

## Assoc. Prof. MERYEM KALKAN ERDOĞAN

### Personal Information

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### International Researcher IDs

ScholarID: OSUir7kAAAAJ

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Publons / Web Of Science ResearcherID: X-5672-2019

ScopusID: 57191597475

Yoksis Researcher ID: 173653

### Education Information

Doctorate, Ankara University, Fen Bilimleri Enstitüsü, Kimya (Dr), Turkey 2011 - 2017

Postgraduate, Ankara University, Fen Bilimleri Enstitüsü, Kimya (YI) (Tezli), Turkey 2008 - 2011

Undergraduate, Gazi University, Fen Fakültesi, Kimya Bölümü, Turkey 2004 - 2008

### Foreign Languages

English, B2 Upper Intermediate

### Dissertations

Doctorate, Polyester kumaşların indigo boyar maddeleri ile boyanabilirliğinin geliştirilmesi için poli(Vinil alkol) ve modifiye poli(Vinil alkol) polimerleri ile modifiye edilmesi, Ankara University, Fen Bilimleri Enstitüsü, Kimya (Dr), 2017  
Postgraduate, İletken politiyofen/poli (etilen teraftalat) kompozit liflerinin hazırlanması, karakterizasyonu ve elektromanyetik dalga koruyucu özelliğinin incelenmesi, Ankara University, Fen Bilimleri Enstitüsü, Kimya (YI) (Tezli), 2011

### Research Areas

Natural Sciences, Engineering and Technology

### Academic Titles / Tasks

Associate Professor, Ankara University, Fen Fakültesi, Kimya Bölümü, 2021 - Continues

Research Assistant, Ankara University, Fen Fakültesi, Kimya Bölümü, 2009 - Continues

## Courses

Polimerik Tekstil Malzemelerinin Kimyası ve Teknolojisi, Postgraduate, 2022 - 2023

BASIC CHEMISTRY II, Undergraduate, 2021 - 2022

Polimer Kimyasına Giriş, Undergraduate, 2022 - 2023

Fizikokimya Laboratuvarı, Undergraduate, 2022 - 2023

INTRODUCTION TO POLYMER TECHNOLOGY, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020

Basic Chemistry I, Undergraduate, 2021 - 2022

FIBER CHEMISTRY, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020

## Advising Theses

Kalkan Erdoğan M., Poliaminotiyofenol ve PD nanoparçacıkları ile modifiye edilmiş yün kumaş kompozitlerinin hazırlanması ve bazı aromatik nitro bileşiklerinin indirgenmesinde katalizör olarak kullanımı, Postgraduate, B.BAŞBUĞ(Student), 2022

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

- I. **Sequential Deposition of Polyaminothiophenols and Gold Nanoparticle on Wool Fabrics: Fabric Composites as Efficient Catalysts in the Reduction of Nitroarenes**  
Başbuğ B., Kalkan Erdoğan M., Karakışla M., Saçak M.  
CHEMISTRYSELECT, vol.8, no.48, pp.1-12, 2023 (SCI-Expanded)
- II. **Easily Applicable Heterogeneous Catalyst from Sustainable Resources: Anchoring of Pd Nanoparticles onto Chemically Poly(2-amino thiophenol)-Modified Wool Fabrics**  
Basbug B., Erdogan M., KARAKIŞLA M., SAÇAK M.  
ACS APPLIED POLYMER MATERIALS, vol.4, no.10, pp.6834-6849, 2022 (SCI-Expanded)
- III. **Successive Chemical Modification of Poly(acrylonitrile) Fibers with Glycidyl Methacrylate and Poly(p-phenylenediamine)/Ag Particles for an Efficient Antibacterial Activity**  
Eroglu N. S., Edogan M., Karakışla M., Saçak M.  
FIBERS AND POLYMERS, vol.23, no.3, pp.589-600, 2022 (SCI-Expanded)
- IV. **Investigation of antibacterial properties of polyacrylonitrile fibers modified by new functional groups and silver nanoparticles**  
Okay Z., Kalkan Erdoğan M., Karaca B., Karakışla M., Saçak M.  
TURKISH JOURNAL OF CHEMISTRY, vol.46, pp.1137-1151, 2022 (SCI-Expanded)
- V. **The hydrophilic modification of acrylic textile fibers by grafting of 2-hydroxyethyl methacrylate and investigation of the imparted properties**  
Barut M., Kalkan Erdoğan M., Karakışla M., Saçak M.  
JOURNAL OF MACROMOLECULAR SCIENCE PART A-PURE AND APPLIED CHEMISTRY, vol.59, no.1, pp.59-71, 2022 (SCI-Expanded)
- VI. **Deposition of electrically-conductive polyaniline/ferrite nanoparticles onto the polypropylene nonwoven for the development of an electromagnetic interference shield material**  
Yörük A. E., Erdoğan M., KARAKIŞLA M., SAÇAK M.  
Journal of the Textile Institute, vol.113, no.12, pp.2660-2672, 2022 (SCI-Expanded)
- VII. **A novel tool for the adsorption of dsDNA: Electrochemical reduction of Pd nanoparticles onto reduced-keratin particles extracted from wool wastes**  
KALKAN ERDOĞAN M., AYDOĞDU TIĞ G., SAÇAK M.  
BIOELECTROCHEMISTRY, vol.140, 2021 (SCI-Expanded)
- VIII. **Hydrophobic modification of kaolinite by coating with the conductive polythiophene and investigation of the usability as the environmental-based sensors**  
Gunay M., KALKAN ERDOĞAN M., KARAKIŞLA M., SAÇAK M.  
CHEMICAL PAPERS, vol.75, no.1, pp.123-137, 2021 (SCI-Expanded)

