

## Res. Asst. MURAT ULUSOY

### Personal Information

**Office Phone:** [+90 312 202 1457](tel:+903122021457)

**Email:** [ulusoymurat@gazi.edu.tr](mailto:ulusoymurat@gazi.edu.tr)

**Web:** <https://avesis.gazi.edu.tr/12412>

**Address:** Gazi Üniversitesi Fen Fakültesi Emniyet Mahallesi Bandırma Caddesi No: 6/8 06500 Yenimahalle/ANKARA

### International Researcher IDs

ScholarID: 5dzbOmwAAAAJ

ORCID: 0000-0001-9842-0318

Publons / Web Of Science ResearcherID: AAR-3864-2021

ScopusID: 57223197114

Yoksis Researcher ID: 319167

### Education Information

Postgraduate, Gazi University, Fen Bilimleri Enstitüsü, Turkey 2018 - 2021

Undergraduate, Gazi University, Fen Fakültesi, Fizik, Turkey 2007 - 2011

Undergraduate, Ataturk University, Mühendislik Fakültesi, Makine Mühendisliği, Turkey 2005 - 2007

### Foreign Languages

English, B2 Upper Intermediate

### Certificates, Courses and Trainings

Education Management and Planning, Fizik Öğretmenliği Formasyon Eğitimi, Karadeniz Teknik Üniversitesi, 2011

### Dissertations

Postgraduate, Investigation of Electrical Properties of Au/(NiS:PVP)/n-Si (MPS) Structure in Wide Range Frequency, Gazi University, Fen Bilimleri Enstitüsü, 2021

### Research Areas

Condensed Matter 1: Structural, Mechanical and Thermal Properties, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties

### Academic Titles / Tasks

Research Assistant, Gazi University, Fen Fakültesi, Fizik, 2020 - Continues

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

- I. **The probe of current conduction mechanisms, interface states, and the forward bias intersection point of the Al/Al<sub>2</sub>O<sub>3</sub>/Ge/p-Si heterostructures depending on temperature**  
Akın B., A.Hameed S., ALTINDAL YERİŞKİN S., ULUSOY M., Durmuş H.  
Materials Science in Semiconductor Processing, vol.184, 2024 (SCI-Expanded)
- II. **Tunable dielectric characteristics of the nanocomposite diode based on functionalized graphene quantum dots with and without gadolinium**  
Berktaş Z., ANTER A., Dikicioğlu E., ULUSOY M., Candan C., YILDIZ M., Di Bartolomeo A., ORHAN E.  
Surfaces and Interfaces, vol.51, 2024 (SCI-Expanded)
- III. **The Electrical and Photodetector Characteristics of the Graphene:PVA/p-Si Schottky Structures Depending on Illumination Intensities**  
ULUSOY M., Koçyiğit S., TATAROĞLU A., ALTINDAL YERİŞKİN S.  
ACS Omega, vol.9, no.29, pp.32243-32255, 2024 (SCI-Expanded)
- IV. **A study on the complex dielectric ( $\epsilon^*$ )/electric-modulus ( $M^*$ )/impedance ( $Z^*$ ), tangent-loss ( $\tan\delta$ ), and ac conductivity ( $\sigma_{ac}$ ) of the Al/(S:DLC)/p-Si/Au (MIS)-type Schottky structures in a wide range of frequency and voltage at room temperature (RT)**  
Eroğlu Tezcan A., A.hameed S., Feizollahi Vahid A., ULUSOY M., ALTINDAL Ş.  
Physica B: Condensed Matter, vol.684, 2024 (SCI-Expanded)
- V. **Beta Irradiation Effects on Electrical Characteristics of Graphene-Doped PVA/n-type Si Nanostructures**  
Abay Ö., ULUSOY M., UYAR E., GÖKMEN U., BİLGE OCAK S.  
ACS Omega, vol.9, no.22, pp.23193-23201, 2024 (SCI-Expanded)
- VI. **The study of the dependence of dielectric properties, electric modulus, and ac conductivity on the frequency and voltage in the Au/(CdTe:PVA)/n-Si (MPS) structures**  
Güçlü Ç., ALTINDAL Ş., ULUSOY M., Tezcan A. E.  
Journal of Materials Science: Materials in Electronics, vol.35, no.18, 2024 (SCI-Expanded)
- VII. **Lanthanum(III)hydroxide Nanoparticles and Polyethyleneimine-Functionalized Graphene Quantum Dot Nanocomposites in Photosensitive Silicon Heterojunctions**  
ANTER A., ORHAN E., ULUSOY M., Polat B., YILDIZ M., Kumar A., Di Bartolomeo A., Faella E., Passacantando M., Bi J.  
ACS Applied Materials and Interfaces, vol.16, no.17, pp.22421-22432, 2024 (SCI-Expanded)
- VIII. **A comparison electrical characteristics of the Au/(pure-PVA)/n-Si and Au/(CdTe doped-PVA)/n-Si (MPS) type Schottky structures using I-V and C-V measurements**  
Güçlü Ç. Ş., ULUSOY M., ALTINDAL Ş.  
Journal of Materials Science: Materials in Electronics, vol.35, no.12, 2024 (SCI-Expanded)
- IX. **Evaluation of the current transport mechanism depending on the temperature of Schottky structures with Ti:DLC interlayer**  
ERBİLEN TANRIKULU E., Berkün Ö., ULUSOY M., Avar B., Durmuş H., ALTINDAL Ş.  
Materials Today Communications, vol.38, 2024 (SCI-Expanded)
- X. **Investigation of the interface state characteristics of the Al/Al<sub>2</sub>O<sub>3</sub>/Ge/p-Si heterostructure over a wide frequency range by capacitance and conductance measurements**  
Akın B., ULUSOY M., ALTINDAL YERİŞKİN S.  
Materials Science in Semiconductor Processing, vol.170, 2024 (SCI-Expanded)
- XI. **Frequency-dependent physical parameters, the voltage-dependent profile of surface traps, and their lifetime of Au/(ZnCdS-GO:PVP)/n-Si structures by using the conductance method**  
Güçlü Ç., Tanrikulu E., ULUSOY M., Kalandarğh Y. A., ALTINDAL Ş.  
Journal of Materials Science: Materials in Electronics, vol.35, no.5, 2024 (SCI-Expanded)
- XII. **The photoresponse behavior of a Schottky structure with a transition metal oxide-doped organic polymer (RuO<sub>2</sub>:PVC) interface**  
Elamen H., Badali Y., ULUSOY M., AZIZIAN-KALANDARAGH Y., ALTINDAL Ş., Güneşer M. T.  
Polymer Bulletin, vol.81, no.1, pp.403-422, 2024 (SCI-Expanded)
- XIII. **Electrical and Photodetector Characteristics of Schottky Structures Interlaid with P(EHA) and**

