Hossein Nouri Alavijeh

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Education

Clarkson University, New York, United States **June. 2020**
Ph.D. Student and Research Assistant in Chemical Engineering
- Thesis: Investigation of the Effects of Electrostatics Interaction, Hydrodynamic Forces, and Flexibility on Membrane Filtration of single stranded DNA: Theory and Experiment
- Advisor: Dr. Ruth Baltus

Isfahan University of Technology, Isfahan, Iran **Jul. 2015**
M.Sc. in Chemical Engineering – Advanced
- Thesis: Comparison of Chemical Coagulation and Electrocoagulation and Combined the by Ultrafiltration and Nanofiltration for Treatment of the Baker's Yeast Wastewater
- Advisor: Dr. Morteza Sadeghi

University of Sistan and Balouchestan, Zahedan, Iran **Sep. 2012**
B. Sc. in Chemical Engineering – Gas Industries
- Senior Project: Computer Simulation Methods for Predicting Gas Hydrate Formation Conditions in Pipe Lines
- Advisor: Dr. Morteza Zivdar

Publications and Presentations

Preparing (ISI)
- **Nouri, H.**, Khavari, M., Sadeghi, M. and Moheb, A., "Baker's yeast wastewater treatment by nanofiltration using (electro) coagulation-ultrafiltration pretreatment", Journal of Water Research, Elsevier.
- **Nouri, H.**, Sadeghi, M., Moheb, A., Rajaeih, M., Fauzi Ismail, A. "Integrated ultrafiltration membranes and chemical coagulation for treatment of baker's yeast wastewater", Journal of RSC Advances.

Accepted
- **Nouri, H.**, Sadeghi, M., Moheb, A., "Baker's yeast wastewater treatment using electrochemical methods", IRSME Journal (Separation Science and Engineering Iranian Journal), In Farsi, 2015.

Conference Proceedings
- **Nouri, H.**, Baltus, R. E., Kim, K., Chellam, Sh., "Investigations of Electrostatic Interactions, Hydrodynamic Effects and Pore Size on Rejection by Porous Membrane", Gordon Research Conference and Seminar: Membrane Processes and Materials, New Hampshire, United States, August 2018
- Wilson, S., Kim, K., **Nouri, H.**, Baltus, R. E., Chellam Sh., "Pore size and zeta potential effects on colloid removal by clean microfiltration membranes", Physics & Chemistry of Water Treatment (ACS), New Orlean, United States, March 2018.
- **Nouri, H.**, Sadeghi, M., Moheb, A., Rajaeih, M., "Treatment of Baker's Yeast Wastewater by Combined coagulation and ultrafiltration membranes", The 12th International Conference on Membrane Science and Technology (MST), Tehran, Iran, 2015.
- **Nouri, H.**, Khavari, M., Sadeghi, M., Moheb, A., "Baker's yeast wastewater treatment by electrocoagulation", 2th Water recovery conference, Tehran, Iran, 2014.
- Rezaei, H., **Nouri, H.**, Fereydouni, E., Karimi, K., "Investigation of NO removal by CO on Rh/Al_2O_3 catalyst in the fixed bed reactor", 2th Conference of Energy, Environment and Biological defense, Tehran, Iran, 2014.
- **Nouri, H**., Esmaili, E., Khodaparast, M., Zivdar, M. "Computer simulation methods for predicting gas hydrate formation conditions in pipe lines", 4th Iranian Pipe and Pipeline conference, Tehran, Iran, 2012.

Work Experiences

- Technical Expert, Isfahan Science and Technology Town (ISTT) Filtration Test Laboratory, Isfahan, Iran **2015-2016**
- Project Engineer (Part Time), Parsian Pishro Sanat Polymer company, Isfahan, Iran **2014-2016**
- Project Engineer (Part Time), Poroshat Filter company, Isfahan, Iran **2013-2014**
- Internship in Isfahan oil refinery, Isfahan, Iran **Summer 2012**

Work Projects

- Reduction of Nitrate and other pollutions in groundwater sources of Tehran province in Iran by modern methods in situ, Parsian Pishro Sanat Polymer Co. (affiliated to Isfahan University of Technology)
- Creation of selective layer on the NF and RO PolySulfone hollow fiber membranes to removal of hardness and nitrate for application in domestic water purifiers in Iran, Parsian Pishro Sanat Polymer Co. (affiliated to Isfahan University of Technology)
- Study innovative Technologies for fit-for-purpose Water Production, Parsian Pishro Sanat Polymer company Co. (affiliated to Isfahan University of Technology)
- Study Dry Gas Filter design and applications in CGS and TBS stations of gas pipelines in Iran, Poroshat Filter company.
- Basic design of Slaughterhouse wastewater treatment unit by combined coagulation and ultrafiltration, Parsian Pishro Sanat Polymer Company.
- Basic design of Carpet cleaning wastewater treatment unit by combined coagulation and ultrafiltration, Parsian Pishro Sanat Polymer Company.

Academic Projects

- "Simulation of Turbulent Flow in Vertical Pipe using k-ε Model with FLUENT software", "*Advanced Fluids*" course term project.
- "Membrane for Gas Separation", "*Advanced Unit Operation Design*" course term project.
- "NO Reduction by CO using CSTR and Fixed-bed Catalytic Reactors", "*Advanced Reactor*" course term project.
- "Oil Production by Fungi", "*Advanced Biochemistry*" course term project.

Technical Skills

Some more important Skills have been listed as follows:

- Membrane Filtration
- Chemical and Electrochemical separation instruments
- Oil Filter Tests according to ISO 4548
- Zeta Analyzer
- Fluorescence Recovery After Photobleaching
- COD and BOD Spectrophotometer

My Honors

- Selected for 2019 NAMS Elias Klein award.
- Ranked among top 10% in MSc students in Chemical Engineering school of Isfahan University of Technology
- Ranked 402th (10000 candidates) in Chemical Engineering Graduate Entrance Examination
- Ranked 120th (8000 candidates) in Gas transportation and refinement Graduate Entrance Examination

Computer Skills

- **Engineering Software**: MATLAB, COMSOL, Aspen Plus, Aspen Hysys, Fluent and Gambit, DX7 (Design Experiment), HYDROFIT
- **Programming**: MATLAB, C (Basic)

Extracurricular

- President of Iranian Student Association, Clarkson University **2017-Present**
- Member of Graduate Students Association, Clarkson University **2018-Present**
- Member of Chemical Engineering Association (Undergraduate) **2010-2012**