- IX. **Preparation of hydrophilic woven fabrics: Surface modification of poly(ethylene terephthalate) by grafting of poly(vinyl alcohol) and poly(vinyl alcohol)-g-(N-vinyl-2-pyrrolidone)**  
Kalkan Erdoğan M., Akdemir O., Hamitbeyli A., Karakışla M.  
JOURNAL OF APPLIED POLYMER SCIENCE, vol.137, no.16, 2020 (SCI-Expanded)
- X. **Improvement of the adhesion of conductive poly(m-toluidine) onto chemically reduced-wool fabrics**  
KALKAN ERDOĞAN M., KARAKIŞLA M., SAÇAK M.  
TURKISH JOURNAL OF CHEMISTRY, vol.44, no.3, pp.775-790, 2020 (SCI-Expanded)
- XI. **Preparation and stabilization of Ag nanoparticles with N-vinyl-2-pyrrolidone grafted-poly(vinyl alcohol) in an organic medium and investigation of their usability in the catalytic dye decolorization**  
KALKAN ERDOĞAN M.  
COLLOID AND INTERFACE SCIENCE COMMUNICATIONS, vol.34, 2020 (SCI-Expanded)
- XII. **Morphologically different silver particles decorated- conductive poly(o-anisidine)/wool fabric composites and investigation of catalytic activity in reduction of methylene blue**  
KALKAN ERDOĞAN M., KARAKIŞLA M., SAÇAK M.  
MATERIALS CHEMISTRY AND PHYSICS, vol.225, pp.72-83, 2019 (SCI-Expanded)
- XIII. **Preparation and characterization of electrically semi-conductive polyfuran-coated poly(ethylene terephthalate) fibers**  
KALKAN ERDOĞAN M., KARAKIŞLA M., SAÇAK M.  
JOURNAL OF THE TEXTILE INSTITUTE, vol.110, no.2, pp.282-288, 2019 (SCI-Expanded)
- XIV. **Polypyrrole and silver particles coated poly(ethylene terephthalate) nonwoven composite for electromagnetic interference shielding**  
KALKAN ERDOĞAN M., KARAKIŞLA M., SAÇAK M.  
JOURNAL OF COMPOSITE MATERIALS, vol.52, no.10, pp.1353-1362, 2018 (SCI-Expanded)
- XV. **Fabrication of poly(o-Anisidine)/Ag particles coated poly(ethylene terephthalate) nonwoven composite and investigation of antibacterial activity**  
KALKAN ERDOĞAN M., KARAKIŞLA M., SAÇAK M.  
POLYMER COMPOSITES, vol.39, 2018 (SCI-Expanded)
- XVI. **Conductive poly(o-anisidine)/poly(ethylene terephthalate) nonwoven composite: Investigation of synthesis parameters and electromagnetic shielding effectiveness**  
Turay C. B., KALKAN ERDOĞAN M., KARAKIŞLA M., SAÇAK M.  
JOURNAL OF INDUSTRIAL TEXTILES, vol.46, no.4, pp.1104-1120, 2016 (SCI-Expanded)
- XVII. **Conductive polyaniline-polythiophene/poly(ethylene terephthalate) composite fiber: Effects of pH and washing processes on surface resistivity**  
KALKAN ERDOĞAN M., KARAKIŞLA M., SAÇAK M.  
JOURNAL OF APPLIED POLYMER SCIENCE, vol.132, no.20, 2015 (SCI-Expanded)
- XVIII. **Preparation, Characterization and Electromagnetic Shielding Effectiveness of Conductive Polythiophene/Poly(ethylene terephthalate) Composite Fibers**  
KALKAN ERDOĞAN M., KARAKIŞLA M., SAÇAK M.  
JOURNAL OF MACROMOLECULAR SCIENCE PART A-PURE AND APPLIED CHEMISTRY, vol.49, no.6, pp.473-482, 2012 (SCI-Expanded)
- XIX. **Preparation of a novel polymer-modified Si surface for DNA immobilization**  
Demirel G. B., Coskun S., Kalkan M., ÇAYKARA T.  
Macromolecular Bioscience, vol.9, no.5, pp.472-479, 2009 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Preparation of a Clay Composite Containing Poly(o-toluidine) and Halloysite, and Examining of Its Performance as a Humidity Sensor**  
Kalkan Erdoğan M., Karakışla M.  
Düzce Üniversitesi Bilim ve Teknoloji Dergisi, vol.9, no.2, pp.521-534, 2021 (Peer-Reviewed Journal)

