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### Advising Theses

2023	Aydemir U., Postgraduate, H.ÖZBEK(Student), Araçlarda yeni bir fiber optik merkezi aydınlatma sistemi kurgusu tasarımı ve analizi
2022	Aydemir U., Postgraduate, S.GİZEM(Student), Su Altında Görünür Işık Haberleşmesi
2022	Aydemir U., Postgraduate, S.LISKIN(Student), KIZILÖTESİ IŞIK İLE İNVAZİV OLMAYAN KAN ŞEKERİÖLÇÜM SİSTEMİNİN GELİŞTİRİLMESİ
2021	Aydemir U., Postgraduate, M.FATİH(Student), OTONOM ARAÇLAR İÇİN STATİK VE DİNAMİK LOGO PROJEKSİYON LAMBALARININ GELİŞTİRİLMESİ
2021	Aydemir U., Postgraduate, T.Demirtaş(Student), İki Boyutlu GaSe Katkılı PVP İnce Film Tabanlı Fotodedektörlerin Üretilmesi ve İncelenmesi
2019	Aydemir U., Postgraduate, M.DURMUŞ(Student), Preparation of metal/semiconductor diodes with electron beam irradiated alq3 interfacial layer and investigation of irradiation effect on device performance

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

- I. Degrading effect on electrical properties of printed gallium sulfide based photodetector**  
Odaci C., Khan M. S., Jose M., Kisieleska M., Roshanghias A., AYDEMİR U.  
FLEXIBLE AND PRINTED ELECTRONICS, vol.9, no.2, 2024 (SCI-Expanded)
- II. Fabrication and Characterization of Printed Phototransistors Based on Monochalcogenide Inks**  
Odaci C., Muehleisen W., AYDEMİR U., Roshanghias A.  
ACS APPLIED ELECTRONIC MATERIALS, vol.5, no.4, pp.2007-2016, 2023 (SCI-Expanded)
- III. ANN-based estimation of MEMS diaphragm response: An application for three leaf clover diaphragm based Fabry-Perot interferometer**  
Yiğit E., Hayber Ş. E., Aydemir U.  
Measurement: Journal of the International Measurement Confederation, vol.199, 2022 (SCI-Expanded)
- IV. Enhanced photoresponse of PVP:GaSe nanocomposite thin film based photodetectors**  
Demirtaş T., Odaci C., Aydemir U.  
NANOTECHNOLOGY, vol.33, no.20, 2022 (SCI-Expanded)
- V. Design and simulation of a novel fungus-shaped center embossed diaphragm for fiber optic**

## pressure sensors

Hayber Ş. E., Aydemir U.

OPTICAL FIBER TECHNOLOGY, vol.61, 2021 (SCI-Expanded)

