Donya Hamidi

Address	Department of Chemical, Biochemical and Environmental Engineering	✉ donyahamidi@umbc.edu	in Linkedin
		g Google scholar	R⁶ Researchgate
Date of birth:	06/07/1993		

Education

Current **Sep 2016 - Oct 2020**	Ph.D. in Environmental Engineering - University of Maryland, Baltimore County. M.Sc. Degree in Chemical Engineering (Separation Processes) - University of Guilan, Guilan.

GPA:	2.73/4
Thesis:	A comparative study on the efficiency of combined electro-Fenton-membrane and electro-Fenton-like-membrane processes in olive oil wastewater treatment.
Supervisor:	Dr. Behrooz Abbasi Souraki and Dr. Alireza Pendashteh.

Sep 2011 - Jun 2015	B.Sc. Degree in Chemical Engineering - Islamic Azad University, Rasht Branch, Guilan.

GPA:	3.67/4

Honors & Awards

Aug 2023	Full fund PhD admission (full-time admission) in Environmental Engineering, University of Maryland, Baltimore County.
Sep 2016 - Oct 2020	Tuition Wavier Award, University of Guilan, Guilan.

Research Interests

- The occurrence, fate, transport, and toxicity of contaminants of emerging concern (CECs)
- Environmental monitoring and analysis.
- passive sampling
- Membrane technology, membrane fouling characterization and control.
- Chemical, Electrochemical, and biological wastewater treatment processes.
- Application of natural and low-cost coagulant and adsorbent in water and wastewater treatment process.
- Processes modeling and optimization.
- Kinetic study.

Publications

1. Moein Besharati Fard, Abolfazl Hamedani, Mehdi Ebadi, **Donya Hamidi**, Kasra Motlaghzadeh, Mohammadreza Emarati, Di Wu, Gordon Mckay. Sustainable waste-to-energy plant site selection by a hybrid method of geographic information system and evidential reasoning: A case study Guilan province. Journal of Process Safety and Environmental Protection (2023). DOI: 10.1016/j.psep.2023.05.063
2. **Donya Hamidi**, Moein Besharati Fard, Kaan Yetilmezsoy, Javad Alavi, Hossein Zarei. Application of *Orchis Mascula* Tuber Starch as a Natural Coagulant for Oilysaline Wastewater Treatment: Modeling and Optimization by Multivariate Adaptive Regression Splines Method and Response Surface Methodology. Journal of Environmental Chemical Engineering (2021). DOI: 10.1016/J.Jece.2020.104745
3. Moein Besharati Fard, **Donya Hamidi**, Javad Alavi, Reza Jamshidian, Alireza Pendashteh, Seyed Ahmad Mirbagheri. Saline Oily Wastewater Treatment Using *Lallemantia* Mucilage as a Natural Coagulant: Kinetic Study, Process Optimization, and Modeling. Journal of Industrial Crops & Products (2021). DOI: 10.1016/j.indcrop.2021.113326
4. Moein Besharati Fard, **Donya Hamidi**, Kaan Yetilmezsoy, Javad Alavi, Fatemeh Hosseinpour. Utilization of *Alyssum* Mucilage as a Natural Coagulant in Oily-Saline Wastewater Treatment. Journal of Water Process Engineering (2021). DOI: 10.1016/J.Jwpe.2020.101763
5. Moein Besharati Fard, **Donya Hamidi**, Mehdi Ebadi, Javad Alavi, Gordon Mckay. Optimum Landfill Site Selection by a Hybrid Multi-Criteria and Multi-Agent Decision-Making Method in a Temperate and Humid Climate: Best-Worst-GIS-FAHP-GT. Journal of sustainable cities and society (2021). DOI: 10.1016/j.scs.2021.103641
6. **Donya Hamidi**, Behrooz Abbasi Souraki, Alireza Pendashteh. Efficiency Investigation of Electro-Fenton Process in Olive Mill Wastewater Treatment. 3rd International and 21st National Conference on Environmental Health, February 26-28, 2019, Zanjan, Iran. (Reference)
7. **Donya Hamidi**, Behrooz Abbasi Souraki, Alireza Pendashteh. A Review on Fenton, Fenton-Like, Electro- Fenton and Electro-Fenton-Like Processes for Olive Mill Wastewater Treatment. Research Week, University of Guilan, December 23, 2017.

Presentations

- **Poster Presentations**
- **Donya Hamidi**, Behrooz Abbasi Souraki, Alireza Pendashteh. Efficiency Investigation of Electro-Fenton Process in Olive Mill Wastewater Treatment. 3rd International and 21st National Conference on Environmental Health, February 26-28, 2019, Zanjan, Iran.

- **Oral Presentations**
- **Donya Hamidi**, Behrooz Abbasi Souraki, Alireza Pendashteh. A Review on Fenton, Fenton-Like, Electro-Fenton and Electro-Fenton-Like Processes for Olive Mill Wastewater Treatment. Research Week, University of Guilan, 2017.

