

## Asst. Prof. NİHAN ÜNLÜ

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: JFJ-5523-2023

ScopusID: 57212446182

Yoksis Researcher ID: 343118

### Education Information

Doctorate, Firat University, Fen Bilimleri Enstitüsü, Fizik (Dr), Turkey 2017 - 2021

Postgraduate, Firat University, Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli), Turkey 2013 - 2016

Undergraduate, Ankara University, Fen Fakültesi, Fizik Bölümü, Turkey 2005 - 2012

### Dissertations

Doctorate, Yüksek sıcaklık uygulamaları için şekil hafızalı nanokompozit malzemelerin üretimi ve karakterizasyonu, Firat University, Fen Bilimleri Enstitüsü, Fizik (Dr), 2021

Postgraduate, Demir katkılı cualni şekil hafızalı alaşımların üretilmesi ve karakterizasyonu, Firat University, Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli), 2016

### Research Areas

Condensed Matter 1: Structural, Mechanical and Thermal Properties

### Academic Titles / Tasks

Assistant Professor, Istanbul Gelisim University, VOCATIONAL SCHOOL OF HEALTH SERVICES, OPTICIANRY, 2022 - Continues

### Courses

FİZİK (FIZ111), Associate Degree, 2021 - 2022

ELEKTROTEKNOLOJİ (OPY208), Undergraduate, 2021 - 2022

RADYASYON GÜVENLİĞİ VE KORUNMASI (TGP104), Associate Degree, 2021 - 2022

RÖNTGEN CİHAZ YAPISI (RDP104), Associate Degree, 2021 - 2022

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

- I. **Unveiling the etiological impact of GST-M1, GST-T1, and P53 genotypic variations on brain carcinogenesis**  
DİRİCAN O., Kaygın P., Oğuztüzün S., HUSSEINI A. A., Sarialtn S. Y., Yılmaz C., ÜNLÜ N., İzci Y.  
Molecular Biology Reports, vol.51, no.1, 2024 (SCI-Expanded)
- II. **The chemical ordering and local pressure dependence for truncated octahedron PdAuRh nanoalloys**  
Garip A. K., Göcen T., ÜNLÜ N.  
Physica Scripta, vol.99, no.8, 2024 (SCI-Expanded)
- III. **Production and characterization of polyvinyl alcohol films containing essential oil**  
Ünlü N., Özgen A., Aksu Canbay C.  
Journal of Biomaterials Science, Polymer Edition, vol.35, no.10, pp.1537-1549, 2024 (SCI-Expanded)
- IV. **Energetic Behavior Study in Phase Transformations of High Temperature Cu–Al–X (X: Mn, Te, Sn, Hf) Shape Memory Alloys**  
Canbay C. A., Karaduman O., ÜNLÜ N., Özkul İ., Çiçek M. A.  
Transactions of the Indian Institute of Metals, vol.74, no.10, pp.2447-2458, 2021 (SCI-Expanded)
- V. **Production and characterization of shape memory polymeric nanocomposite materials**  
Canbay C. A., ÜNLÜ N.  
Journal of Molecular Structure, vol.1227, 2021 (SCI-Expanded)
- VI. **Study on Basic Characteristics of CuAlBe Shape Memory Alloy**  
Canbay C. A., Karaduman O., ÜNLÜ N., Özkul I.  
Brazilian Journal of Physics, vol.51, no.1, pp.13-18, 2021 (SCI-Expanded)
- VII. **Modifying Thermal and Structural Characteristics of CuAlFeMn Shape Memory Alloy and a Hypothetical Analysis to Optimize Surface-Diffusion Annealing Temperature**  
Canbay C. A., Karaduman O., Özkul İ., ÜNLÜ N.  
Journal of Materials Engineering and Performance, vol.29, no.12, pp.7993-8005, 2020 (SCI-Expanded)
- VIII. **Heat treatment and quenching media effects on the thermodynamical, thermoelastical and structural characteristics of a new Cu-based quaternary shape memory alloy**  
Canbay C. A., Karaduman O., ÜNLÜ N., Baiz S. A., Özkul İ.  
Composites Part B: Engineering, vol.174, 2019 (SCI-Expanded)
- IX. **Investigation of Fe content in Cu–Al–Ni Shape Memory Alloys**  
Canbay C. A., ÜNLÜ N., Ozkul I., Polat T., Sekerci M., Aldas K.  
Physics of Metals and Metallography, vol.119, no.6, pp.536-541, 2018 (SCI-Expanded)