- VI. **High-energy e-Beam-induced effects in Au/n-Si diodes with pre-irradiated PTCDA interfacial layer**  
AYDEMİR U.  
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.31, no.7, pp.5779-5788, 2020 (SCI-Expanded)
- VII. **Tuning series resistance in Au/Alq3/n-Si diodes with high-energy e-Beam irradiation**  
AYDEMİR U., Durmus M.  
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.31, no.5, pp.4287-4293, 2020 (SCI-Expanded)
- VIII. **The Experimental Validation of Designed Fiber Optic Pressure Sensors With EPDM Diaphragm**  
Hayber Ş. E., Aydemir U., Tabaru T. E., Saraçoğlu Ö. G.  
IEEE SENSORS JOURNAL, vol.19, no.14, pp.5680-5685, 2019 (SCI-Expanded)
- IX. **Use of 2D In2Se3 Single Crystal as a Diaphragm Material for Fabry-Perot Fiber Optic Acoustic Sensors**  
Hayber Ş. E., Tabaru T. E., Aydemir U., Saraçoğlu Ö. G.  
JOURNAL OF NANOELECTRONICS AND OPTOELECTRONICS, vol.14, no.4, pp.464-469, 2019 (SCI-Expanded)
- X. **Dielectric and optical properties of CdS-polymer nanocomposites prepared by the successive ionic layer adsorption and reaction (SILAR) method**  
Azizian-Kalandaragh Y., Aydemir U., Altindal Ş.  
Journal of Electronic Materials, vol.43, no.4, pp.1226-1231, 2014 (SCI-Expanded)
- XI. **A detailed comparative study on the main electrical parameters of Au/n-Si and Au/PVA:Zn/n-Si Schottky barrier diodes**  
AYDEMİR U., Tascioglu I., Altindal S., Uslu I.  
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.16, no.6, pp.1865-1872, 2013 (SCI-Expanded)
- XII. **A detailed study on current-voltage characteristics of Au/n-GaAs in wide temperature range**  
Ozavci E., Demirezen S., AYDEMİR U., Altindal S.  
SENSORS AND ACTUATORS A-PHYSICAL, vol.194, pp.259-268, 2013 (SCI-Expanded)
- XIII. **Effect of series resistance and interface states on the I-V, C-V and G/omega-V characteristics in Au/Bi-doped polyvinyl alcohol (PVA)/n-Si Schottky barrier diodes at room temperature**  
Demirezen S., Sonmez Z., AYDEMİR U., Altindal S.  
CURRENT APPLIED PHYSICS, vol.12, no.1, pp.266-272, 2012 (SCI-Expanded)
- XIV. **Forward and reverse bias current-voltage characteristics of Au/n-Si Schottky barrier diodes with and without SnO2 insulator layer**  
Gokcen M., Altindal S., Karaman M., AYDEMİR U.  
PHYSICA B-CONDENSED MATTER, vol.406, no.21, pp.4119-4123, 2011 (SCI-Expanded)
- XV. **Epitaxial growth and electrical characterization of germanium**  
Bosi M., Attolini G., Ferrari C., Frigeri C., Calicchio M., Gombia E., Asar T., Boyali E., AYDEMİR U., Ozcelik S., et al.  
CRYSTAL RESEARCH AND TECHNOLOGY, vol.46, no.8, pp.813-817, 2011 (SCI-Expanded)
- XVI. **Analysis of the forward and reverse bias I-V characteristics on Au/PVA: Zn/n-Si Schottky barrier diodes in the wide temperature range**  
Tascioglu I., AYDEMİR U., Altindal S., KINACI B., Ozcelik S.  
JOURNAL OF APPLIED PHYSICS, vol.109, no.5, 2011 (SCI-Expanded)
- XVII. **A comparative study on the electrical characteristics of Au/n-Si structures with anatase and rutile phase TiO2 interfacial insulator layer**  
Bengi A., AYDEMİR U., Altindal S., Ozen Y., Ozcelik S.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.505, no.2, pp.628-633, 2010 (SCI-Expanded)
- XVIII. **Temperature and voltage dependent current-transport mechanisms in GaAs/AlGaAs single-quantum-well lasers**  
Uslu H., Bengi A., Cetin S. S., AYDEMİR U., Altindal S., Aghaliyeva S. T., Ozcelik S.

- JOURNAL OF ALLOYS AND COMPOUNDS, vol.507, no.1, pp.190-195, 2010 (SCI-Expanded)
- XXIX. **The explanation of barrier height inhomogeneities in Au/n-Si Schottky barrier diodes with organic thin interfacial layer**  
Tascioglu I., Aydemir U., Altindal S.  
JOURNAL OF APPLIED PHYSICS, vol.108, no.6, 2010 (SCI-Expanded)
- XX. **The interface states and series resistance effects on the forward and reverse bias I-V, C-V and G/omega-V characteristics of Al-TiW-Pd2Si/n-Si Schottky barrier diodes**  
Uslu H., Altindal S., AYDEMİR U., Dokme I., Afandiyeva I. M.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.503, no.1, pp.96-102, 2010 (SCI-Expanded)
- XXI. **Temperature-dependent profile of the surface states and series resistance in (Ni/Au)/AlGaN/AlN/GaN heterostructures**  
Tascioglu I., AYDEMİR U., Safak Y., Ozbay E.  
SURFACE AND INTERFACE ANALYSIS, vol.42, pp.812-815, 2010 (SCI-Expanded)
- XXII. **Interface state density analyzing of Au/TiO2(rutile)/n-Si Schottky barrier diode**  
Altuntas H., Bengi A., Asar T., AYDEMİR U., Sarikavak B., Ozen Y., Altindal S., Ozcelik S.  
SURFACE AND INTERFACE ANALYSIS, vol.42, pp.1257-1260, 2010 (SCI-Expanded)
- XXIII. **The effects of series resistance on the forward bias I-V characteristics in Au/Bi4Ti3O12/SnO2 (MFM) structures**  
Tataroglu A., Altindal S., AYDEMİR U., Uslu H.  
OPTOELECTRONICS AND ADVANCED MATERIALS-RAPID COMMUNICATIONS, vol.4, no.5, pp.616-619, 2010 (SCI-Expanded)
- XXIV. **The distribution of barrier heights in Au/n-Si Schottky barrier diodes from I-V-T measurements**  
Durmus P., Cuha B., Altindal S., AYDEMİR U.  
OPTOELECTRONICS AND ADVANCED MATERIALS-RAPID COMMUNICATIONS, vol.4, no.4, pp.579-583, 2010 (SCI-Expanded)
- XXV. **Electrical characterization of current conduction in Au/TiO2/n-Si at wide temperature range**  
Altuntas H., Bengi A., AYDEMİR U., Asar T., Cetin S. S., Kars I., Altindal S., Ozcelik S.  
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.12, no.6, pp.224-232, 2009 (SCI-Expanded)

