

Education

- **Polytechnique Montreal, Montreal, QC, Canada** (Fall 2020)
Ph.D. Student, Department of Chemical Engineering
- **Aix-Marseille University (AMU), Marseille, France** (2015-2016)
M.SC Chemical Process Engineering, Department of Chemical Engineering
- **National Institute of Applied Science and Technology, Tunis, Tunisia** (2010-2015)
B.SC Industrial Chemistry, Department of Chemistry

Research Interests

- Water treatment and seawater desalination.
- Sustainable water technologies in industry.
- Energy and renewable energy.
- Mineral processing.
- Combustion and alternative fuels.
- Chemical reaction engineering.
- Process design and optimization.

Work Experience

- Water Desalination and Reuse Center at KAUST, Thuwal, Saudi Arabia Consultant (2019-2020)
- Advanced Treatment for Water Purification Co (TWATCO), Jeddah, Saudi Arabia R&D chemical Engineer (2018-2020)
- Al-Tayseer Chemicals and Fertilizers (TPF), Yanbu, Saudi Arabia Chemical Engineer (2017-2018)
- Combustion and Pyrolysis Chemistry (CPC) group at KAUST, Thuwal, Saudi Arabia Research Assistant (2016-2017)
- Engineering Procurement & Project Management (EPPM), Tunis, Tunisia Chemical Engineer-Intern (Summer 2014)

Teaching Experience

- Online tutoring, SUPADOM, Paris, France Chemistry Tutor (2017- Now)

Expertise

- Design and building experimental setup at lab scale.
- Sustainable processes for water desalination.
- Aluminum based coagulants manufacturing at pilot and industrial scale.
- Instrumental chemical analysis.
- Optimization of membrane processes.

Journal Publications

- **Najjar, A.**, Zhandong, W. and Sarathy, S. M. (2021). *Study of the pyrolysis and oxidation of pentane isomers using a jet stirred reactor. (On going)*
- **Najjar, A.**, Hammami, MA., Alpatova, A. and Ghaffour, N. (2021). *Effectiveness of Polyaluminum chloride (PAC PPT 100) on low turbidity removal and its effect on RO membrane. (On going)*
- Dong, S., Zhang, K., Ninnemann, E. M., **Najjar, A.**, Kukkadapu, G., Baker, J., ... & Sarathy, S. M. (2021). *A comprehensive experimental and kinetic modeling study of 1-and 2-pentene. Combustion and Flame, 223, 166-180.*
- Wang, Zhandong, Nils Hansen, Ahren W. Jasper, Bingjie Chen, Denisia M. Popolan-Vaida, Kiran K. Yalamanchi, **Ahmed Najjar**, Philippe Dagaut, and S. Mani Sarathy. *"Cool flame chemistry of diesel surrogate compounds: n-Decane, 2-methylnonane, 2, 7-dimethyloctane, and n-butylcyclohexane."* *Combustion and Flame* 219 (2020): 384-392.
- Atef, N., Issayev, G., Mohamed, S. Y., **Najjar, A.**, Wang, Z., Wang, J. Y., ... & Sarathy, S. M. (2019). *Chemical kinetic study of triptane (2, 2, 3-trimethylbutane) as an anti-knock additive. Combustion and Flame, 210, 399-412.*

Conference Publications and Presentations

- **Najjar, A.**, Zhandong, W. and Sarathy, S. M. "Study of the pyrolysis and oxidation of pentane isomers using a jet stirred reactor". The Sixth Saudi Arabian Section of the Combustion Institute (SAS-CI), (2017).