

## **Asst. Prof. ZELİHA ERTEKİN**

### **Personal Information**

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### **International Researcher IDs**

ORCID: 0000-0001-6106-7987

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### **Education Information**

Doctorate, Hacettepe University, Fen Bilimleri Enstitüsü, Analitik Kimya, Turkey 2011 - 2016

Postgraduate, Akdeniz University, Institute Of Science, Analitik Kimya, Turkey 2008 - 2011

Undergraduate, Ankara University, Fen Fakültesi, Turkey 2003 - 2008

### **Foreign Languages**

English, C1 Advanced

### **Dissertations**

Doctorate, Susuz Ortamda TiO<sub>x</sub> Filmlerinin Elektrokimyasal Olarak Hazırlanması ve Karakterizasyonu, Hacettepe Üniversitesi, Fen Bilimleri Enstitüsü, Kimya (Dr), 2016

Postgraduate, Metal iyonlarının sulu çözeltilerden Aktif Karbon Kumaşı üzerine adsorpsiyon ve elektrosorpsiyonlarının iyon seçici elektrotlar kullanarak incelenmesi, Akdeniz Üniversitesi, Fen Fakültesi, Kimya Bölümü, 2011

### **Research Areas**

Chemistry, Analytical Chemistry, Spectroscopical Methods, Natural Sciences

### **Academic Titles / Tasks**

Research Assistant, Hacettepe University, Fen Fakültesi, Kimya Bölümü, 2010 - Continues

Research Assistant, Akdeniz University, Faculty Of Science, Department Of Chemistry, 2009 - 2010

### **Published journal articles indexed by SCI, SSCI, and AHCI**

#### **I. Evaluating the native oxide of titanium as an electrocatalyst for oxalic acid reduction**

Sale H., ERTEKİN Z., Lalaguna P. L., Kadodwala M., Symes M. D.

CHEMICAL COMMUNICATIONS, no.47, pp.6003-6006, 2024 (SCI-Expanded)