## Articles Published in Other Journals

- I. **IGUSABDER**  
ÜNLÜ N., ÖZGEN A.  
İstanbul Gelişim Üniversitesi Sağlık Bilimleri Dergisi, vol.1, no.22, pp.73-80, 2024 (Peer-Reviewed Journal)
- II. **Investigation of Polyvinyl Alcohol (PVA)-Sakacin P Interaction by Molecular Docking Method**  
Ünlü N., Özgen A.  
İstanbul Gelişim Üniversitesi Sağlık Bilimleri Dergisi, no.22, pp.73-80, 2024 (Peer-Reviewed Journal)
- III. **Interactions of AFB2 Aflatoxin and Cinnamycin bacteriocin by Molecular Docking**  
ÖZGEN A., ÜNLÜ N., AZARABADI N.  
Journal of Materials and Electronic Devices, vol.3, no.1, pp.28-31, 2023 (Peer-Reviewed Journal)
- IV. **Molecular Docking Study on Interaction of Polyvinyl Alcohol (PVA) with Group IA Bacteriocin**  
ÜNLÜ N., ÖZGEN A., AKSU CANBAY C.  
Turkish Journal of Science and Technology, vol.18, no.1, pp.177-182, 2023 (Peer-Reviewed Journal)
- V. **Moleküler Kenetleme (Docking) Yöntemi ile Bakteriyel Bir Sinyal Kompleksi ve Peonidin Molekülü Etkileşiminin İncelenmesi**  
ÖZGEN A., ÜNLÜ N.  
FIRAT ÜNİVERSİTESİ FEN BİLİMLERİ DERGİSİ, vol.34, no.2, pp.201-205, 2022 (Peer-Reviewed Journal)

- VI. **Shape Memory Performance in Composites with the addition of TiO<sub>2</sub>**  
ÜNLÜ N., AKSU CANBAY C.  
Journal of International Journal of Materials and Electronic Devices, 2021 (Peer-Reviewed Journal)
- VII. **Production of Cross-linked Poly (Vinyl Alcohol) (PVA) and Its Spectroscopic, Thermal and Superficial Characterization**  
ÜNLÜ N., AKSU CANBAY C.  
Journal of Materials and Electronic Devices, no.3, pp.8-13, 2020 (Peer-Reviewed Journal)
- VIII. **Synthesis of Graphene oxide (GO) Produced by Hummers Method Doped with Poly (Vinyl Alcohol) (PVA) and Investigation of Its Structural/Thermal Properties**  
ÜNLÜ N., AKSU CANBAY C.  
Journal of International Journal of Materials and Electronic Devices, no.3, pp.28-32, 2020 (Peer-Reviewed Journal)
- IX. **PVA/GO ve PVA/rGO Polimerik Nanokompozit Malzemelerin Üretimi ve Karakterizasyonu**  
AKSU CANBAY C., ÜNLÜ N.  
Firat Üniversitesi Fen Bil. Dergisi, 2020 (Peer-Reviewed Journal)
- X. **Chemical Synthesis of Marble Powder-Fly Ash Doped Poly (Vinyl Alcohol) Composites and Comparison between their Structural, Thermal and Mechanical Properties**  
AKSU CANBAY C., ÜNLÜ N.  
Journal of Material Science and Technology Research, vol.7, 2020 (Peer-Reviewed Journal)
- XI. **Smart material characterization by thermal and structural analysing techniques**  
ÜNLÜ N., AKSU CANBAY C., ÖZKUL İ., Karaduman O.  
AIP CONFERENCE PROCEEDINGS, vol.2178, 2019 (Scopus)
- XII. **Analysis of a newly composed Cu-Al-Mn SMA showing acute SME characteristics**  
Karaduman O., AKSU CANBAY C., ÜNLÜ N., ÖZKUL İ.  
AIP CONFERENCE PROCEEDINGS, vol.2178, 2019 (Scopus)
- XIII. **Structural and thermodynamical study of Cu-Zn-Al shape memory alloys with new compositions produced by hot isostatic press (HIP)**  
Karaduman O., AKSU CANBAY C., ÜNLÜ N., ÖZKUL İ.  
AIP CONFERENCE PROCEEDINGS, vol.2178, 2019 (Scopus)
- XIV. **The production and characterization of graphene oxide**  
ÜNLÜ N., AKSU CANBAY C.  
AIP CONFERENCE PROCEEDINGS, vol.2178, 2019 (Scopus)
- XV. **Investigation of shape memory behavior in Cu-based quaternary shape memory alloys**  
ÜNLÜ N., ÖZKUL İ., AKSU CANBAY C.  
AIP CONFERENCE PROCEEDINGS, vol.2042, 2018 (Scopus)
- XVI. **Thermal and structural analyses in Ni-Ti shape memory alloys**  
ÜNLÜ N., ÖZKUL İ., AKSU CANBAY C.  
AIP CONFERENCE PROCEEDINGS, vol.2042, 2018 (Scopus)
- XVII. **The Investigation of SME in a Cu-Al-Ni HTSMA**  
Karaduman O., ÜNLÜ N., AKSU CANBAY C., ÖZKUL İ., Baiz S. A.  
Journal of Materials and Electronic Devices, 2018 (Peer-Reviewed Journal)
- XVIII. **Production and Characterization of Ternary Heusler Shape Memory Alloy with A New Composition**  
Karaduman O., AKSU CANBAY C., ÖZKUL İ., Baiz S. A., ÜNLÜ N.  
Journal of International Journal of Materials and Electronic Devices, 2018 (Peer-Reviewed Journal)

