Curriculum Vitae

Fariba Rezvani

Assistant professor,

Environmental and Industrial Biotechnology

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https://scholar.google.com/citations?user=KcWDUzEAAAAJ&hl=en

Education:

Post-doctoral: By Prof. Sarrafzadeh (University of Tehran) (2018-2019)

Ph.D. Chemical Engineering-Biotechnology

Overall GPA: 18.46/20

University: University of Tehran, Tehran, Iran (2014 -2018)

Sabbatical: Korea Research Institute of Bioscience and Biotechnology (KRIBB) (2016-2017, one year)

Title of Thesis: Nitrate Removal from Water Using Photosynthetic Hybrid Granule

M.Sc. Chemical Engineering-Biotechnology

Overall GPA: 17.80/20

University: University of Tehran, Tehran, Iran (2010-2012)

Title of Thesis: Study of self –forming dynamic membrane operation in membrane bioreactor

B.Sc. Chemical engineering-Food Industry (2009)

Overall GPA: 17.58/20

University: University of Mohaghegh Ardabili, Ardebil, Iran (2005-2009)

Publications

Number	Type of articles
13	International peer reviewed articles (WOS indexed)
1	Other international peer reviewed articles
1	Persian peer reviewed conferences
2	International peer reviewed conferences (sKorea)
2	International peer reviewed conferences (Thailand)
1	International peer reviewed conferences (Turkey)
1	International online conferences (France)

1. **Fariba Rezvani***, Mohammad-Hossein Sarrafzadeh, 2023. Basic principles and effective parameters for microalgae-bacteria granulation in wastewater treatment: a mini review. International Journal of Environmental Science and Technology, 20, 3371–3384.
2. **Fariba Rezvani***, Khosrow Rostami, Photobioreactors for utility-scale applications: effect of gas–liquid mass transfer coefficient and other critical parameters. Environmental Science and Pollution Research. 30, 76263–76282
3. Zeinab Rezvani, **Fariba Rezvani**, Selcuk Arslan, 2022, Designing, simulating and technical analysis of a 2 MW on-grid photovoltaic system for agricultural applications. Biomechanism and Bioenergy Research.1, 1-6.
4. Alireza Fallahi, **Fariba Rezvani***, Hashem Asgharnejad, Ehsan Khorshidi Nazloo, Nima Hajinajaf, Brendan Higgins, 2021. Interactions of microalgae-bacteria consortia for nutrient removal from wastewater: A review, Chemosphere. 272, 129878.
5. **Fariba Rezvani**, Mohammad-Hossein Sarrafzadeh, 2020. Autotrophic granulation of hydrogen consumer denitrifiers and microalgae for nitrate removal from drinking water resources at different hydraulic retention times, Journal of Environmental Management. 268, 110674.
6. **Fariba Rezvani**, Mohammad-Hossein Sarrafzadeh, Hee-Mock Oh, 2020. Hydrogen producer microalgae in interaction with hydrogen consumer denitrifiers as a novel strategy for nitrate removal from groundwater and biomass production, Algal Research 45, 101747.
7. **Fariba Rezvani**, Mohammad Hossin Sarrafzadeh, Sirous Ebrahimi, Hee-Mock Oh, 2019. Nitrate Removal from Drinking Water with a Focus on Biological Methods: a review, Environmental Science and Pollution Research, 2, 1124-1141.
8. **Fariba Rezvani**, Mohammad-Hossein Sarrafzadeh, Seong-Hyun Seo, Hee-Mock Oh, 2018. Optimal strategies for bioremediation of nitrate-contaminated groundwater and microalgae biomass production. Environmental Science and Pollution Research. 1-12.
9. **Fariba Rezvani**, Mohammad Reza Mehrnia. 2018. Self-forming dynamic membrane formed on mesh filter coupled with membrane bioreactor at different sludge concentrations. Membrane Water Treatment 9, 255-262.
10. **Fariba Rezvani**, Mohammad-Hossein Sarrafzadeh, Seong-Hyun Seo, Hee-Mock Oh, 2017. Phosphorus optimization for simultaneous nitrate-contaminated groundwater treatment and algae biomass production using Ettlia sp. Bioresource Technology 244, 785-792
11. **Fariba Rezvani**, Mohammad Reza Mehrnia, Amir Ali Poostchi, 2014. Optimal operating strategies of SFDM formation for MBR application, Separation and Purification Technology 124: 124–133.
12. Amir Ali Poostchi, Mohammad Reza Mehrnia, **Fariba Rezvani**, Mohammad Hossein Sarrafzadeh, 2012. Low-cost monofilament mesh filter used in membrane bioreactor process: Filtration characteristics and resistance analysis, Desalination 286: 429–435.
13. Amir Ali Poostchi, Mohammad Reza Mehrnia, **Fariba Rezvani**, 2015. Dynamic membrane behaviors during constant flux filtration in membrane bioreactor coupled with mesh filter, Environmental Technology, 36: 1751-1758.

