

Res. Asst. PhD MERVE AKBAYRAK

Personal Information

Office Phone: [+90 312 210 5125](tel:+903122105125)

Email: emerve@metu.edu.tr

Web: <https://avesis.metu.edu.tr/emerve>

Address: ODTÜ Kimya Bölümü

International Researcher IDs

ScholarID: y2YjzVkAAAAJ

ORCID: 0000-0003-3283-2146

Publons / Web Of Science ResearcherID: N-5377-2016

ScopusID: 57190229813

Yoksis Researcher ID: 226928

Education Information

Doctorate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Kimya (Dr), Turkey 2016 - Continues

Postgraduate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Kimya (YI) (Tezli), Turkey 2014 - 2016

Undergraduate, Middle East Technical University, Faculty of Arts and Sciences, Department of Chemistry, Turkey 2009 - 2014

Dissertations

Postgraduate, Synthesis and electropolymerization of new hybrid monomers containing carbazole units, Middle East Technical University, Graduate School of Natural and Applied Sciences, Kimya (YI) (Tezli), 2016

Research Areas

Natural Sciences

Academic Titles / Tasks

Research Assistant, Middle East Technical University, Graduate School of Natural and Applied Sciences, kimya bölümü, 2015 - Continues

Published journal articles indexed by SCI, SSCI, and AHCI

- Hunting black color via absorption engineering: EDOT and thiophene-benzothiadiazole based black-to-transmissive copolymer and its electrochromic device application**
Ergün E. G. C., Akbayrak M.
POLYMER, vol.264, pp.125565, 2022 (SCI-Expanded)

- II. **The Utilization of Iridium Nanoparticles Impregnated on Metal Oxides (Ceria, Titania, and Zirconia) with a Simple and Ecologically Safe Synthesis Approach in Oxygen Evolution Reactions**
AKBAYRAK M., ÖNAL A. M.
Journal of the Electrochemical Society, vol.169, no.7, 2022 (SCI-Expanded)
- III. **Metal oxides supported cobalt nanoparticles: Active electrocatalysts for oxygen evolution reaction**
AKBAYRAK M., ÖNAL A. M.
ELECTROCHIMICA ACTA, vol.393, 2021 (SCI-Expanded)
- IV. **High Durability and Electrocatalytic Activity Toward Hydrogen Evolution Reaction with Ultralow Rhodium Loading on Titania**
AKBAYRAK M., ÖNAL A. M.
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, vol.167, no.15, 2020 (SCI-Expanded)
- V. **Binder- free iridium based electrocatalysts: Facile preparation, high activity and outstanding stability for hydrogen evolution reaction in acidic medium**
AKBAYRAK M., ÖNAL A. M.
JOURNAL OF COLLOID AND INTERFACE SCIENCE, vol.580, pp.11-20, 2020 (SCI-Expanded)
- VI. **Efficient Ceria-Supported Rhodium Nanoparticles as an Electrocatalyst for Hydrogen Evolution**
Akbayrak M., Önal A. M.
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, vol.166, no.16, 2019 (SCI-Expanded)
- VII. **Synthesis and electro-optical properties of a new copolymer based on EDOT and carbazole**
AKBAYRAK M., ERGÜN E. G. C., ÖNAL A. M.
DESIGNED MONOMERS AND POLYMERS, vol.19, no.7, pp.679-687, 2016 (SCI-Expanded)
- VIII. **Synthesis and electrochemical polymerization of diketopyrrolopyrrole based donor-acceptor-donor monomers containing 3,6-and 2,7-linked carbazoles**
Akbayrak M., Önal A. M.
POLYMER CHEMISTRY, vol.7, pp.6110-6119, 2016 (SCI-Expanded)
- IX. **Effect of Thiophene Units on the Properties of Donor Acceptor Type Monomers and Polymers Bearing Thiophene-Benzothiadiazole- Scaffolds**
Cansu-Ergun E. G., AKBAYRAK M., AKDAĞ A., ÖNAL A. M.
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, vol.163, no.10, 2016 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

- I. **Highly Durable Rhodium Nanoparticles Supported on Titania as an Electrocatalyst for Hydrogen Evolution Reaction via Electrochemical Water Splitting**
Akbayrak M., Önal A. M.
3rd International Hydrogen Energy Conference and Exhibitions, Ankara, Turkey, 14 - 16 June 2021, pp.142
- II. **Iridium Nanoparticles on Ceria for Hydrogen Evolution Reaction in Acidic Medium**
Akbayrak M., Önal A. M.
3 rd International HydrogenEnergy Congress&Exhibitions, Ankara, Turkey, 14 - 16 June 2021, pp.143
- III. **Synthesis and Electrochemical Polymerization of Diketopyrrolopyrrole Based Donor-Acceptor-Donor Monomers Containing 3,6- and 2,7-linked Carbazoles**
ÖNAL A. M., AKBAYRAK M.
The 69th Annual Meeting of the International Society of Electrochemistry, 2 - 07 September 2018
- IV. **SYNTHESIS AND ELECTROPOLYMERIZATION OF NEW HYBRID MONOMERS CONTAINING CARBAZOLE UNITS**
AKBAYRAK M., ÖNAL A. M.
International Congress on Semiconductor Materials and Devices (ICSMD-2017), 17 August 2016 - 19 August 2017
- V. **Karbazol Birimleri İçeren Yeni Hibrit Monomerlerin Sentezi Ve Elektrokimyasal Polimerizasyonu**
AKBAYRAK M., ÖNAL A. M.
29. Ulusal Kimya Kongresi, Turkey, 10 - 14 September 2017

Metrics

Publication: 14

Citation (WoS): 53

Citation (Scopus): 43

H-Index (WoS): 5

H-Index (Scopus): 4

Congress and Symposium Activities

3 rd International HydrogenEnergy Congress&Exhibitions, Attendee, Ankara, Turkey, 2021

3 rd International HydrogenEnergy Congress&Exhibitions, Attendee, Ankara, Turkey, 2021