

# Amin Ghaderikia

**Current Location:** Middle East Technical University, Cankaya Ankara/TURKEY

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## Research Interests

Wastewater Engineering, Bioelectrochemical Processes, Biofuel Production, Nutrient Removal and Recovery, Optimization.

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## Education

### Middle East Technical University

M.Sc. Environmental Engineering (December 2022)

• *Thesis:* "Start-Up Strategies for Enhanced Methane Production from Cattle Manure In Bioelectrochemical Systems"

*Supervisor:* Assist. Prof. Dr. Yasemin Dilsad Yilmazel

### Semnan University

M.Sc. Chemical Engineering- Health, Safety and Environment (February 2017)

• *Thesis:* "Optimization of F.G.S Detectors' Layout at Process Facilities"

*Supervisor:* Assoc. Prof. Dr. Mehdi Parvini

### Abadan Institute of Technology

B.S. in Safety and Technical Protection Engineering (September 2013)

• *Thesis:* "On the Carbon-Dioxide Absorption and Storage Methods at the Abadan Iran Refinery"

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## Experiences

**Research assistant** at the Department of Environmental Engineering, Middle East Technical University, Ankara, TURKEY (September 2019 - Present)

- Worked as a Researcher within the Bioprocess Engineering Research Group (BIOERG) at METU on various anaerobic biotechnology topics (<http://yasemindilsad.com/index.html>)
- Growth and maintenance of pure and mixed culture anaerobe microorganisms that required different cultivation procedures
- Design and operation of a batch-fed integrated biomethane production system with anaerobic digestion (AD) and Microbial Electrolysis Cells (MEC)
- Maintenance of instrumental devices such as GC, data acquisition unit, and potentiostat/galvanostat
- Writing the progress and final reports of the national and international projects funding the research

**HSE Consultant** at Semnan Sodium Ash Cooperation, Semnan, Iran. (September 2015- June 2016)

**Intern** at Gachsaran Oil and Gas Production Company, Gachsaran, Iran (September 2010)

**Intern** at East Azerbaijan National Iranian Gas Company, Tabriz, Iran. (September 2009)

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## Scholarship and Funded Projects

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Student Scholarship, Abadan Institute of Technology (2008.09-2013.09)

Methane Production from Cow Manure in Electromethanogenic Reactors (2021.02 - 2022.04)

**Funding:** Middle East Technical University (Ankara) Office of Sponsored Research Program (Grant no: 10776)

Nutrient recovery and high-value fertilizer production from biogas plant wastes (2021.09 - 2022.01)

**Funding:** Royal Academy of Engineering Newton Fund Transforming Systems Through Partnerships Program (Grant no: TSP1283)

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## Publications

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**Ghaderikia, A.**, Taskin, B., & Dilsad, Y. (2023). Start-up strategies of electromethanogenic reactors for methane production from cattle manure. *Waste Management*, 159(January), 27–38. <https://doi.org/10.1016/j.wasman.2023.01.027>.

**Ghaderikia A.** and Yilmazel Y.D., The Impact of Conductive Material Amendment on the Performance of Anaerobic Digestion-Microbial Electrolysis Cell (AD-MEC) Systems. Manuscript in preparation.

### Oral Presentations

**Ghaderikia A.** and Yilmazel Y.D., " Effect of acclimation with different substrates on electrotrophic biofilm formation and performance of electromethanogenic cell ", Abstract accepted for publication, 5th AP-ISMET, 16-18 July 2021. [Online].

**Ghaderikia A.** and Yilmazel Y.D., " The impact of cathode acclimation methods on electrotrophic biofilm formation and performance of electromethanogenic cells ", Abstract accepted for publication, 5th EU-ISMET, 13-15 September 2021. [Online].

**Ghaderikia A.** and Yilmazel Y.D., " The Impact of Conductive Material Amendment on the Performance of Anaerobic Digestion-Microbial Electrolysis Cell (AD-MEC) Systems ", Abstract accepted for publication, 9th International Conference on Sustainable Solid Waste Management Corfu, Greece, 15 - 18 JUNE 2022.

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## Laboratory Skills

Anaerobic Cultivation  
GAS Chromatography  
DNA sample collection, extraction, and analysis  
Electrochemical Analysis (LSV,CV, EIS)

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## Computer Skills

Languages: MATLAB  
Modeling: DNV PHAST, ALOHA, Aermod  
Operating Systems: Windows

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## Languages

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Azeri, Native  
Persian, Native  
Turkish, Fluent  
English, Fluent

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## Certificates

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Anaerobic Treatment of High-Strength Industrial Wastes at Marquette University (Online), (2020)