

## Asst. Prof. OZAN ARI

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: JGE-2479-2023

ScopusID: 55613190600

Yoksis Researcher ID: 200803

### Education Information

Doctorate, Izmir Institute Of Technology, The Graduate School of Engineering & Sciences, Department of Physics, Turkey  
2011 - 2017

Postgraduate, Izmir Institute Of Technology, The Graduate School of Engineering & Sciences, Department of Physics,  
Turkey 2009 - 2011

### Dissertations

Doctorate, Molecular beam epitaxy growth and characterization of CdTe heterostructures on GaAs- effect of interface, growth and annealing conditions to crystal quality, Izmir Institute Of Technology, The Graduate School of Engineering & Sciences, Department of Physics, 2017

Postgraduate, Electronic, spintronic and transport properties of carbon based nanowires, Izmir Institute Of Technology, The Graduate School of Engineering & Sciences, Department of Physics, 2011

### Research Areas

Quantum Communication, Quantum Cryptography, Quantum Calculation, Optics and Photonics, Atomic Spectra and Photon Interactions

### Academic Titles / Tasks

Assistant Professor, Hacettepe University, Nükleer Bilimler Enstitüsü, Nükleer Bilimler Enstitüsü Fotonik A.B.D, 2024 - Continues

Research Assistant, Izmir Institute Of Technology, Faculty of Science, Department of Physics, 2009 - 2017

### Academic and Administrative Experience

Assistant Director of the Institute, Hacettepe University, Nükleer Bilimler Enstitüsü, 2024 - Continues

## Research Infrastructure Information

Arı O., Aselsan Kuantum Teknolojileri Araştırma Laboratuvarı, November 2022

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

- I. **Hybrid J-Aggregate-Graphene Phototransistor**  
Yakar O., Balci O., Uzlu B., Polat N., Ari O., Tunc I., Kocabas C., Balci S.  
ACS Applied Nano Materials, vol.3, no.1, pp.409-417, 2020 (SCI-Expanded)
- II. **Identifying threading dislocations in CdTe films by reciprocal space mapping and defect decoration etching**  
Polat M., Bilgilişoy E., Arı O., Öztürk O., Selamet Y.  
Journal of Applied Physics, vol.124, no.8, 2018 (SCI-Expanded)
- III. **Reciprocal space mapping study of CdTe epilayer grown by molecular beam epitaxy on (2 1 1)B GaAs substrate**  
Polat M., Arı O., Öztürk O., Selamet Y.  
Materials Research Express, vol.4, no.3, 2017 (SCI-Expanded)
- IV. **Nitrogen doping for facile and effective modification of graphene surfaces**  
Yanılmaz A., Tomak A., Akbali B., Bacaksiz C., Ozceri E., Ari O., Senger R., Selamet Y., Zareie H.  
RSC Advances, vol.7, no.45, pp.28383-28392, 2017 (SCI-Expanded)
- V. **MBE-Grown CdTe Layers on GaAs with In-assisted Thermal Deoxidation**  
Arı O., Bilgilişoy E., Ozceri E., Selamet Y.  
Journal of Electronic Materials, vol.45, no.10, pp.4736-4741, 2016 (SCI-Expanded)
- VI. **Surface roughness estimation of MBE grown CdTe/GaAs(211)B by ex-situ spectroscopic ellipsometry**  
Karakaya M., Bilgilişoy E., Arı O., Selamet Y.  
AIP Advances, vol.6, no.7, 2016 (SCI-Expanded)
- VII. **Cleavage induced rows of missing atoms on ZnTe (110) surface**  
Çelebi C., Ari O., Senger R.  
Physical Review B - Condensed Matter and Materials Physics, vol.87, no.8, 2013 (SCI-Expanded)

## Articles Published in Other Journals

- I. **The effect of electron-phonon interactions on the spectral properties of single defects in hexagonal boron nitride**  
Arı O., Polat N., Fırat V., Çakır Ö., Ates S.  
arxiv, vol.0, no.0, 2018 (Non Peer-Reviewed Journal)
- II. **Growth and characterization of CdTe absorbers on GaAs by MBE for high concentration PV solar cells**  
Ari O., Polat M., Karakaya M., Selamet Y.  
Physica Status Solidi (C) Current Topics in Solid State Physics, vol.12, no.9-11, pp.1211-1214, 2015 (Scopus)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Photoluminescence of Er-doped YIG Crystal**  
YORULMAZ S. Ç., Avinca E., Zainullin F., ARI O., MAKSUTOĞLU M., Khaibullin R., RAMEEV B.  
Conference on Quantum Information Science, Sensing, and Computation XVI, Maryland, United States Of America, 22 - 25 April 2024
- II. **Kuantum Çağında Siber Güvenlik Paneli**  
GENÇOĞLU M. T., ATEŞ S., BOZBEY A., ARI O.