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

- I. **Fully Printed GaTe Based Photodetector on PET Substrate**  
ODACI C., Khan M. S., Corzo D., Jose M., Roshanghias A., AYDEMİR U.  
2023 Conference on Lasers and Electro-Optics Europe & European Quantum Electronics Conference, Munich, Germany, 26 June 2023
- II. **GaSe-Based Fiber Optic Sensor for Human Health Monitoring**  
ODACI C., Khan M. S., Corzo D., Jose M., Roshanghias A., AYDEMİR U.  
2023 Conference on Lasers and Electro-Optics Europe & European Quantum Electronics Conference, Munich, Germany, 26 June 2023
- III. **The sensitivity improvement via TlInS2 chalcogen flake-based PVP nanocomposite thin films for Silicon photodiodes**  
UÇMAN Y. K., ÇETİNKAYA H. G., AYDEMİR U.  
2nd International Conference on Innovative Academic Studies, Konya, Turkey, 28 - 31 January 2023
- IV. **A Novel Fiber Optical Central Lighting System For Today and Futures Vehicles**  
Ozbek H., Aydemir U.  
2022 International Conference on INnovations in Intelligent SysTems and Applications (INISTA), Aquitaine, France, 8 - 12 August 2022, pp.1-4
- V. **Support Vector Regression Method for Deflection and Frequency Analysis of Center Embossed Diaphragms**  
Durmaz A., AYDEMİR U., HAYBER Ş. E., YİĞİT E.

1st International Conference on Applied Engineering and Natural Sciences, Konya, Turkey, 10 May 2022

- VI. **Machine Learning-Based Estimation of Static and Dynamic Pressure Responses of Specially Designed Diaphragm Based Fabry-Perot Interferometer**  
YİĞİT E., HAYBER Ş. E., AYDEMİR U., ÖZKAYA U.  
1st International Conference on Engineering and Applied Natural Sciences, Konya, Turkey, 10 May 2022
- VII. **A Thematic Review of the Present Photonic Education**  
YALÇIN H. A., ÇEPNİ S., AYDEMİR U.  
Education and Training in Optics and Photonics, Washington, Kiribati, 08 September 2021
- VIII. **A Thematic Review of the Present Photonic Education**  
Yalçın H. A., Çepni S., Aydemir U.  
Education and Training in Optics and Photonics (ETOP), Washington, United States Of America, 8 - 10 September 2021, pp.4-5
- IX. **A Thematic Review of the Present Photonics Education**  
Yalçın H. A., Çepni S., Aydemir U.  
The Education and Training in Optics and Photonics Conference (ETOP), 8 - 10 September 2021, pp.1-5
- X. **2D Materials/Ag Nanoparticles Coated Surface Plasmon Resonance Based U-shaped Fiber Optic Sensors for Bio-sensing Applications**  
ODACI C., AYDEMİR U.  
2nd International Summit on Optics, Photonics and Laser Technologies, United States Of America, 29 June 2021
- XI. **Photoelectric Characteristic of the Silicon Photodiode with BCP Interfacial Layer**  
DEMİRTAŞ T., ODACI C., AYDEMİR U.  
6TH INTERNATIONAL CONFERENCE ON ENGINEERING AND NATURAL SCIENCES, Belgrade, Serbia, 21 October 2020
- XII. **The investigation of Au/n-Si Schottky diodes with Alq3 organic interfacial layer: The effect of electron beam irradiation**  
Durmuş M., AYDEMİR U.  
IV. INSAC Natural and Engineering Sciences Congress, Konya, Turkey, 11 - 13 October 2019, pp.14-15
- XIII. **A New Diaphragm Material for Fiber Optic Fabry-Perot Acoustic Sensors with 2D GaSe**  
HAYBER Ş. E., TABARU T. E., AYDEMİR U., SARAÇOĞLU Ö. G.  
IV. INTERNATIONAL MULTIDISCIPLINARY CONGRESS OF EURASIA (IV-IMCOFE), ROMA, Italy, 23 - 25 August 2017, pp.482
- XIV. **Au/n-Si Schottky Diodes with Electron Beam Irradiated PTCDA Interfacial Layer**  
AYDEMİR U.  
IV. International Multidisciplinary Congress of Eurasia (IMCOFE 17), ROMA, Italy, 23 - 25 August 2017, pp.534
- XV. **Using of 2D In<sub>2</sub>Se<sub>3</sub> Single Crystal for Fabry-Perot Fiber Optic Acoustic Sensors as a Diaphragm Material**  
HAYBER Ş. E., TABARU T. E., AYDEMİR U., SARAÇOĞLU Ö. G.  
4th INTERNATIONAL CONFERENCE ON COMPUTATIONAL AND EXPERIMENTAL SCIENCE AND ENGINEERING (ICCESEN-2017), Antalya, Turkey, 4 - 08 October 2017, pp.462
- XVI. **Illumination Dependent Admittance Characteristics of Au/Zinc Acetate Doped Polyvinyl Alcohol (PVA:Zn)/n-Si Schottky Barrier Diodes (SBDs)**  
Tascioglu I., AYDEMİR U., Altindal S., Tunc T.  
1st International Congress on Advances in Applied Physics and Materials Science (APMAS), Antalya, Turkey, 12 - 15 May 2011, vol.1400, pp.307-311
- XVII. **Admittance Spectroscopy Characteristics of Au/PVA/n-Si Schottky Barrier Diodes under Various Illumination Intensities**  
AYDEMİR U., TAŞÇIOĞLU İ., ALTINDAL Ş.  
TURKISH PHYSICAL SOCIETY 27TH INTERNATIONAL CONGRESS, 14 - 17 September 2010
- XVIII. **Illumination Effect on the main electrical parameters of Schottky Barrier Diodes with organic interfacial alyer**  
TAŞÇIOĞLU İ., AYDEMİR U., ALTINDAL Ş.

