

## Asst. Prof. ÖZLEM EROL

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: GNM-5984-2022

Yoksis Researcher ID: 297743

### Education Information

Doctorate, Gazi University, Fen Bilimleri Enstitüsü, Kimya (Dr), Turkey 2008 - 2014

Postgraduate, Gazi University, Fen Bilimleri Enstitüsü, Kimya (YI) (Tezli), Turkey 2006 - 2008

Undergraduate, Gazi University, Gazi Eğitim Fakültesi, Matematik ve Fen Bilimleri Eğitimi, Turkey 2001 - 2006

### Dissertations

Doctorate, Farklı geometrilerde, kendiliğinden düzenlenmeyle yüzeyi modifiye edilmiş TiO<sub>2</sub>/iletken polimer çekirdek/kabuk yapılı hibrit nanokompozitlerin kolloidal ve elektroeolojik karakterizasyonu, Gazi University, Fen Bilimleri Enstitüsü, Kimya (Dr), 2014

Postgraduate, Poliindol/montmorillonit nanokompozit sentezi, karakterizasyonu ve elektroeolojik özelliklerinin araştırılması, Gazi University, Fen Bilimleri Enstitüsü, Kimya (YI) (Tezli), 2008

### Research Areas

Chemistry, Physical Chemistry, Natural Sciences

### Academic Titles / Tasks

Assistant Professor, Gazi University, Fen Fakültesi, Kimya, 2019 - Continues

Lecturer, Baskent University, Faculty Of Engineering, 2018 - 2019

### Academic and Administrative Experience

Fakülte Yönetim Kurulu Üyesi, Gazi University, Fen Fakültesi, 2020 - Continues

Deputy Head of Department, Gazi University, Fen Fakültesi, Kimya Bölümü, 2020 - 2023

Fakülte Akademik Kurul Üyesi, Gazi University, Fen Fakültesi, 2019 - 2022

### Courses

Mathematics for Chemist and Comp., Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020  
General Chemistry-I, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020  
Chemistry Laboratory, Undergraduate, 2023 - 2024  
General Chemistry Laboratory, Undergraduate, 2021 - 2022  
General Chemistry-II, Undergraduate, 2021 - 2022, 2020 - 2021  
Colloid Chemistry, Postgraduate, 2020 - 2021  
Kimya-I, Undergraduate, 2017 - 2018  
Genel Kimya Laboratuvarı, Undergraduate, 2017 - 2018

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

- I. **The effect of different enzymatic pretreatment processes on the production of nanocellulose from wheat straw** Buğday sapından nanoselüloz üretiminde farklı enzimatik ön muamele işlemlerinin etkisi  
Sertkaya S., Arslan R., Tozluoğlu A., Fidan H., EROL Ö., ÜNAL H. İ., CANDAN Z.  
Journal of the Faculty of Engineering and Architecture of Gazi University, vol.38, no.4, pp.2055-2067, 2023 (SCI-Expanded)
- II. **Recent advances in bioactive 1D and 2D carbon nanomaterials for biomedical applications**  
EROL Ö., Uyan I., Hatip M., Yilmaz C., Tekinay A. B., Guler M. O.  
NANOMEDICINE-NANOTECHNOLOGY BIOLOGY AND MEDICINE, vol.14, no.7, pp.2433-2454, 2018 (SCI-Expanded)
- III. **Biocompatible Electroactive Tetra(aniline)-Conjugated Peptide Nanofibers for Neural Differentiation**  
Arioz I., EROL Ö., Bakan G., Dikecoglu F. B., Topal A. E., Urel M., Dana A., Tekinay A. B., Guler M. O.  
ACS APPLIED MATERIALS & INTERFACES, vol.10, no.1, pp.308-317, 2018 (SCI-Expanded)
- IV. **Core/shell-structured, covalently bonded TiO<sub>2</sub>/poly(3,4-ethylenedioxythiophene) dispersions and their electrorheological response: the effect of anisotropy**  
EROL Ö., Unal H. İ.  
RSC ADVANCES, vol.5, no.125, pp.103159-103171, 2015 (SCI-Expanded)
- V. **Effects of Different Polymerization Protocols on the Degree of Conversion of Two Dual-Cured Core Buildup Composites Polymerized by Light-Emitting Diode and Halogen Light-Curing Units**  
KARAKIŞ D., YILDIRIM BİÇER A. Z., EROL Ö., DOĞAN A.  
JOURNAL OF APPLIED POLYMER SCIENCE, vol.131, no.15, 2014 (SCI-Expanded)
- VI. **Effect of surfactant on electrokinetic properties of polyindole/TiO<sub>2</sub>-conducting nanocomposites in aqueous and nonaqueous media**  
ÜNAL H. İ., Sahan B., EROL Ö.  
COLLOID AND POLYMER SCIENCE, vol.292, no.2, pp.499-509, 2014 (SCI-Expanded)
- VII. **Quaternized-poly(N-yinylimidazole)/montmorillonite nanocomposite: Synthesis, characterization and electrokinetic properties**  
ÜNAL H. İ., EROL Ö., Gumus O. Y.  
COLLOIDS AND SURFACES A-PHYSICO-CHEMICAL AND ENGINEERING ASPECTS, vol.442, pp.132-138, 2014 (SCI-Expanded)
- VIII. **Synthesis, characterization and electrorheological properties of biodegradable chitosan/bentonite composites**  
Cabuk M., Yavuz M., Unal H. İ., EROL Ö.  
CLAY MINERALS, vol.48, no.1, pp.129-141, 2013 (SCI-Expanded)
- IX. **Effect of surface properties on the electrorheological response of hematite/silicone oil dispersions**  
EROL Ö., Ramos-Tejada M. d. M., ÜNAL H. İ., Delgado A. V.  
JOURNAL OF COLLOID AND INTERFACE SCIENCE, vol.392, pp.75-82, 2013 (SCI-Expanded)
- X. **The negative and positive electrorheological behavior and vibration damping characteristics of colemanite and polyindene/colemanite conducting composite**  
Cetin B., Unal H. İ., EROL Ö.

