

Ayşe Dilay Erdali

Ph.D. Student
Department of Chemistry
Bilkent University, 06800, Ankara, Turkey
Email: dilay.erdali@bilkent.edu.tr

Scientific Background:

2020-Present: **Ph.D. in Chemistry**

Department of Chemistry, Bilkent University, Ankara, Turkey.
Supervisor: Prof. Emrah Ozensoy

2017-2020: **M.S. in Chemical Engineering**

Department of Chemical Engineering, Gazi University, Ankara, Turkey
Supervisor: Prof. Meltem Dogan
Thesis: *Investigation of Isobutane Dehydrogenation in Membrane Reactor*

2011-2016: **B.S. in Chemical Engineering**

Department of Chemical Engineering, Gazi University, Ankara, Turkey

Work Experience:

2018-2020: **R&D Engineer**

YEDIC Engineering, METU Technopolis, Ankara, Turkey.

- Hydrogen technologies
- Renewable energy systems
- Adsorption systems, adsorbents for industrial gases
- Managing projects through all stages of product development from initial conception to product release
- Document and reporting skills in project management
- Performing cost analysis and financial engineering to ensure project feasibility
- Developing new process for continually improvement
- Maintaining relationship with customers, partners and vendors

2017-2018: **Long Term Production Intern**

HENKEL, Ankara, Turkey

- Liquid & Powder Detergent Production
- Sulfonation Process
- Follow up OEE/MOEE, KPI in liquid and powder detergent production lines
- Estimating production lines efficiency and reporting to senior managers
- Involved in researching ways to develop improved chemical manufacturing processes
- TPM works, Lean Manufacturing
- SMED, 5S, VM, KAIZEN

July 2016: **Intern**

Eti Mining Operations General Directorate, Kütahya, Turkey.

- Boric Acid Production Plant

August 2015: **Intern**

TAI- TUSAŞ/ Turkish Aerospace Industries, Ankara, Turkey.

- Chemical Processes Treatment, Autopaint Heat Treatment
-

Publications:

1. **Ayşe Dilay Erdali**, Saliha Cetinyokus, Meltem Dogan. "Investigation of Isobutane Dehydrogenation on $\text{CrO}_x/\text{Al}_2\text{O}_3$ Catalyst in a Membrane Reactor." *Chemical Engineering and Processing - Process Intensification* 175 (2022): 108904.
-

Instrumentation:

- FTIR (Fourier-Transform Infrared Spectroscopy)
 - ATR-FTIR (Attenuated Total Reflection)
 - XPS (X-Ray Photoelectron Spectroscopy)
 - SEM-EDX (Scanning Electron Microscopy-Energy-dispersive X-Ray Spectroscopy)
 - Raman Spectroscopy
 - X-Ray Diffraction (XRD)
 - BET Specific Surface Area Analysis (BET-SSA)
 - Gas Chromatography (Gas Chromatography–Mass Spectrometry)
 - ICP-MS (Inductively Coupled Plasma Mass Spectrometry)
-

Research Experiences:

2020-Present: Highly Dispersed Catalytic Active Sites for Ethanol Dry Reforming Reaction

2017-2020: Isobutane Dehydrogenation on Chromia-Alumina Catalysts in a Membrane Reactor

Teaching Experiences:

Analytical Chemistry II Laboratory, *Teaching Assistant* (Spring 2021).

Quantum Chemistry II, *Grader* (Spring 2022).

Trainings, Meetings & Congress:

Feb, 2020. Turkey in Horizon 2020 Accelerator Project Writing Training for SMEs.

Feb, 2020. TSSK 7th Project Fair and Collaboration Summit.

Jan, 2020. Developing International Partnerships Training, Bernard DELCOURT

Nov, 2019. Technology Valuation Training, Kazım YALÇINOĞLU

Nov, 2019. EIF 2019 - 12th International Energy Congress and Expo

Aug, 2019. Bootcamp Climate LaunchPad

Apr, 2019. PCM (Project Cycle Management) Training, Ankara Development Agency

Jan, 2018. Value Stream Mapping, Kaizen Atölyesi

Dec, 2017. IOSH Leading Safely, Doga HSE Group

Sep, 2017. Machinery Safety, PILZ

Aug, 2017. ISO 9001:2015 Quality Management System

Aug, 2016. National Chemical Engineering Congress 2016, Izmir Institute of Technology

Jun, 2016. IV. Entrepreneurship Training Courses, Gazi Technopark.

Projects:

2020- Hydrogen Purification by Pressure Swing Adsorption

Yedic Engineering (TUBITAK 1507 SME R&D Start-up Support Programme)

2020- Development of Production Infrastructure

(KOSGEB R&D, Innovation and Industrial Application Support Program)

2019- REENSO- Renewable Energy Solutions

Yedic Engineering (4th place in national finals Climate LaunchPad Turkey)

2019- REENSO- Renewable Energy Solutions

Yedic Engineering (TechAnkara Project Market 2018 top 100 companies)

2019- Regenerative Hydrogen Dryer

Yedic Engineering (TUBITAK 1507 SME R&D Start-up Support Programme)