Book Chapter

Omid Alizadeh, **Donya Hamidi**. Cost-Effective Adsorbents for Reduction of Conventional and Emerging Pollutants in Modified Natural Wastewater Treatment. Springer (2022). (DOI: 10.1007/698_2022_865)

Academic Experience

Aug 2023	**Research Assistant, University of Maryland, Baltimore County.** Dr. Lee Blaney's lab
Jan 2019 - May 2019	**Graduate Teaching Assistant, University of Guilan, Guilan.** Course: Aspen HYSYS software Responsibilities: Problem-solving sessions, developed assignments, and exam questions for undergraduate students.
Nov 2018 - Feb 2019	**Lecturer, Kadoos Technical and Educational Institution, Guilan.** Course: Aspen HYSYS software Responsibilities: Developed and delivered two weekly 90-minute lectures to undergraduate students for each course. Designed the syllabus and integrated active learning strategies, problem-based activities, and micro assignments.
Sep 2018 - Dec 2018	**Graduate Teaching Assistant, University of Guilan, Guilan.** Course: Fluid Mechanics Laboratory Responsibilities: Collaborating as a lecturer and assisting with laboratory set-up and course preparation.
Jan 2017 - May 2017	**Graduate Teaching Assistant, University of Guilan, Guilan.** Course: Process Control Laboratory Responsibilities: Collaborating as a lecturer and assisting with laboratory set-up and course preparation.

Research Experience

Department of Chemical Engineering, Water and Wastewater Treatment Laboratory, University of Guilan, Guilan.
Supervisor: Dr. Alireza Pendashteh.

July 2021 -Sept 2021	▪ Pilot study on pharmaceutical wastewater treatment by nanoadsorbents.
Feb 2020 - Jun 2020	▪ Pilot study on oily-saline wastewater treatment by different natural coagulants.
Nov 2019 - Jan 2020	▪ Carpet cleaning wastewater treatment using electrocoagulation and electro- Fenton processes.
Aug 2019 - Nov 2019	▪ Pilot study on landfill leachate treatment using coagulation and electro- Fenton processes.
July 2019- Sept 2019	▪ Diagnosing the origin of tastes and odors in well water and comparing potassium permanganate oxidation, chlorine oxidation, activated carbon and greensand filters as removal methods for iron, manganese, tastes and odors from well water (Case study: Guilan Province, Iran).
Jan 2019 - Jul 2019	▪ Pilot study and efficiency investigation of electro-Fenton, electrocoagulation, Fenton and coagulation processes for formaldehyde removal from resin and paint manufacturing wastewater.
Jan 2019 -Apr 2019	▪ Pilot study on olive oil mill wastewater treatment using coagulation, Fenton, electro- Fenton and electro-Fenton-like processes.
Dec 2018 -Jun 2019	▪ Feasibility Study of employing moving-bed biofilm reactor for increasing organic load capacity of a wastewater treatment plant.
Jan 2018 – Mar 2018	▪ Design of a small-scale new wastewater treatment package for simultaneous removal of carbon and nutrients from municipal wastewater.
Nov 2017 - Mar 2018	▪ Investigation of practical methods for optimization of chemicals consumption and sludge management in water and wastewater treatment plants.
Dec 2016- July 2017	▪ Pilot study on latex wastewater (glove factory) treatment using chemical treatment.
Dec 2016 - Jun 2017	▪ Design and simulation of emissions control process in fish and meat processing plants using Aspen HYSYS software.

Work Experience

Aug 2019 – May 2023 ▪ **Senior Water and Wastewater Technical Expert – Nirooab alborz Mabna Co.**
- Process modeling and optimization of several wastewater treatment plants.
- Project costs estimation based on engineering analyses.
- Identification of environmental problems to suggest the most cost effective solution.
- Conduct literature reviews, collect and analyze data.
- Provide ready access to all experimental data for the process manager and attend project meetings.

Jul 2015 - Aug 2019 ▪ **Technical Expert – Pouyandegan Fanavar Sanaat Guilan Co.**
- Process modeling and optimization.
- Identification of environmental problems to suggest the most appropriate solution for industries.
- Technical and economic feasibility studies of projects.

Volunteer Activities

Dec 2019 – Jun 2020 ▪ Participating in a voluntary laboratory wastewater treatment program at the University of Guilan to attract and promote students' participation in this program.

Software

Programing language:	MATLAB	**Design software:**	AutoCAD
Design of experiment:	Design expert	**MS:**	Microsoft office
Process simulation software:	Aspen plus, Aspen HYSYS, Gambit, Fluent		

Professional Memberships

Jan 2021 - Present Iranian Association of Chemical Engineering (IJChE)

Language

Persian (Native), English