**P(EHA-co-AA) Functional Polymers by the iCVD Method**

Demirezen S., Ulusoy M., Durmuş H., Cavusoglu H., Yılmaz K., Altındal Ş.  
ACS OMEGA, vol.8, no.49, pp.46499-46512, 2023 (SCI-Expanded)

- XIV. **Dielectric properties of MS diodes with Ag:ZnO doped PVP interfacial layer depending on voltage and frequency**  
Altındal Yerişkin S., ERBİLEN TANRIKULU E., ULUSOY M.  
Materials Chemistry and Physics, vol.303, 2023 (SCI-Expanded)
- XV. **Effect of Gadolinium on Electrical Properties of Polyethyleneimine Functionalized and Nitrogen-Doped Graphene Quantum Dot Nanocomposite Based Diode**  
Orhan E., Anter A., Ulusoy M., Polat B., Okuyucu C., Yıldız M., Altındal Ş.  
ADVANCED ELECTRONIC MATERIALS, vol.1, no.1, pp.1-12, 2023 (SCI-Expanded)
- XVI. **On frequency and voltage dependent physical characteristics and interface states characterization of the metal semiconductor (MS) structures with (Ti:DLC) interlayer**  
Berkün Ö., Ulusoy M., Altındal Ş., Avar B.  
PHYSICA B: CONDENSED MATTER, vol.666, pp.415099, 2023 (SCI-Expanded)
- XVII. **The investigation of frequency dependent dielectric properties and ac conductivity by impedance spectroscopy in the Al/(Cu-doped Diamond Like Carbon)/Au structures**  
Feizollahi Vahid A., Alptekin S., Basman N., ULUSOY M., ŞAFAK ASAR Y., ALTINDAL Ş.  
Journal of Materials Science: Materials in Electronics, vol.34, no.13, 2023 (SCI-Expanded)
- XVIII. **Negative Capacitance Behavior at Low Frequencies of Nitrogen-Doped Polyethylenimine-Functionalized Graphene Quantum Dots-Based Structure**  
Berktaş Z., Orhan E., Ulusoy M., Yıldız M., Altındal Ş.  
ACS Applied Electronic Materials, vol.5, no.3, pp.1804-1811, 2023 (SCI-Expanded)
- XIX. **The capacitance/conductance and surface state intensity characteristics of the Schottky structures with ruthenium dioxide-doped organic polymer interface**  
Ulusoy M., Badali Y., Pirgholi-Givi G., Azizian-Kalandaragh Y., Altındal Ş.  
SYNTHETIC METALS, vol.292, pp.117243, 2023 (SCI-Expanded)
- XX. **Temperature dependence of electrical characteristics and interface state densities of Au/n-type Si structures with SnS doped PVC interface**  
Karataş Ş., Altındal Ş., Ulusoy M., Azizian-Kalandaragh Y., Özçelik S.  
Physica Scripta, vol.97, no.9, 2022 (SCI-Expanded)
- XXI. **The illumination effects on the current conduction mechanisms of the Au/( Er<sub>2</sub>O<sub>3</sub>:PVC )/n-Si ( MPS ) Schottky diodes**  
Altındal Ş., Azizian-Kalandaragh Y., Ulusoy M., Pirgholi-Givi G.  
JOURNAL OF APPLIED POLYMER SCIENCE, vol.139, no.25, pp.1-12, 2022 (SCI-Expanded)
- XXII. **The electrical characteristic of an MIS structure with biocompatible minerals doped (Brushite+Monetite: PVC) interface layer**  
Ulusoy M., Altındal Ş., Azizian-Kalandaragh Y., Özçelik S., Mirzaei-Kalar Z.  
Microelectronic Engineering, vol.258, 2022 (SCI-Expanded)
- XXIII. **Comparison of the electrical and impedance properties of Au/(ZnOMn:PVP)/n-Si (MPS) type Schottky-diodes (SDs) before and after gamma-irradiation**  
ALTINDAL Ş., Barkhordari A., Pirgholi-Givi G., ULUSOY M., Mashayekhi H., ÖZÇELİK S., AZIZIAN-KALANDARAGH Y.  
PHYSICA SCRIPTA, vol.96, no.12, 2021 (SCI-Expanded)
- XXIV. **On the frequency-dependent complex-dielectric, complex-electric modulus and conductivity in Au/(NiS:PVP)/n-Si structures**  
ALTINDAL Ş., ULUSOY M., ÖZÇELİK S., AZIZIAN-KALANDARAGH Y.  
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.32, no.15, pp.20071-20081, 2021 (SCI-Expanded)
- XXV. **Frequency and voltage-dependent electrical parameters, interface traps, and series resistance profile of Au/(NiS:PVP)/n-Si structures**  
Ulusoy M., Altındal Ş., Durmus P., Ozcelik S., Azizian-Kalandaragh Y.