TURKISH PHYSICAL SOCIETY 27TH INTERNATIONAL CONGRESS, 14 - 17 September 2010

**XIX. The C-V-f and G/w-V-f Characteristics of Au/SrTiO<sub>3</sub>/n-Si Schottky Barrier Diodes (SBDs) with Interfacial Layer**

AYDEMİR U., TAŞÇIOĞLU İ., ASAR T., Mamedova V. J., Mammadov T.

International Conference "Physics-2010", Baku, Azerbaijan, 30 June - 02 July 2010, vol.16, pp.223-224

**XX. The investigation of hysteresis properties on metal-ferroelectric-semiconductor structures by using capacitance-voltage (C-V) measurements**

AYDEMİR U., ALTINDAL Ş.

INTERNATIONAL CONFERENCE ON SUPERCONDUCTIVITY AND MAGNETISM (ICSM-2010), 25 - 30 April 2010

**XXI. Interface states density analyzing of Au/TiO<sub>2</sub>(Rutile)/n-Si Schottky barrier diodes**

ALTUNTAŞ H., Bengi A., ASAR T., AYDEMİR U., LİŞESİVDİN B., ÖZEN Y., ALTINDAL Ş., ÖZÇELİK S.

13 th European Conference on Applications of Surface and interface Analysis (ECASIA "19), 18 - 23 October 2009

**XXII. Deep Level Transient Spectroscopy of Au/SrTiO<sub>3</sub>/n-Si Structures**

AYDEMİR U., ŞAFAK ASAR Y., ALTINDAL Ş.

TURKISH PHYSICAL SOCIETY 26TH INTERNATIONAL CONGRESS, 24 - 27 September 2009

**XXIII. Temperature Dependent profile of the surface states and series resistance in (Ni/Au)/AlGaIn/GaN heterostructures**

TAŞÇIOĞLU İ., AYDEMİR U., ŞAFAK ASAR Y., ÖZBAY E.

13 th European Conference on Applications of Surface and interface Analysis (ECASIA "19), 18 - 23 October 2009

**XXIV. ON THE FREQUENCY AND VOLTAGE DEPENDENT INTERFACE STATES AND SERIES RESISTANCE IN Au/SrTiO<sub>3</sub>/n-Si STRUCTURES**

AYDEMİR U., ŞAFAK ASAR Y., Mammadov T., ALTINDAL Ş.

TURKISH PHYSICAL SOCIETY 25TH INTERNATIONAL PHYSICAL CONGRESS, 25 - 29 August 2008

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