- II. **Electromagnetic Shielding Effectiveness of Polyaniline/Modified-Poly(vinyl Alcohol) Film Composite**  
KALKAN ERDOĞAN M., SAÇAK M.  
GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.34, no.2, pp.381-394, 2021 (ESCI)
- III. **Simultaneous deposition of poly(O-anisidine) and noble ag particles on wool fabric and the evaluation of its performance as a catalyst in dye reduction**  
KALKAN ERDOĞAN M., KARAKIŞLA M.  
Journal of the Turkish Chemical Society, Section A: Chemistry, vol.6, no.2, pp.225-236, 2019 (Scopus)

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

- I. **Revolutionizing Textile Properties: A Study on the Electrospinning of Biocompatible Polymer Blend onto Cotton Fabric**  
Beycan B., Kalkan Erdoğan M., Karakışla M., Saçak M.  
5. Euroasia Biochemical Approaches and Technologies, Antalya, Turkey, 2 - 05 November 2023
- II. **Preparation and Characterization of Biocompatible Materials From Keratin-based Nanofibers by Electro-Spinning Method**  
Başbuğ B., Kalkan Erdoğan M., Karakışla M., Saçak M.  
5. Euroasia Biochemical Approaches and Technologies, Antalya, Turkey, 2 - 05 November 2023
- III. **Development of an Easily Applicable Heterogeneous Catalyst by Anchoring Palladium and Gold Nanoparticles onto Chemically-Modified Wool Fabrics**  
KALKAN ERDOĞAN M., Başbuğ B., KARAKIŞLA M., SAÇAK M.  
NanoTR-16, Ankara, Turkey, 5 - 08 September 2022
- IV. **Adsorption of palladium ions onto keratin particles extracted from wool wastes**  
KALKAN ERDOĞAN M., SAÇAK M.  
3rd International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2020), Ankara, Turkey, 19 - 20 March 2020
- V. **Preparation of Poly(ethylene terephthalate)/polypyrrole/Fe<sub>3</sub>O<sub>4</sub> Composite and Investigation of Its Electromagnetic Shielding Effectiveness**  
Beycan B., KALKAN ERDOĞAN M., SAÇAK M.  
5th International Conference on Engineering and Natural Sciences (ICENS), Prag, Czech Republic, 12 - 16 June 2019
- VI. **Ag Particles Deposition on Polyacrylonitrile Fibers Grafted By Acrylamide, Acrylamide-Itaconic Acid and Acrylamide-Maleic Acid**  
OKAY Z., KALKAN ERDOĞAN M., KARAKIŞLA M., SAÇAK M.  
5th International Conference on New Trends in Chemistry, 22 - 24 April 2019
- VII. **Electromagnetic Shielding Effectiveness Performances of Wool Fabric Composites Differently Coated with Conductive Polyaniline Derivatives and Noble Ag Particles**  
KALKAN ERDOĞAN M., ŞAHİN M., SAÇAK M.  
2nd International Conference on Innovations in Natural Science and Engineering, Kiev, Ukraine, 7 - 10 September 2018
- VIII. **Preparation of Conductive Polyaniline/Metacryloyl Modified-Poly(Vinyl Alcohol) Thin Films and Investigation of Their Usability in the Reduction of Morphologically Different Ag Particles**  
KALKAN ERDOĞAN M., ŞAHİN M., SAÇAK M.  
31st Materials Science and Engineering Conference: Advancement Innovations, Helsinki, Finland, 15 - 17 October 2018
- IX. **The Preparation of Ag Particles Deposited and Acrylic Acid Grafted Polyacrylonitrile Fiber Composite and Its Antibacterial Properties**  
OKAY Z., KALKAN ERDOĞAN M., KARAKIŞLA M., SAÇAK M.  
4th International Turkic World Conference on Chemical Sciences and Technologies, 7 - 10 September 2018
- X. **Modification and Characterization of Poly(acrylonitrile) Fibers by Grafting of Acrylic Acid**

OKAY Z., KALKAN ERDOĞAN M., KARAKIŞLA M., SAÇAK M.