#### **II. Enhanced ultrasonic degradation of methylene blue using a catalyst-free dual-frequency treatment**

- Yusuf L. A., ERTEKİN Z., Fletcher S., Symes M. D.  
Ultrasonics Sonochemistry, vol.103, 2024 (SCI-Expanded)
- III. **Catalytic performance on the water decontamination and the water-splitting electrolysis of new phosphite salts ( $\text{enH}_2\text{M}(\text{H}_2\text{O})_6\text{HPO}_3\text{O}_2$  ( $\text{M}=\text{Co, Ni and Mg}$ )**  
Akouibaa M., El Bali B., Poupon M., Ouarsal R., Lachkar M., More-chevalier J., Pokorny J., Eigner V., Dusek M., Symes M. D., et al.  
Journal of Applied Electrochemistry, 2024 (SCI-Expanded)
- IV. **Room temperature electro-carboxylation of styrene and stilbene derivatives: A comparative study**  
Alhathlaul N., ERTEKİN Z., Sproules S., Symes M. D.  
Journal of Electroanalytical Chemistry, vol.950, 2023 (SCI-Expanded)
- V. **Metal-phthalocyanine complexes as electrocatalysts for the multi-electron reduction of carbon dioxide**  
ERTEKİN Z., Symes M. D.  
Applied Catalysis A: General, vol.666, 2023 (SCI-Expanded)
- VI. **A simple in situ deposition of metal alloys on graphite surface based on Sb, Bi, Cu, and Sn as an electrocatalyst for  $\text{V}-3(+)/\text{V}-2(+) \text{ redox reaction}$**   
ÖZÇELİK N., ERTEKİN Z., Pekmez N., PEKMEZ K.  
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.46, no.15, pp.22001-22013, 2022 (SCI-Expanded)
- VII. **The electrochemical performance of manganese oxoborate cathodes for lithium-ion batteries: Effect of synthesis method**  
ERTEKİN Z., Ozgenc G., ÖZER D., İÇTEN O., Elmacı G., Kose D., PEKMEZ K., KARAN B.  
Ceramics International, vol.47, no.24, pp.35312-35319, 2021 (SCI-Expanded)
- VIII. **Manganese Oxoborate-Based Nanostructures as Novel Oxygen Evolution Catalysts in Neutral Media**  
ELMACI G., İÇTEN O., ÖZER D., Ozgenc G., ERTEKİN Z., KÖSE D. A., PEKMEZ K., Zumreoglu-Karan B.  
CHEM NANOMAT, vol.7, no.12, pp.1340-1347, 2021 (SCI-Expanded)
- IX. **Synthetic routes to manganese oxoborate and correlations between experimental parameters and properties**  
İÇTEN O., Ozgenc G., ÖZER D., Kose D., Elmacı G., ERTEKİN Z., PEKMEZ K., KARAN B.  
Ceramics International, vol.47, pp.17353-17360, 2021 (SCI-Expanded)
- X. **Room temperature electrosynthesis of  $\text{Ti}_{n-1}\text{O}_{2n-1}$  film and its bilayer with PNMPy on mild steel for corrosion protection in sulphuric acid**  
Pekmez N. O., Ugur M., KARACA E., ERTEKİN Z., PEKMEZ K.  
ELECTROCHIMICA ACTA, vol.376, 2021 (SCI-Expanded)
- XI. **Application of EIS technique to investigate the adsorption of different types of depressants on pyrite**  
ERTEKİN Z., PEKMEZ K., Kappes R., EKMEKÇİ Z.  
PHYSICOCHEMICAL PROBLEMS OF MINERAL PROCESSING, vol.57, no.3, pp.112-126, 2021 (SCI-Expanded)
- XII. **One-step electrochemical deposition of thin film titanium suboxide in basic titanyl sulfate solution at room temperature**  
ERTEKİN Z., Pekmez N., PEKMEZ K.  
JOURNAL OF SOLID STATE ELECTROCHEMISTRY, vol.24, no.4, pp.975-986, 2020 (SCI-Expanded)
- XIII. **Electrosynthesis and characterizations of electrochromic and soluble polymer films based on N-substituted carbazole derivates**  
Elkhidr H. E., ERTEKİN Z., Udum Y. A., PEKMEZ K.  
SYNTHETIC METALS, vol.260, 2020 (SCI-Expanded)
- XIV. **Fuel effects on  $\text{Li}_2\text{CuP}_2\text{O}_7$  synthesized by solution combustion method for lithium-ion batteries**  
ÖZER D., ERTEKİN Z., PEKMEZ K., Oztas N. A.  
CERAMICS INTERNATIONAL, vol.45, no.4, pp.4626-4630, 2019 (SCI-Expanded)
- XV. **Evaluation of collector adsorption by electrochemical impedance spectroscopy**  
ERTEKİN Z., PEKMEZ K., EKMEKÇİ Z.  
INTERNATIONAL JOURNAL OF MINERAL PROCESSING, vol.154, pp.16-23, 2016 (SCI-Expanded)
- XVI. **Cathodic electrochemical deposition of Magneli phases  $\text{Ti}_{n-1}\text{O}_{2n-1}$  thin films at different temperatures**

**in acetonitrile solution**

ERTEKİN Z., Tamer U., PEKMEZ K.

ELECTROCHIMICA ACTA, vol.163, pp.77-81, 2015 (SCI-Expanded)

- XVII. **Comparison of the catalytic efficiency of synthesized nano tin oxide particles and various catalysts for the pyrolysis of hazelnut shell**

Gokdai Z., Sinag A., Yumak T.

BIOMASS & BIOENERGY, vol.34, no.3, pp.402-410, 2010 (SCI-Expanded)

## **Articles Published in Other Journals**

- I. **In Situ Characterization of the Locked Particle Behavior of Sulfide Minerals Using Non-Destructive Electrochemical Measurements**

İZERDEM D., ERTEKİN Z.

Dokuz Eylül Üniversitesi Mühendislik Fakültesi Fen ve Mühendislik Dergisi, 2023 (Peer-Reviewed Journal)

## **Refereed Congress / Symposium Publications in Proceedings**

- I. **Electrochemical detection of thiosulfate in the presence of sulfate ion using stainless steel electrode modified by gold**

ERTEKİN Z., PEKMEZ K., CAN N. M., EKMEKÇİ Z.

Flotation 19 CapeTown South Africa, 11 - 14 November 2019

- II. **Solution Combustion Synthesis of Lithium Copper Pyrophosphate for Lithium-ion Batteries**

ÖZER D., ERTEKİN Z., ALTUNTAŞ ÖZTAŞ N., PEKMEZ K.

