



# Elif Demir Arabaci

Yenimahalle/ANKARA

+90537 991-93-00

elifdemirarabaci@gmail.com

linkedin.com/in/elif-demir-arabaci

## About

I am a Ph.D. student and research assistant in the Department of Chemistry at METU. I have extensive experience in small organic molecule synthesis, polymerization, electrochemistry, inorganic synthesis, and theoretical chemistry.

## Education

### Ph.D.(c) | Middle East Technical University | Chemistry

2017 – Current

3.50/4.00, GPA, Thesis Term

My doctoral research is focused on the synthesis and polymerization of donor-acceptor-donor type molecules and the optical, electrochemical, and theoretical investigation of obtained monomers and polymers are investigated by some electroanalytical and spectroscopic, and computational techniques.

### M.Sc. | Middle East Technical University | Chemistry

2015 – 2017

3.50/4.00, GPA

My M.Sc. study was based on the development of catalysts for electrocatalytic hydrogen production from water splitting and their spectroscopic and electrochemical investigation.

### B.Sc. | Middle East Technical University | Chemistry

2010 – 2015

2.88/4.00, GPA

## Experience

### Research Assistant | Middle East Technical University

05.2018 – Continued

### Research Assistant | Atılım University

05.2016 – 02.2018

### Project Support Officer | Arçelik - Dishwasher Plant

10.2015 – 03.2016

## Skills

- Electrochemical Techniques | Use; LSV, CV, EIS, DPV, SWV, Constant current, and constant potential electrolysis,
- Spectroscopic Techniques | Use; UV, Fluorescence, FTIR, NMR

- Computer programs; Office programs, Chemdraw, Origin, MestReNova, Gaussian09

## Research Articles

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- Demir, E., Akbayrak, S., Önal, A. M., Özkar S. 2018. "Nanoceria-Supported Ruthenium(0) Nanoparticles: Highly Active and Stable Catalysts for Hydrogen Evolution from Water", ACS Applied Materials & Interfaces, 10, 6299-6308. doi:10.1021/acsami.7b17469
- Demir, E., Akbayrak, S., Önal, A. M., Özkar S. 2018. "Titania, zirconia and hafnia supported ruthenium(0) nanoparticles: Highly active hydrogen evolution catalysts", Journal of Colloid and Interface Science, 531, 570-577. doi: 10.1016/j.jcis.2018.07.085
- Demir, E., Akbayrak, S., Önal, A. M., Özkar S. 2019. "Ceria supported ruthenium(0) nanoparticles: Highly efficient catalysts in oxygen evolution reaction", Journal of Colloid and Interface Science, 534, 704-710. doi: 10.1016/j.jcis.2018.09.075
- Demir Arabacı, E., Önal, A. M., Özkar, S. 2020. "Ceria Supported Nickel(0) Nanoparticles: A Highly Active and Low-Cost Electrocatalyst for Hydrogen Evolution Reaction", Journal of The Electrochemical Society, 167, 106513. doi: 10.1149/1945-7111/ab9d9

## Congress

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- Demir, E., Akbayrak, S., Önal, A. M., Özkar S. 29. Ulusal Kimya Kongresi, Ankara; 10.09.2017-14.09.2017.
- Demir, E., Akbayrak, S., Önal, A. M., Özkar S. 69th Annual Meeting of the International Society of Electrochemistry, Bologna; 02.09.2018-07.09.2018.

## References

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- Available if requested.