International Congress on Fundamental and Applied Sciences, 18 - 22 June 2018

- XI. **The Modification of Surface of Polyacrylonitrile Fiber by Grafting of Glycidyl Methacrylate Monomer**  
ŞAHİN M., Seven N., KALKAN ERDOĞAN M., SAÇAK M.  
4th International Conference on New Trends in Chemistry, ST. PETERSBURG, Russia, 11 - 13 May 2018
- XII. **İletken Polimer/Metal Parçacık ile Kaplanmış Nonwoven Kumaşların Elektromanyetik Girişime Karşı Koruyuculuğunun İncelenmesi.**  
KALKAN ERDOĞAN M., KARAKIŞLA M., SAÇAK M.  
29. ULUSAL KİMYA KONGRESİ, Ankara, Turkey, 10 - 14 September 2017
- XIII. **Preparation of conductive composite fiber by the reduction of silver particles onto hydrolyzed polyacrylonitrile fiber**  
OKAY Z., KALKAN ERDOĞAN M., ŞAHİN M., SAÇAK M.  
ICP 2016: 18th International Conference on Polymer, Rio de Janeiro, Brazil, 1 - 02 February 2016
- XIV. **Preparation of Conductive Composite Fiber by the Reduction of Silver Particles onto Hydrolyzed Poly acrylonitrile Fiber**  
OKAY Z., KALKAN ERDOĞAN M., KARAKIŞLA M., SAÇAK M.  
18. International Science University, World Academy of Science, Engineering and Technology, 1 February - 02 January 2016
- XV. **Preparation and Characterization of Conductive Poly o anisidine Coated Wool Fabrics**  
KALKAN ERDOĞAN M., ŞAHİN M., SAÇAK M.  
European Polymer Congress, Pisa, Italy, 16 - 19 June 2013
- XVI. **Conducting Nonwoven Poly( ethylene terephthalate) Fabric Composite**  
TURAY C. B., KALKAN ERDOĞAN M., KARAKIŞLA M., SAÇAK M.  
The 12th International Symposium on Multiscale, Multifunctional Functionally Graded Materials, China, 22 - 26 September 2012
- XVII. **o m ve p Poliaminofenol Türevlerinin Sentezi ve Karakterizasyonu**  
KALKAN ERDOĞAN M., ŞAHİN M., SAÇAK M.  
4. Polimer Bilim ve Teknoloji Kongresi, Turkey, 5 - 08 September 2012
- XVIII. **Preparation and Characterization of Conducting Composite of Polyaniline Polythiophene Poly ethylene terephthalate Fiber**  
KALKAN ERDOĞAN M., KARAKIŞLA M., SAÇAK M.  
14. International Asian Chemistry Conference, Bangkok, Thailand, 5 - 08 September 2011
- XIX. **İletken Politiyofen Poli etilenteraftalat Kompozit Liflerin Hazırlanması ve Karakterizasyonu**  
KALKAN ERDOĞAN M., SHAHSAVAR E. R., MARŞAN G., KARAKIŞLA M., SAÇAK M.  
24. Ulusal Kimya Kongresi, Turkey, 29 June - 02 July 2010
- XX. **Polifuran/Poli etilenteraftalat Kompozit Liflerin Hazırlanması ve Karakterizasyonu**  
KALKAN ERDOĞAN M., MARŞAN G., KARAKIŞLA M., SAÇAK M.  
3. Polimer Bilimi ve Teknoloji Kongresi, Turkey, 12 - 14 May 2010

## Supported Projects

Kalkan Erdoğan M., Karakışla M., Saçak M., Yurdakök Dikmen B., Kıymacı M. E., Filazi A., Ünal N., Sancak E., TUBITAK Project, Cilt ile uyumlu, antimikrobiyal ve yıkanabilir özellikte, polimer modifiyeli elektro-eğirilmiş kumaş yüz maskesi geliştirilmesi, 2022 - 2024