14. Javad Damirchi, **Fariba Rezvani**, 2011. An integral equation method and regularization method for an inverse heat conduction problem, Journal of Advanced Research in Scientific Computing, 3: 44-56.
15. **Fariba Rezvani**, Mohammad Reza Mehrnia, Amir Ali Poostchi, 2015. The estimation of fouling rates in formation of self-forming dynamic membrane bioreactor, Accepted for **POSTER** presentation in the15th Iranian National Congress of Chemical Engineering, Tehran, Iran.
16. **Fariba Rezvani**, Mohammad Hossin Sarrafzadeh, Sirous Ebrahimi, Hee-Mock Oh, 2016. Autotrophic Nitrate Removal from Water and Its Advantages over Other Methods, Accepted for **ORAL** presentation in the 2nd International Water Industry Conference, Daegu, Korea
17. **Fariba Rezvani**, Mohammad-Hossein Sarrafzadeh, Seong-Hyun Seo, Hee-Mock Oh, 2017. Nitrate contaminated ground water as a potential medium for algae biomass production application, Accepted for **ORAL** presentation in the 2nd International Conference on Alternative Fuels and Energy: Future and Challenges – ICAFE 2017, Daegu, Korea
18. **Fariba Rezvani**, Mohammad Hossin Sarrafzadeh, 2019. A novel approach of nitrate removal from drinking water by using granule of microalgae and hydrogen consumer denitrifier, Accepted for **POSTER** presentation in the first International Conference on Biotechnology, Bioengineering, Biorefinery, and Pollution Prevention, Chulalongkorn University, Bangkok, Thailand
19. **Fariba Rezvani**, Mohammad Hossin Sarrafzadeh, 2019. Optimal operating strategies of hydrogenotrophic denitrification and alga biomass production in nitrate contaminated groundwater, Accepted for **POSTER** presentation in the first International Conference on Biotechnology, Bioengineering, Biorefinery, and Pollution Prevention, Chulalongkorn University, Bangkok, Thailand
20. **Fariba Rezvani**, Mohammad Hossin Sarrafzadeh, 2020. A brief description of drinking water contaminants with a focus on nitrate and its current removal approaches. Accepted for **Poster** presentation in **International Water Resources Association** (IWRA's 2020 Online Conference).
    Available poster in below link: https://iwraonlineconference.org/posters/
21. Zeinab Rezvani, Hamid Mortezapour, Selçuk Arslan, **Fariba Rezvani**, 2022. Energy and environment analysis of a solar absorption chiller. Accepted for ORAL presentation in the 2nd International Conference on Energy, Environment and Storage of Energy, Kayseri, Turkey.

Research Projects:

- Conductor of some research projects as listed below:
  - ✓ The study of nitrate removal from drinking water (funded by IROST, 2021-present)
  - ✓ The study of interactions between *Ettlia* sp.-based microalgae and hydrogen consumer denitrifies for nitrate removal from water resources (funded by INSF, 2019-2020)
  - ✓ Investigation the performance of heterotrophic denitrifiers in interaction with a mixture of microalgae based on *Scenedesmus* to remove nitrate from water under autotrophic condition (funded by INSF, 2022-present)

Honors, Awards

- **University of Tehran (2018),**

Top Ph.D Student among 5 Graduated Students,

- **University of Tehran (2012),**

Top M.Sc Student among 11 Graduated Students,

- **Mohaghegh Ardebili University (2009),**

Top B.Sc Student among 35 Students,

Invention Disclosures and Patents

1) I.R. patent of "Formation of self-forming dynamic membrane in bioreactor on the filter cloth" with patent number and registration date of 78631 and 17/2/2013, respectively: Accepted by Iran's National Elites Foundation (INEF), as well.
2) I.R. patent of "Using of aeration method for membrane formation in dynamic membrane bioreactor" with patent number and registration date of 79792 and 19/6/2013, respectively: Accepted by Iran's National Elites Foundation (INEF), as well.
3) I.R. patent of "A hybrid bioreactor-photobioreactor system for the formation of biogranules in water and wastewater treatment "with patent number and registration date of 101110 and 12/5/2020, respectively.
4) U.S. patent of "Nitrate Removal from Drinking Water" with number of US11261112B2 available at https://patents.google.com/patent/US11261112B2/en

Extra Curriculum Experiences: teaching and research

- **Visiting Professor** at Fouman Faculty of Engineering, University of Tehran, for teaching the courses of "Membrane Separation Technologies" and "Mass and Energy Balance" (2020-2021).
- **Visiting Professor** at Caspian Faculty of Engineering, University of Tehran, for teaching the courses of "Environmental Engineering" and "Water and Wastewater Treatment and Environmental Protection" (2021-2022).
- **Visiting Professor** at Chemical Engineering Department, Faculty of Engineering, University of Tehran, for teaching the course of "Mass and Energy Balance" (2022-2023).
- **Teacher assistant** for "Advanced Environment Engineering" at University of Tehran (2018).
- **Research assistant** and advisor for master projects in UNESCO Chair on Water Reuse at University of Tehran (2016-2019)
- **Reviewer of** 3th congress of Iranian water and wastewater Science and engineering. November. 24-26, 2020 (Shiraz, University of Shiraz)
- **Reviewer of ISI and JCR journals:** Chemosphere, Journal of Environmental Chemical Engineering**,** Journal of Basic Microbiology, Bioresource Technology, Separation and Purification Technology
- **Reviewer of** Intellectual Property Center of the University of Tehran **for PCTs and Patents (2019-2022)**
- **On panels of:** Young and International Kharezmi Festival Awards (2021-2022)

Skills and Qualifications:

- Microsoft Excel (skillful)
- Microsoft PowerPoint (skillful)

- Microsoft Word (skillful)
- Sigma Plot (skillful)
- MATLAB programming and applications (familiar)
- HYSIS (familiar)
- VISIO (skillful)
- COMSOL Multiphysics (familiar)
- SuperPro Designer (familiar)

Research Interests:

- Water and wastewater treatment
- Environmental biotechnology (applying microalga, activated sludge, nutrient removal)
- Membrane bioreactors
- Biological nutrient removal
- Bioreactor and photobioreactor design
- Membrane technologies
- Separation processes
- Environmental engineering