



# Yu Miao

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Professional field: Energy Chemical Engineering  
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## Profile

### Education

July 2010, Bachelor of Chemical Engineering and Technology, graduated in the School of Chemical Engineering from Shenyang University of Chemical Technology

June 2013, Master of Chemical Engineering, graduated in the School of Chemical, Biological and Environmental Engineering from Oregon State University (U.S.)

June 2016, PhD Degree in Chemical Engineering conferred by Oregon State University (U.S.)

### Working experience

July 2016 - October 2017, worked as postdoctoral research associate in the School of Chemical, Biological and Environmental Engineering of Oregon State University

November 2017 - October 2020, worked as postdoctoral research associate in the School of Engineering and Computer Science of Baylor University

Since November 2020, worked as lecturer in the School of Resources and Environmental Engineering of East China University of Science and Technology

## Research Field

- 1.Applications of non-thermal plasma in chemical reactions
- 2.Conversion of carbon dioxide and methane
- 3.Hydrogen generation and storage

## Research results and main published thesis

- [1].Yu Miao, Alexandre Yokochi, Goran Jovanovic, Suping Zhang, Annette von Jouanne, "Application-oriented non-thermal plasma in chemical reaction engineering: A review," Green Energy and Resources, 2023, 1, 100004.
- [2].Yu Miao, Peter Kreider, Justin Pommerenck, Nick AuYeung, Annette von Jouanne, Goran Jovanovic, Alexandre Yokochi, "CO<sub>2</sub> Reduction in Multi-point Microscale-based Corona Reactor: Experiments and Modeling," Industrial & Engineering Chemistry Research, 2022, 61, 10756-10765.
- [3].Ian Reddick, Adam Shareghi, Yu Miao, Justin Pommerenck, Matthew Coblyn, Alexandre Yokochi, Annette von Jouanne, Goran Jovanovic, Nick AuYeung, "Parametric Study of Hydrocarbon Chain Growth from Methane via a Nonthermal Plasma Discharge Microreactor," Industrial & Engineering Chemistry Research, 2022, 61, 10047-10057.
- [4].Yu Miao, Peter Kreider, Ian Reddick, Justin Pommerenck, Ryan Collin, Nick AuYeung, Annette von Jouanne, Goran Jovanovic, Alexanre Yokochi, "Methane Coupling to Ethylene and Longer-Chain Hydrocarbons by Low-Energy Electrical Discharge in Microstructured Reactors," Industrial & Engineering Chemistry Research, 2021, 60, 6950-6958.
- [5].Yu Miao, Annette von Jouanne, Alexandre Yokochi, "Current Technologies in Depolymerization Process and the Road Ahead," Polymers, 2021, 13, 449.
- [6].Annette von Jouanne, Ryan Collin, Madeline Stephens, Yu Miao, Brian Thayil, Caleb Li, Emmanuel Agamloh, Alexandre Yokochi, "Motor Bearing Current Characterization in SiC-based Variable Frequency Drive Applications," 2020 IEEE Energy Conversion Congress and Exposition (ECCE), Oct. 11-15, 2020. Detroit, MI, USA: 2718-2725.
- [7].Ryan Collin, Yu Miao, Alexandre Yokochi, Prasad Enjeti, Annette von Jouanne, "Advanced Electric Vehicle Fast-Charging Technologies," Energies, 2019, 12, 1839.
- [8].Yu Miao, Patrick Hynan, Annette von Jouanne, Alexandre Yokochi, "Current Li-Ion Battery Technologies in Electric Vehicles and Opportunities for Advancements," Energies, 2019, 12, 1074.
- [9].Annette von Jouanne, Ryan Collin, Yu Miao, Alexandre Yokochi, Scott Harpool, Adam Shareghi, "Power electronics testbed for converting methane to liquid fuels via electrical corona," 2018 IEEE Energy Conversion Congress and Exposition (ECCE), Sep. 23-27, 2018. Portland, OR, USA: 3572-3578.
- [10].Jovanovic, G. N., Yokochi, A. F., Miao, Y., Pommerenck, J., Alanazi, Y., & Kreider, P. "Corona Discharge Reactor and Method for Using," Pub. No.: US 2018/0290123 A1, Pub. Date: Oct. 11, 2018.
- [11].Yu Miao, Nuchanart Siri-Nguan, Thana Sornchamni, Goran Jovanovic, Alexandre Yokochi, "CO<sub>2</sub> Reduction in Aqueous-Ionic Liquid Solution in Microscale-Based Electrochemical Reactor," Chem. Eng. J., 2018, 333, 300-309.