Kalkan Erdoğan M., TUBITAK Project, SÜRDÜRÜLEBİLİR VE KOLAY-UYGULANABİLİR PD VE AU ESASLI HETEROJEN BİR KATALİZÖR HAZIRLANMASI İÇİN MODİFİYE YÜN KUMAŞ TASARIMI, 2021 - 2022

Kalkan Erdoğan M., Project Supported by Higher Education Institutions, METAL NANOPARÇACIKLARIN HAZIRLANMASINDA KOLLOİDAL STABİLİZÖR OLARAK KULLANILACAK AŞI KOPOLİMERLERİN TASARLANMASI VE KATALİTİK AKTİVİTELERİNİN İNCELENMESİ, 2018 - 2019

Saçak M., Karakışla M., Akdemir Ö., Gül T. E., Hamitbeyli A., Kanık M., Industrial Thesis Project, Polyester Kumaşların

İndigo Boyarmaddeleri ile Boyanabilirliğinin Geliştirilmesi için Poli vinil alkol ve Modifiye Poli vinil alkol Polimerleri ile Modifiye Edilmesi, 2015 - 2019

KALKAN ERDOĞAN M., SAÇAK M., OKAY Z., Project Supported by Higher Education Institutions, POLİAKRİLONİTRİL LİFLERİN KİMYASAL MODİFİKASYONU VE MODİFİYE EDİLMİŞ LİFLERE GÜMÜŞ PARÇACIKLARI ÇÖKTÜRÜLEREK BAZI ÖZELLİKLERİNİN İNCELENMESİ, 2016 - 2017

KALKAN ERDOĞAN M., SAÇAK M., Project Supported by Higher Education Institutions, İLETKEN POLİMER POLİ ETİLEN TERAFTALAT DOKUMA KOMPOZİTLERİNİN HAZIRLANMASI KARAKTERİZASYONU VE ELEKTROMANYETİK KORUMA ETKİNLİĞİNİN İNCELENMESİ, 2012 - 2014

KALKAN ERDOĞAN M., SAÇAK M., Project Supported by Higher Education Institutions, İLETKEN POLİANİLİN POLİTİYOFEN POLİ ETİLEN TERAFTALAT KOMPOZİT LİFLERİNİN HAZIRLANMASI VE KARAKTERİZASYONU, 2011 - 2012

## Activities in Scientific Journals

Communications Faculty of Sciences University of Ankara Series B chemistry and Chemical Engineering, Editor, 2023 - Continues

## Scientific Refereeing

Communications Faculty of Sciences University of Ankara Series B Chemistry and Chemical Engineering, National Scientific Refreed Journal, November 2023

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, October 2023

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, September 2023

JOURNAL OF THE TEXTILE INSTITUTE, SCI Journal, September 2023

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, July 2023

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, June 2023

REVIEWS ON ADVANCED MATERIALS SCIENCE, SCI Journal, May 2023

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, May 2023

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, May 2023

MATERIALS CHEMISTRY AND PHYSICS, SCI Journal, April 2023

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, March 2023

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, February 2023

JOURNAL OF POLYMERS AND THE ENVIRONMENT, Journal Indexed in SCI-E, January 2023

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, January 2023

Journal of the Turkish Chemical Society, Section A: Chemistry, National Scientific Refreed Journal, September 2022

Project Supported by Higher Education Institutions, BAP Research Project, Istanbul University, Turkey, September 2022

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, August 2022

Technopark, Ankara University, Turkey, July 2022

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, May 2022

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, January 2022

Osmaniye Korkut Ata Üniversitesi Fen Bilimleri Enstitüsü Dergisi (Online), National Scientific Refreed Journal, January 2022

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, December 2021

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, October 2021

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, June 2021

TEKSTİL VE KONFEKSİYON, Journal Indexed in SCI-E, March 2021

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, March 2021

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, February 2021

SCIENTIFIC REPORTS, SCI Journal, June 2020

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, June 2020

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, May 2020

MATERIALS CHEMISTRY AND PHYSICS, SCI Journal, March 2020

COLLOID AND INTERFACE SCIENCE COMMUNICATIONS, Journal Indexed in SCI-E, March 2020

Gazi Üniversitesi Fen Bilimleri Dergisi Part C: Tasarım ve Teknoloji, National Scientific Refreed Journal, February 2020

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, February 2020

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, September 2019

JOURNAL OF APPLIED POLYMER SCIENCE, SCI Journal, August 2019

MATERIALS CHEMISTRY AND PHYSICS, SCI Journal, January 2016

## **Metrics**

Publication: 42

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