

Majed S. Madani

Assistant Professor, Department of Chemical and Materials Engineering, King Abdulaziz University

Education

| Degree | Field of Study | Institution | Year |
|---------------|-----------------------|-----------------------------------|-------------|
| Ph.D. | Chemical Engineering | University of Southern California | 2023 |
| MS | Chemical Engineering | University of California, Irvine | 2017 |
| BS | Chemical Engineering | Montana State University, Bozeman | 2014 |

Academic Experience

| From | To | Institution | Rank | | Full or Part Time |
|-------------|-----------|-----------------------------------|---------------------|--|--------------------------|
| 2024 | Present | King Abdulaziz University | Assistant Professor | | Full Time |
| 2018 | 2023 | University of Southern California | Research Assistant | | Full Time |
| 2019 | 2019 | Stanford University (SLAC) | Visiting Researcher | | Part Time |
| 2015 | 2017 | University of California, Irvine | Research Assistant | | Full Time |
| 2015 | 2023 | King Abdulaziz University | Teaching Assistant | | Full Time |
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Non Academic Industrial Experience (including Consultations)

| From | To | Company/Entity | Title | Position Description | Full or Part Time |
|-------------|-----------|-----------------------|----------------------------|-----------------------------------|--------------------------|
| 2013 | 2013 | Saudi Aramco | Process Engineering Intern | Internship at Ras Tanura Refinery | Full Time |
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Certifications and Professional Registrations**Current Membership in Professional Societies and Organizations**

| Society/organization | Rank | Member Since |
|---|-------------|---------------------|
| 1. American Institute of Chemical Engineers | Member | 2018 |
| 2. | | |
| 3. | | |
| 4. | | |

Honors and Awards

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| 1 | Research Poster Award (2 nd Place). UC Irvine Graduate Recruitment |
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Services activities (within and outside of the institution)

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| 1. | Mentor for USC-Bravo STAR & EHA Program |
| 2. | |
| 3. | |
| 4. | |
| 5. | |

Principal Publications/Presentations from the Past five Years

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| 1 | K. Huynh, M. S. Madani and J. Lee, "Investigation of Elastic Modulus and Thermal Conductivity of Rough Silicon Nanowires," 2018 17th IEEE Intersociety Conference on Thermal and Thermomechanical Phenomena in Electronic Systems (ITherm), San Diego, CA, 2018, pp. 214-217 |
| 2 | Madani, et al "Flow Reactors for Rapid Screening of Reaction Parameters to Synthesize Molybdenum Carbide Catalysts for Biomass Conversion Processes". 2020 AIChE annual meeting |
| 3 | Madani et al , "Application of a Continuous Flow Millifluidic Reactor Towards Optimizing Manufacturing Throughput for Molybdenum Carbide Nanoparticles". 2021 AIChE Annual Meeting |
| 4 | Madani et al , "Evaluation of Nucleation and Growth Kinetics of Ionic Liquid-Based Pt Nanoparticles Synthesis in a Millifluidic Reactor By in Situ Small-Angle X-Ray Scattering" 2022 AIChE Annual Meeting |
| 5 | Karadaghi. L*, Madani. M* , Williamson. E*, et al "Throughput Optimization of Molybdenum Carbide Nanoparticle Catalysts in a Continuous Flow Reactor Using Design of Experiments". ACS Appl. Nano Mater. 2022, 5, 2, 1966–1975) *equal contribution |
| 6 | M.C. Blosser, J. So, M.S. Madani , N. Malmstadt. "Effect of cholesterol on permeability of carbon dioxide across lipid membranes". (BioRxiv 2020) |
| 7 | Madani et al , "Machine learning methods to study ionic liquid-based platinum nanoparticle synthesis in a Continuous Flow Reactor (<i>Manuscript in Preparation</i>) |
| 8 | Madani et al , "Nucleation and Growth Kinetics of Ionic Liquid-Based Pt Nanoparticles Synthesis in a Millifluidic Reactor by Synchrotron Radiation SAXS" (<i>Manuscript in Preparation</i>) |
| 9 | Baddour et al "Technoeconomic Analysis of Continuous Flow Methods vs Batch Methods" (<i>Manuscript in Preparation</i>) |
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Recent Professional Development Activities (*Workshops, training, etc.*)

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