

Haydar Aljaafari

(319) 333-6211 | haydar-aljaafari@uiowa.edu
haydaralaa@yahoo.com

SUMMARY

- 5 years R&D skills on medical implant and biofilms eradication at the University of Iowa, Iowa, US.
- 2 years R&D skills on membrane technology at the University of Technology, Baghdad, Iraq.
- 5 months R&D skills on membrane technology at the University of Calabria, Calabria, Italy.
- Projected graduation May 2021.

EDUCATION

University of Iowa Iowa City, IA	Projected graduation: May 2021
PhD, Chemical and Biochemical Engineering	GPA 3.89 / 4.00
Dissertation "Thermal Shock Dynamics on Biofilm Viability and Stability"	
University of Technology Baghdad, Iraq	Graduated July 2012
Master of Science, Chemical Engineering	(Ranked 1 among 8 graduates)
University of Technology Baghdad, Iraq	Graduated July 2006
Bachelor of Science, Chemical Engineering	(Ranked 2 among 288 graduates)

PROFESSIONAL EXPERIENCE

University of Iowa, Iowa City, IA	Aug. 2015-Present
Graduate Research Assistant, Chemical & Biochemical Engineering Department	
<ul style="list-style-type: none">• Investigating the effects of thermal shock on biofilm elimination on medical surfaces.• Studying the combined effect of thermal shock and antibiotics on eradication of microorganisms' community.• Investigating the methodology by which a community of bacteria respond to heat.• Working on project research implementation and improvement as well as research publications.• Mentoring two teams of undergrad students in maintaining high level research investigating thermal shock viability on biofilm elimination and developing polymer-iron oxide composite coating for remote heating.• Writing detailed procedures, maintaining laboratory's instruments, and maintaining safe and secure lab environment.	
University of Technology, Baghdad, Iraq	Aug. 2012 to Aug. 2014
Research Assistant, Membrane Technology Research Unit	
<ul style="list-style-type: none">• Trained grad students on the fabrication techniques of polymeric membranes.• Conducted experiments, analyzed data, wrote reports and published papers.• Collaborated with Chemical and Petrochemical Research Center in producing super hydrophobic membrane.• Collaborated with the General Company for Project Design in solving the wastewater problem in the City of Alqam by nano filtration technique.	
University of Calabria, Calabria, Italy	Aug. 2011 to Dec. 2011
Graduate Research Assistant, Institute on Membrane Technology (ITM-CNR)	
<ul style="list-style-type: none">• Worked with group of professors, grad and undergrad students in conducting Ultrafiltration related researches.• Characterized spinning parameters on preparation of hollow-fiber membranes for protein separation.• Set up, adjusted, calibrated, and maintained lab's instruments and equipment such as hollow fiber spinning machine, pore size distribution, mechanical properties testing machine, and surface tension.• Tested and studied new composite membrane for pervaporation separation process.	

PUBLICATIONS AND CONFERENCES

Publications

- Haydar A. S. Aljaafari, Yuejia Gu, Hannah Chicchelly and Eric Nuxoll. Orthogonal Interactions of Thermal Shock and Ciprofloxacin on *Pseudomonas aeruginosa* Biofilms. (Submitted)
- Hayder A. Alalwan, Alaa H. Alminshid, Haydar A.S. Aljaafari. Promising evolution of biofuel generations. Subject review. *Renewable Energy Focus*. 2019; Volume 28, March 2019, Pages 127-139. DOI:10.1016/j.ref.2018.12.006
- Erica Ricker, Haydar Aljaafari, Trigg Bader, Bruce Hundley, and Eric Nuxoll. Thermal Shock Susceptibility and Regrowth of *Pseudomonas aeruginosa* Biofilms. *International Journal of Hyperthermia*. 2018; 34(2):168-176. DOI:10.1080/02656736.2017.1347964
- Alsahy, Q.F., R.I. Ibrahim, H.A. Salih and M.A. Zablouk. Experimental investigation and optimization of air sparging on hollow fiber membrane performance. *Am. J. Mod. Chem. Eng.* 2014; 1: 40-54.
- Alsahy, Q.F., H.A. Salih, S. Simone, M. Zablouk, E. Drioli and A. Figoli. Poly(ether sulfone) (PES) hollow-fiber membranes prepared from various spinning parameters. *Desalination*. 2014; 345: 21-35. DOI: 10.1016/j.desal.2014.04.029
- Alsahy, Q.F., H.A. Salih, R.H. Melkon, Y.M. Mahdi and N.A. Abdul Karim. Effect of the preparation conditions on the morphology and performance of poly(imide) hollow fiber membranes. *J. Applied Polym. Sci.* 2014; Vol. 131, No. 12. DOI: 10.1002/app.40428.

Conferences

- More than ten papers presented in Annual Meetings in the US, Italy, Malaysia, and Iraq.

HONORS AND AWARDS

- Ballard and Seashore Dissertation Fellowships award from **Graduate Collage UI Fall 2020**.
- Summer Fellowships award from the **Graduate Collage UI 2020 and 2019**.
- Travel grant award from **Graduate and Professional Student Government 2017 and 2018**.
- Finalist of **Three Minute Thesis (3MT) Competition University of Iowa 2019**.
- Winner of Chemical and Biochemical Engineering **Department Three Minute Thesis (3MT) Competition 2019**.
- Graduate College Post-Comprehensive Research Award from **Graduate College UI Fall 2018**.
- Fellowship sponsored by **The Higher Committee of Education Development in Iraq**, for pursuing PhD in Chemical and Biochemical Engineering.
- Fellowship sponsored by the **Ministry of Higher Education and Scientific Research**, for completion research of MSc in Chemical Engineering.

CETIFICATE OF PROFESSIONAL DEVELOPMENT TRAINING

- **Graduate Certificate in College Teaching**. University of Iowa, College of Education. (May, 2020) Iowa City, IA.
- **Chemical and Biological Security Training** by U.S. Department of State. (Dec. 2017), Kansas City, MO.
- **Process Safety** by DOW Chemical Company. (June 2018), Lake Jackson, TX.
- **Lab Design** by Sandia National Laboratories. (June 2019), Denver, CO.

For more information, please visit my:

LinkedIn <https://www.linkedin.com/in/haydar-aljaafari-3a163579/>

ResearchGate https://www.researchgate.net/profile/Haydar_Aljaafari2