SMART MATERIALS AND STRUCTURES, vol.21, no.12, 2012 (SCI-Expanded)

- XI. **Electrokinetic and electrorheological properties of poly(vinyl chloride)/polyindole conducting composites**  
Koyuncu K., Ünal H. İ., Gumus O. Y., Erol Ö., Sarı B., Ergin T.  
POLYMERS FOR ADVANCED TECHNOLOGIES, vol.23, no.11, pp.1464-1472, 2012 (SCI-Expanded)
- XII. **Electrorheological properties of polyaniline/K-feldspar conducting composite**  
EROL Ö., Karakışla M., ÜNAL H. İ., SAÇAK M.  
JOURNAL OF COMPOSITE MATERIALS, vol.46, no.11, pp.1295-1304, 2012 (SCI-Expanded)
- XIII. **Polyindene/organo-montmorillonite conducting nanocomposites. II. electrorheological properties**  
Guzel S., EROL Ö., ÜNAL H. İ.  
JOURNAL OF APPLIED POLYMER SCIENCE, vol.124, no.6, pp.4935-4944, 2012 (SCI-Expanded)
- XIV. **SYNTHESIS, CHARACTERIZATION, AND ELECTROKINETIC PROPERTIES OF POLYINDENE/COLEMANITE CONDUCTING COMPOSITE**  
Cetin B., ÜNAL H. İ., EROL Ö.  
CLAYS AND CLAY MINERALS, vol.60, no.3, pp.300-314, 2012 (SCI-Expanded)
- XV. **Investigation of electrokinetic and electrorheological properties of polyindole prepared in the presence of a surfactant**  
ÜNAL H. İ., Sahan B., EROL Ö.  
MATERIALS CHEMISTRY AND PHYSICS, vol.134, no.1, pp.382-391, 2012 (SCI-Expanded)
- XVI. **Polyindene/organo-montmorillonite conducting nanocomposites. I. Synthesis, characterization, and electrokinetic properties**  
Guzel S., ÜNAL H. İ., EROL Ö., SARI B.  
JOURNAL OF APPLIED POLYMER SCIENCE, vol.123, no.5, pp.2911-2922, 2012 (SCI-Expanded)
- XVII. **Electrorheology and creep-recovery behavior of conducting polythiophene/poly(oxymethylene)-blend suspensions**  
EROL Ö., ÜNAL H. İ., SARI B.  
CHINESE JOURNAL OF POLYMER SCIENCE, vol.30, no.1, pp.16-25, 2012 (SCI-Expanded)
- XVIII. **Polythiophene/Borax Conducting Composite II: Electrorheology and Industrial Applications**  
Gumus O. Y., EROL Ö., ÜNAL H. İ.  
POLYMER COMPOSITES, vol.32, no.5, pp.756-765, 2011 (SCI-Expanded)
- XIX. **Synthesis, Characterization, and Colloidal Properties of Polythiophene/Borax Conducting Composite**  
Gumus O. Y., ÜNAL H. İ., EROL Ö., SARI B.  
POLYMER COMPOSITES, vol.32, no.3, pp.418-426, 2011 (SCI-Expanded)
- XX. **Synthesis, Electrorheology, and Creep Behaviors of In Situ Intercalated Polyindole/Organo-Montmorillonite Conducting Nanocomposite**  
EROL Ö., ÜNAL H. İ., SARI B.  
POLYMER COMPOSITES, vol.31, no.3, pp.471-481, 2010 (SCI-Expanded)
- XXI. **Electrorheological behavior of biodegradable modified corn starch/corn oil suspensions**  
YAVUZ M., TILKI T., Karabacak C., EROL Ö., ÜNAL H. İ., Uluturk M., Cabuk M.  
CARBOHYDRATE POLYMERS, vol.79, no.2, pp.318-324, 2010 (SCI-Expanded)
- XXII. **Synthesis, electrorheology and creep behavior of polyindole/polyethylene composites**  
SARI B., Yavas N., Makulogullari M., EROL Ö., ÜNAL H. İ.  
REACTIVE & FUNCTIONAL POLYMERS, vol.69, no.11, pp.808-815, 2009 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Genotoxicity of Two Nanoparticles: Titanium Dioxide and Zinc Oxide**  
ÜNAL F., Demirtas Korkmaz F., Suludere Z., EROL Ö., YÜZBAŞIOĞLU D.  
GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.34, no.4, pp.948-958, 2021 (ESCI)