## Refereed Congress / Symposium Publications in Proceedings

- I. **A COMPARISON ELECTRICAL PARAMETERS AND ENERGY DEPENDENT PROFILE OF SURFACE STATES OF Au/n-Si STRUCTURE WITH PVA AND (CdTe: PVA) INTERLAYER USING CURRENT-VOLTAGE (I-V) AND CAPACITANCE-VOLTAGE (C-V) MEASUREMENTS**  
Güçlü Ç. Ş., Ulusoy M.  
3rd International Natural Science, Engineering and Material Technologies Conference, Gazimagusa, Cyprus (Kkctc), 21 September 2023, pp.26
- II. **ORGANİK ARAYÜZEY TABAKALI METAL-YARIİLETKEN YAPILARIN ELEKTRİKSEL ÖZELLİKLERİNİN BETA RADYASYONUNA BAĞLI İNCELENMESİ**  
Abay Ö., Ulusoy M., Uyar E., Altındal Ş., Bilge Ocak S.  
8. ULUSLARARASI MÜHENDİSLİK VE TEKNOLOJİ YÖNETİMİ KONGRESİ, İstanbul, Turkey, 08 December 2022, pp.134-138
- III. **Illumination effects on the capacitance/conductance-voltage characteristics of Au/(PVC:Er2O3)/n-Si (MPS) type structure for 0.5 MHz at room temperature**  
Ulusoy M., Altındal Ş.  
2nd International Conference on Light and Light-based Technologies (ICLLT) 2021, Ankara, Turkey, 26 - 28 May 2021, pp.73

## Supported Projects

ALTINDAL Ş., ULUSOY M., Project Supported by Higher Education Institutions, BOROFEN TABANLI OPTOELEKTRONİK AYGITLARIN ÜRETİMİ VE KARAKTERİZASYONU, 2024 - Continues  
ALTINDAL Ş., ULUSOY M., Project Supported by Higher Education Institutions, Metal Nanokompozit Polimer Yarıiletken Aygıtların Yapımı ve Elektriksel Ölçümlerinin Işığa ve Frekansa Bağlı Ölçülmesi, 2024 - Continues

## Tasks In Event Organizations

Altındal Ş., Çiftci Y., Şahingöz R., Şafak Asar Y., Çetinkaya H. G., Altındal Yerişkin S., Özdemir E. G., Bucurgat M., Erbilgen Tanrikulu E., Ulusoy M., et al., 9th International Conference on Materials Science and Nanotechnology for Next Generation (MSNG-2022), Scientific Congress, Ankara, Turkey, Eylül 2022

## Metrics

Publication: 28  
Citation (WoS): 268  
Citation (Scopus): 320  
H-Index (WoS): 12  
H-Index (Scopus): 12