THE INTERNATINONAL CONFERENCE ONMATERIALS SCIENCE MECHANICAL ANDAUTOMOTIVE ENGINEERINGS ANDTECHNOLOGY IN ÇEŞME/İZMİR (IMSMATEC'18), 10 - 12 April 2018

- III. **Use of EIS to investigate of adsorption of NaCN and Na<sub>2</sub>S<sub>2</sub>O<sub>5</sub> on pyrite**

ERTEKİN Z., EKMEKÇİ Z., PEKMEZ K.

10th International Conference on Instrumental Methods of Analysis: Modern Trends and Applications, 17 - 21 September 2017

- IV. **Pirit Oksidasyonunun Elektrokimyasal Yöntemlerle İncelenmesi**

ERTEKİN Z., PEKMEZ K., EKMEKÇİ Z.

29. Ulusal Kimya Kongresi, Turkey, 10 - 14 September 2017

- V. **Characterization of electrosynthesized coloured TiO<sub>x</sub> thin films electrodes**

ERTEKİN Z., PEKMEZ K.

67th Annual Meeting of the International Society of Electrochemistry, Hague, Netherlands, 21 - 26 August 2016, pp.136

- VI. **A simple method of TiO<sub>x</sub> thin film electrodeposition from basic titanyl sulfate solution**

ERTEKİN Z., PEKMEZ K.

11th International Symposium on Electrochemical Micro & Nanosystem Technologies (EMNT2016), Brüksel, Belgium, 17 - 19 August 2016, pp.102

- VII. **Surface characterization of Pyrite using electrochemical techniques**

ERTEKİN Z., PEKMEZ K., EKMEKÇİ Z.

XIV.INTERNATIONAL MINERAL PROCESSING SYMPOSIUM AND EXHIBITION, IMPS 2014, İzmir, Turkey, 15 - 17 October 2014

- VIII. **Investigation of adsorption and electrosorption of metal ions from aqueous solutions onto activated carbon cloth using ion selective electrodes and ICP spectroscopy**

AYRANCI E., ERTEKİN Z., BAYRAM E.

XVII European Conference on Analytical Chemistry, EUROANALYSIS 2013, 25 - 29 August 2013

## **Supported Projects**

ERTEKİN Z., PEKMEZ K., Uğur M., Karaca E., Project Supported by Higher Education Institutions, Farklı elektrot malzemeleri üzerinde titanyum sub-oksit ince filmlerinin asetonitril çözeltisinde elektrokimyasal olarak biriktirilmesi, 2017 - 2018

ERTEKİN Z., Project Supported by Higher Education Institutions, EIS yöntemi kullanılarak pirit yüzeyinde NaCN ve Na<sub>2</sub>S<sub>2</sub>O<sub>5</sub> adsorpsiyonunun incelenmesi, 2017 - 2017

ERTEKİN Z., Project Supported by Higher Education Institutions, Pirit Oksidasyonunun Elektrokimyasal Yöntemlerle İncelenmesi, 2017 - 2017

PEKMEZ K., ERTEKİN Z., Project Supported by Higher Education Institutions, Bazik titanil sülfat çözeltisinden basit bir yöntemle TiO<sub>x</sub> ince film elektrokimyasal biriktirilmesi, 2016 - 2016

PEKMEZ K., ERTEKİN Z., Project Supported by Higher Education Institutions, 67inci uluslararası elektrokimya konferansına katılım, 2016 - 2016

PEKMEZ K., ERTEKİN Z., Project Supported by Higher Education Institutions, Susuz ortamda TiO<sub>x</sub> filmlerinin elektrokimyasal olarak hazırlanması, karakterizasyonu ve fotovoltaik özelliklerinin incelenmesi, 2014 - 2015

## **Metrics**

Publication: 27

Citation (WoS): 62

Citation (Scopus): 86

H-Index (WoS): 4

H-Index (Scopus): 5

## **Non Academic Experience**

University of Glasgow

Aalto Üniversitesi

RWTH Aachen Üniversitesi

Ghent Üniversitesi- Pfizer Analytical Research Centre

Ghent Üniversitesi