16. Bilgi Güvenliđi ve Kriptoloji Konferansı ISC Türkiye, Ankara, Turkey, 18 - 19 October 2023

- III. **Influence of electron-phonon interactions on the spectral properties of defects in hexagonal boron nitride**  
Ari O., Firat V., Polat N., ÇAKIR Ö., Ates S.  
Quantum Information and Measurement, QIM 2019, Rome, Italy, 4 - 06 April 2019, vol.Part F165-QIM 2019
- IV. **Reversible energy transfer between a single defect in HBN and graphene**  
Ozceri E., Ari O., Balci S., Kocabas C., Ates S.  
Quantum Information and Measurement, QIM 2019, Rome, Italy, 4 - 06 April 2019, vol.Part F165-QIM 2019
- V. **The Effect of Electron-phonon Interaction on the Quantum Emission from Hexagonal Boron Nitride**  
ARI O., ÇAKIR Ö., ATEŞ S.  
3rd International Conference on Physics of 2D Crystals, Malta, 29 May - 02 June 2018
- VI. **The Influence of Electron-Phonon Interaction on Single Photon Emission from Defects in Hexagonal Boron Nitride**  
ARI O., ÇAKIR Ö., ATEŞ S.  
Nanoscale Quantum Optics Conference, Prague, Czech Republic, 13 - 16 February 2018
- VII. **Optical Properties of Defects in Hexagonal Boron Nitride**  
OYUN Y., ARI O., ÖZÇERİ İYİKANAT E., Polat N., ÇAKIR Ö., ATEŞ S.  
13th Nanoscience & Nanotechnology Conference, Antalya, Turkey, 22 - 25 October 2017
- VIII. **The effect of electron-phonon interaction on the quantum emission from hexagonal boron nitride**  
ARI O., ÇAKIR Ö., ATEŞ S.  
19. Ulusal Optik, Elektro-Optik ve Fotonik Çalıştayı, İstanbul, Turkey, 29 September 2017
- IX. **Acoustic Phonon Broadening of Single Photon Emission at Point Defects in h-BN**  
ARI O., Polat N., ÇAKIR Ö., ATEŞ S.  
24. İstatistiksel Fizik Günleri, İzmir, Turkey, 29 June - 01 July 2017
- X. **MBE GROWN CdTe LAYERS ON GaAs with In ASSISTED THERMAL DEOXIDATION**  
ARI O., Bilgisoy E., ÖZÇERİ İYİKANAT E., SELAMET Y.  
THE U.S. WORKSHOP on the physics and chemistry of II-VI materials, Şikago, United States Of America, 5 - 08 October 2015
- XI. **Surface Characterization of MBE Grown CdTe Layers over GaAs 211 B by Spectroscopic Ellipsometry**  
KARAKAYA M., Bilgisoy E., ARI O., SELAMET Y.  
THE U.S. Workshop on the Physics and Chemistry of II-VI Materials 2015, Chicago, United States Of America, 5 - 08 October 2015
- XII. **Structural Characterization of GaAs (211) B/CdTe Composite Substrate**  
POLAT M., ARI O., ÖZTÜRK O., SELAMET Y.  
THE US Workshop on the Physics and Chemistry of II-VI Materials, Baltimore, United States Of America, 20 - 23 October 2014
- XIII. **Investigation of Wet-Chemically Etched GaAs(211)B Surface Before Cadmium Telluride Growth**  
ÖZDEN S., POLAT M., ARI O., YAĞMURCUKARDEŞ N., TARHAN E., SELAMET Y.  
The 2013 U.S. Workshop on the Physics and Chemistry of II-VI Materials, Chicago, United States Of America, 30 September - 03 October 2013, pp.125-128
- XIV. **Linear surface defects on cleaved ZnTe (001) surfaces: Characterization with scanning tunneling microscopy and density functional theory calculations**  
ARI O., ÇELEBİ C., SENER R. T.  
8th Nanoscience and Nanotechnology Conference, Ankara, Turkey, 25 - 29 June 2012

## Supported Projects

ARI O., Project Supported by Defense Industry, Kuantum Radar bileşenleri geliştirilmesi projesi, 2023 - 2025

ARI O., Project Supported by Defense Industry, Kuantum LİDAR geliştirilmesi projesi, 2022 - 2025

ARI O., Project Supported by Other Private Institutions, Kuantum Teknolojileri Geliştirme Projesi, 2022 - 2025

Arı O., Project Supported by Other Private Institutions, Kuantum Aydınlatma Teknolojileri Geliştirme Projesi, 2022 - 2025

Arı O., Özçeri İyikanat E., Polat M., Selamet Y., Project Supported by Defense Industry, SSM Gediz Projesi, 2013 - 2016

## **Memberships / Tasks in Scientific Organizations**

TSE MTC200: Kuantum Teknolojileri, Member, 2024 - Continues, Turkey

CA22168 - Physical layer security for trustworthy and resilient 6G systems (6G-PHYSEC), Member, 2024 - Continues, Turkey

## **Scientific Consultations**

TÜBİTAK BİLGEM, Project Consultancy, Hacettepe University, Nükleer Bilimler Enstitüsü, Nükleer Bilimler Enstitüsü Fotonik A.B.D, Turkey, 2024 - Continues

## **Metrics**

Publication: 23

Citation (Scopus): 89

H-Index (Scopus): 5

## **Non Academic Experience**

Company, Aselsan A.Ş., Research Center