## Books & Book Chapters

- I. **Recent Developments in the Use of Polyaniline-Based Materials for Electric and Magnetic Field Responsive Smart Fluids**  
Erol Ö.  
in: Trends and Developments in Modern Applications of Polyaniline, Florin Năstase, Editor, IntechOpen, Rijeka, pp.1-28, 2023
- II. **Assembly of Non-Aqueous Colloidal Dispersions under External Electric Field**  
Ünal H. I., Erol Ö., Ersöz M.  
in: Colloid and Interface Chemistry for Nanotechnology, Peter Kralchevsky, Reinhard Miller, Francesca Ravera, Editor, CRC, New York, Florida, pp.167-176, 2014

## Refereed Congress / Symposium Publications in Proceedings

- I. **Preparation and self-assembly of bio-conjugated electroactive tetra(aniline)**  
Erol Ö., Faul C. F.  
3rd International Eurasian Conference on Science, Engineering and Technology (EurasianSciEnTech 2021), Ankara, Turkey, 15 - 17 December 2021, pp.477-483
- II. **Genotoxicity Of Two Nanoparticles: Titanium Dioxide And Zinc Oxide**  
Ünal F., Korkmaz F. D., Suludere Z., Erol Ö., Yüzbaşıoğlu D.  
ICMATSE 2020 International Conference On Advanced Materials Science & Engineering And High Tech Device Applications, 2 - 04 October 2020, pp.48-49
- III. **In vitro genotoxic effects of cerium oxide nanopartices by comet assay.**  
Saygılı Y., Ünal F., Suludere Z., Erol Ö., Yüzbaşıoğlu D.  
3rd International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2020), Ankara, Turkey, 19 - 20 March 2020
- IV. **Effect of Defibrillation on Electric Field Response of Sepiolite**  
EROL Ö., ÜNAL H. İ.  
The Porous and Powder Materials Symposium and Exhibitions, Muğla, Turkey, 9 - 11 October 2019
- V. **Assesment of Iron Oxide Nanoparticle Genotoxicity in Human Peripheral Lymphocytes In vitro**  
YASEMİN S., ÜNAL F., SULUDERE Z., EROL Ö., YÜZBAŞIOĞLU D.  
11th Nanoscience and Nanotechnology Conference, 22 June - 25 November 2015
- VI. **Assessment of Iron Oxide Nanoparticle Genotoxicity in Human Peripheral Lymphocytes in vitro**  
SAYGILI Y., ÜNAL F., SULUDERE Z., EROL Ö., YÜZBAŞIOĞLU D.  
11th Nanoscience and Nanotechnology Conference (Nano TR-11), 23 - 25 June 2015
- VII. **Bakır Oksit Nanopartiküllerinin İnsan Lenfositlerinde In Vitro Genotoksik Etkileri**  
YASEMİN S., ÜNAL F., SULUDERE Z., EROL Ö., YÜZBAŞIOĞLU D.  
22. Ulusal Biyoloji Kongresi, Turkey, 23 - 27 June 2014
- VIII. **Genotoxicity Induced by Amorphous Silica Nanoparticles**  
YASEMİN S., ÜNAL F., SULUDERE Z., EROL Ö., YÜZBAŞIOĞLU D.  
3rd International Molecular Biology and Biotechnology Congress, Sarajevo Bosnia, 2 - 06 June 2014
- IX. **Genotoxic Effect of Copper Oxide Nanoparticles on Human Lymphocytes by Comet Assay**  
YASEMİN S., ÜNAL F., EROL Ö., SULUDERE Z., YÜZBAŞIOĞLU D.  
3rd International Molecular Biology and Biotechnology Congress, 2 - 06 June 2014
- X. **Geneotoxic Effect of Copper Oxide Nanoparticles on Human Lymphocytes by Comet Assay**  
SAYGILI Y., ÜNAL F., EROL Ö., SULUDERE Z., YÜZBAŞIOĞLU D.  
3rd International Molecular Biology and Biotechnology Congress, 2 - 06 June 2014
- XI. **Genotoxicity Induced by Silica Nanoparticles**  
SAYGILI Y., ÜNAL F., SULUDERE Z., EROL Ö., YÜZBAŞIOĞLU D.  
3rd International Molecular Biology and Biotechnology Congress, Saray Bosna, Bosnia And Herzegovina, 2 - 06

