSC, UV-Vis Absorption, MS, BET.
- REU Program Mentor
- Trained Undergraduate Students on Research Fundamentals and Skills

Teaching Assistant

- Taught Physical Chemistry Lab (Fall 2015 & 2014), General Chemistry II Lab (Spring 2015)
- Lectured on Lab Experiments, their Concept and Procedures
- Mentored Students
- Graded Tests and Quizzes
- Proctored Tests

Tehran Fire Department, Tehran Safety Service and Fire Fighting Organization, Tehran, Iran 2013-2014
R&D / Safety Specialist

- Researched on the Chemistry of Fire, Protection Methods and Related Safety Issues for Firemen and Victims
- Researched on Establishing Iran's First Chemical & Fire Resistance Testing Laboratory
- Researched on Extinguishing Agents, Especially Clean Agents like Inert Gases and Halocarbons
- Researched on Enhancing and development of Iran's Safety Standard Codes

Iranmehr English Institute (NBE International Education Method), Tehran, Iran 2013-2014
Private Home English Teacher

Taught English Language; American English File Books (Oxford University Press)

Hexane Chemical Process Pasargad Company, Tehran & Yazd, Iran 2010-2012
R&D Researcher

Researched and Formulated:

- Industrial Soaps
- Cosmetic Products
- Prepared Specimens and Chemical Samples for Analysis

Additional Experience

Tak Kaj Co., Yazd, Iran 2008-2009

Individual Volunteer Study

- Researched & Formulated Different Soaps
- Researched & Formulated Different Hair Gels

Publications

1. **Pd-Cu Single Atom Alloy Catalysts for Selective Hydrogenation of Acetylene in Excess Ethylene**, Xinxiang Cao, Arash Mirjalili, Ricky Huitema, Ben W.-L. Jang*, Changjun Liu, Jiajun Wang, and Zongyuan Wangb. *Catalysis Science & Technology Journal, Published by the Royal Society of Chemistry*. Submitted November 2015.
2. **Investigation of the Preparation Methodologies of Pd-Cu Single Atom Alloy Catalysts for Acetylene Selective Hydrogenation**, Xinxiang Cao, Arash Mirjalili, James Wheeler, Wentao Xie, Ben W-L. Jang*. *Frontiers of Chemical Science and Engineering Journal. Vol. 9, Issue 4.* http://journal.hep.com.cn/fcse/EN/10.1007/s11705-015-1547-x

Presentations & Conferences

1. **An Efficient Pd-Cu single Atom Alloy Catalyst Prepared by Galvanic Replacement for Acetylene Selective Hydrogenation,** Poster Presentation, Joint Southwest/Southeastern Regional Meeting of the ACS, Memphis, Tennessee, November 2015.
2. **Effect of Pretreatment Procedure on CU-Pd/Al2O3 Catalysts for Selective Hydrogenation of Acetylene**, Poster Presentation, Joint Southwest/Southeastern Regional Meeting of the ACS, Memphis, Tennessee, November 2015.
3. **An Efficient Pd-Cu single Atom Alloy Catalyst Prepared by Galvanic Replacement for Acetylene Selective Hydrogenation,** Oral Presentation, 48th Annual Meeting-in-Miniature, Dallas-Fort Worth Section of the ACS, University of Texas at Arlington, April 2015.
4. **Investigation of Al_2O_3 Supported Pd-Cu Catalysts for Selective Hydrogenation of Acetylene**, Poster Presentation, ACS Regional Meeting, Fort Worth, Texas, November 2014.
5. **Synthesis of Cobalt-Nickel Nanoparticles and Identification**, Oral Presentation, Sharif University of Technology, Tehran, Iran, (NS2010).
6. **Synthesis of Cobalt-Nickel Nanoparticles in Ethylene Glycol Aqueous Solution**, Kuwait Conference of Chemistry, (KCC 2010). *[Abstract Acceptance]*

7. **Synthesis of Cobalt-Nickel Nanoparticles in Aqueous Solution of Ethylene Glycol,** Pure and Applied Chemistry International Conference, Faculty of Science, Ubon Ratchathani University, (PACCON2010). *[Abstract Acceptance]*
8. **Synthesis, Characterization and Stability of Colloidal Solution of Copper Nanoparticles in Presence of Surfactants**, Ecis 2009, Antalya, Turkey. *[Abstract Acceptance]*

HONORS / AWARDS

Received Commendable Student Chapter Award by National ACS for 2014-2015 Academic Year
Chemistry Endowment Scholarship (Spring 2016, Fall 2015)
Jai & Susan Nagarkatti Chemistry Fellowship (Spring 2015, Fall 2014)
Funding Your Future Chemistry Scholarship (Spring 2015, Summer 2014, Fall 2014, Spring 2014)
Outstanding Selected Researchers by Iran Nanotechnology Initiative Council, 2010
Awarded Financial Support Prize by Iran Nanotechnology Initiative Council, 2010

AFFILIATION

Member, The National Society of Leadership and Success, 2015 – Present
Member, American Chemical Society, 2015 – Present
Member, American Chemical Society, TAMUC Section, 2014 - Present
Member, Science Faculty Chemical Society, Shahid Beheshti University, 2005 - 2007
Member, Volunteer, Mahak Charity, Society to Support Children Suffering From Cancer, 2009 – Present
Member, Doostan Mountain Climbing Group, 2005-2014

LANGUAGES

Fluent in English. TOEFL iBT: 90 (Reading 19, Listening 25, Speaking 22, Writing 24 on 11/12/2011).
Native in Persian/Farsi
Basic Knowledge of Arabic