## **Books & Book Chapters**

### **I. ŞEKİL HAFIZALI POLİMERLER**

Ünlü N.

in: MÜHENDİSLİK ALANINDA YENİLİKÇİ ÇALIŞMALAR - I (2023/1), DOÇ. DR. GÖKHAN ÇAYLI, Editor, ARTİKEL AKADEMİ, İstanbul, pp.65-84, 2023

## Refereed Congress / Symposium Publications in Proceedings

- I. **Molecular Docking Study on Interaction of Polyvinyl Alcohol (PVA) with Group IA Bacteriocin**  
ÜNLÜ N., ÖZGEN A., AKSU CANBAY C.  
9 th International Conference on Materials Science and Nanotechnology for Next Generation, Ankara, Turkey, 22 - 24 September 2022, pp.103
- II. **Investigation of Polyvinyl Alcohol (PVA)-Sakacin P Interaction by Molecular Docking**  
ÜNLÜ N., ÖZGEN A.  
9 th International Conference on Materials Science and Nanotechnology for Next Generation, Ankara, Turkey, 22 - 24 September 2022, pp.94
- III. **Study of Interactions of AFB2 Aflatoxin and Class IB Bacteriocins by Molecular Docking**  
ÖZGEN A., ÜNLÜ N.  
9th MSNG Scientific Conference (MSNG 2022), Ankara, Turkey, 22 September 2022, pp.94
- IV. **Molecular Docking Demonstration of the Interaction of AFB1 Aflatoxin and Lactococcin A**  
ÖZGEN A., ÜNLÜ N., AKSU CANBAY C.  
9th MSNG Scientific Conference (MSNG 2022), Ankara, Turkey, 22 September 2022, pp.102
- V. **Shape Memory Behaviour Of Zinc Oxide (Zno) And Graphene Oxide (Go) Reinforced Polymeric Nanocomposites**  
AKSU CANBAY C., ÜNLÜ N.  
CONGRESS ON SCIENTIFIC RESEARCHES AND RECENT TRENDS-7, Baku, Azerbaijan, 6 - 09 December 2020
- VI. **Fabrication And Characterization Of Shape Memory Polyvinyl Alcohol Matrix Nanocomposites**  
AKSU CANBAY C., ÜNLÜ N.  
36th INTERNATIONAL PHYSICS CONGRESS, Bodrum, Turkey, 1 - 05 September 2020
- VII. **A Mathematical Model for NiTi Alloy Thermal Process.**  
ÖZKUL İ., AKSU CANBAY C., ÜNLÜ N., Baiz S. A., Karaduman O.  
5th International Conference on Materials Science and Nanotechnology For Next Generation (MSNG2018), Nevşehir, Turkey, 4 - 06 October 2018
- VIII. **"Classification of SMAs and Their Applications".**  
ÜNLÜ N., Baiz S. A., AKSU CANBAY C., ÖZKUL İ., Karaduman O.  
5th International Conference on Materials Science and Nanotechnology For Next Generation (MSNG2018), Nevşehir, Turkey, 4 - 06 October 2018
- IX. **Optical Properties of ZnO-3CdO Synthesized by Hydrothermal Method**  
BİROO S. J., AKSU CANBAY C., ÜNLÜ N., ÖZKUL İ.  
1 st INTERNATIONAL ENGINEERING AND TECHNOLOGY SYMPOSIUM, Batman, Turkey, 03 May 2018
- X. **Microstructure and Martensitic Behavior of a Smart Material Shape Memory Alloy**  
AKSU CANBAY C., ÜNLÜ N.  
9th. International Conference of the Balkan Physical Union, İstanbul, Turkey, 24 - 27 August 2015
- XI. **Thermal Analysis of Quaternary Cu Based Shape Memory Alloys**  
ÜNLÜ N., AKSU CANBAY C.  
9th. International Conference of the Balkan Physical Union, İstanbul, Turkey, 24 August - 27 May 2015
- XII. **Structural Analysis of Quaternary Cu Al Ni Fe Shape Memory Alloys**  
AKSU CANBAY C., ÜNLÜ N.  
9th. International Conference of the Balkan Physical Union, İstanbul, Turkey, 24 - 27 August 2015

## Supported Projects

Azarabadi N., Toker Ö. S., Ünlü N., Koç F. E., Project Supported by Other Private Institutions, Akıllı Ambalaj İndikatör Materyali Olarak Polianilin (PANİ) Film Üretimi ve Model Gıda Ambalajlarında Kullanımı, 2023 - 2024

ÜNLÜ N., Project Supported by Higher Education Institutions, Grafen Nanokompozit Şekil Hafızalı Malzeme Üretilmesi ve Karakterizasyonu, 2020 - 2022

ÜNLÜ N., Project Supported by Higher Education Institutions, Demir Katkılı CuAlNi Şekil Hafızalı Alaşımların ÜRETİLMESİ  
VE KARAKTERİZASYONU, 2014 - 2016