June 2014

- XII. **Electrorheological response of polyindene/colemanite conducting composite**  
Unal H. İ., Cetin B., EROL Ö.  
13th International Conference on Electrorheological Fluids and Magnetorheological Suspensions (ERMR), Ankara, Turkey, 2 - 06 July 2012, vol.412
- XIII. **Titanyum dioksit nanopartiküllerinin in vitro insan lenfositlerindeki genotoksik etkileri**  
DEMİRTAŞ KORKMAZ F., ÜNAL F., EROL Ö., SULUDERE Z., YÜZBAŞIOĞLU D.  
The First International Biology Congress, Bishkek, Kyrgyzstan, 24 - 26 September 2012
- XIV. **Genotoxicity of zinc oxide nanoparticles in human lymphocytes assessed by comet assay**  
DEMİRTAŞ KORKMAZ F., ÜNAL F., EROL Ö., SULUDERE Z., YÜZBAŞIOĞLU D.  
40th Annual Meeting of the European Environmental Mutagen Society, Oslo, Norway, 15 - 18 September 2010
- XV. **Titanium dioxide (TiO<sub>2</sub>) genotoxicity in human lymphocytes assessed by the alkaline comet assay**  
DEMİRTAŞ KORKMAZ F., ÜNAL F., SULUDERE Z., EROL Ö., ÜNAL H. İ., YÜZBAŞIOĞLU D., TANER G.  
Nanobilim ve Nanoteknoloji Konferansı (NanoTR6), İzmir, Turkey, 15 - 18 June 2010
- XVI. **Politiyofen/Boraks Kompozitin Sentezi ve Karakterizasyonu**  
Gümüş Ö. Y., Erol Ö., Sarı B., Ünal H. İ.  
23. Ulusal Kimya Kongresi, Sivas, Turkey, 16 - 20 June 2009, pp.386
- XVII. **Poliindol/Polietilen Kompozitin Elektoreolojik Özelliklerinin İncelenmesi**  
Makuloğulları M., Erol Ö., Ünal H. İ., Sarı B.  
23. Ulusal Kimya Kongresi, Sivas, Turkey, 16 - 20 June 2009, pp.88

## Supported Projects

Ünal H. İ., TÜBİTAK - AB COST Project, Yüzeyi modifiye edilmiş farklı geometrilerde TiO<sub>2</sub> üzerinde iletken polimerlerin kendiliğinden düzenlenmesiyle oluşan merkez-kabuk yapıları hibrit nanotaneçiklerin koloidal ve elektoreolojik özelliklerinin araştırılması, 2012 - 2014

Sarı B., Yavuz M., Ünal H. İ., TÜBİTAK Project, Çeşitli İletken Polimer Nano-kompozitlerin Elektoreolojik Özelliklerinin İncelenmesi ve Endüstriyel Uygulanabilirliğinin Araştırılması, 2008 - 2010

## Memberships / Tasks in Scientific Organizations

Turkish Chemical Society, Member, 2023 - Continues, Turkey

## Scientific Refereeing

JOURNAL OF COMPOSITE MATERIALS, SCI Journal, October 2023  
RSC ADVANCES, Journal Indexed in SCI-E, March 2017  
RSC ADVANCES, Journal Indexed in SCI-E, October 2016

## Scientific Consultations

Gazi University, Project Consultancy, Gazi University, Fen Fakültesi, Kimya, Turkey, 2022 - Continues

## Metrics

Publication: 48  
Citation (WoS): 510

Citation (Scopus): 535

H-Index (WoS): 14

H-Index (Scopus): 14

## **Non Academic Experience**

University of Bristol, School of Chemistry