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### Supervised Theses

2024	Aydemir U., Postgraduate, A.DURMAZ(Student), TRAFYO YAĞINDA BOZULMA TESPİTİ İÇİN FİBER OPTİK SENSÖR TASARIMI
2023	Aydemir U., Postgraduate, H.ÖZBEK(Student), Araçlarda yeni bir fiber optik merkezi aydınlatma sistemi kurgusu tasarımı ve analizi
2023	Aydemir U., Postgraduate, Y.KEREM(Student), İki boyutlu T1GaSe2 ve T1InS2 katkılı ince film fotodiyotların üretilmesi ve incelenmesi
2022	Aydemir U., Postgraduate, S.LISKIN(Student), KIZILÖTESİ IŞIK İLE İNVAZİV OLMAYAN KAN ŞEKERİÖLÇÜM SİSTEMİNİN GELİŞTİRİLMESİ
2022	Aydemir U., Postgraduate, S.GİZEM(Student), Su Altında Görünür Işık Habereleşmesi
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 Fotodetektörlerin 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

- The enhanced lifetime of printed GaS-based photodetectors with polymer encapsulation**  
Odaci C., Khan M. S., Beduk T., Jose M., Kisielewska M., AYDEMİR U., Roshanghias A.  
FlatChem, vol.49, 2025 (SCI-Expanded)
- Promoting 21st Century Emerging Technologies in Science Education In Light of Photonics Education Framework**  
Malay H. A., Çepni S., Aydemir U.  
SCIENCE & EDUCATION, 2024 (SCI-Expanded)
- Degrading effect on electrical properties of printed gallium sulfide based photodetector**  
Odaci C., Khan M. S., Jose M., Kisielewska M., Roshanghias A., AYDEMİR U.  
FLEXIBLE AND PRINTED ELECTRONICS, vol.9, no.2, 2024 (SCI-Expanded)

- IV. **Fabrication and Characterization of Printed Phototransistors Based on Monochalcogenide Inks**  
Odaci C., Muehleisen W., Aydemir U., Roshanghias A.  
ACS APPLIED ELECTRONIC MATERIALS, vol.5, no.4, pp.2007-2016, 2023 (SCI-Expanded)
- V. **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)
- VI. **Enhanced photoresponse of PVP:GaSe nanocomposite thin film based photodetectors**  
Demirtaş T., Odaci C., Aydemir U.  
NANOTECHNOLOGY, vol.33, no.20, 2022 (SCI-Expanded)
- VII. **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)
- VIII. **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)
- IX. **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)
- X. **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)
- XI. **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)
- XII. **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)
- XIII. **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)
- XIV. **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)
- XV. **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)
- XVI. **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)
- XVII. **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)

- XVIII. **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)
- XIX. **A comparative study on the electrical characteristics of Au/n-Si structures with anatase and rutile phase TiO<sub>2</sub> 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)
- XX. **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)
- XXI. **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)
- XXII. **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-Pd<sub>2</sub>Si/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)
- XXIII. **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)
- XXIV. **Interface state density analyzing of Au/TiO<sub>2</sub>(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)
- XXV. **The effects of series resistance on the forward bias I-V characteristics in Au/Bi<sub>4</sub>Ti<sub>3</sub>O<sub>12</sub>/SnO<sub>2</sub> (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)
- XXVI. **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)
- XXVII. **Electrical characterization of current conduction in Au/TiO<sub>2</sub>/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)

## Papers Published in Refereed Scientific Meetings

- I. **50 GHz, 100 fs pulses at 100 W average power from a burst mode, all-single mode, Yb-doped fiber laser system**  
Laçın M., Repgen P., Maghsoudi A., Şura A., Aydemir U., İlday F. Ö.  
11TH EPS-QEOD EUROPHOTON CONFERENCE, Vilnius, Lithuania, 25 August 2024
- II. **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

- III. **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
- IV. **The sensitivity improvement via TlInS<sub>2</sub> chalcogen flake-based PVP nanocomposite thin films for Silicon photodiodes**  
Uçman Y. K., Çetinkaya H. G., Aydemir U.  
2nd International Conference on Innovative Academic Studies, Konya, Turkey, 28 - 31 January 2023
- V. **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
- VI. **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
- VII. **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
- VIII. **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
- IX. **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
- X. **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
- XI. **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
- XII. **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
- XIII. **The investigation of Au/n-Si Schottky diodes with Alq<sub>3</sub> 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
- XIV. **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
- XV. **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
- XVI. **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

- XVII. **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
- XVIII. **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
- XIX. **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
- XX. **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 Conferance "Physics-2010", Baku, Azerbaijan, 30 June - 02 July 2010, vol.16, pp.223-224
- XXI. **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
- XXII. **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 Conferance on Appliacations of Surface and interface Analysis (ECASIA "19), 18 - 23 October 2009
- XXIII. **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
- XXIV. **Temperature Dependent profile of the surface states and series resistance in (Ni/Au)/AlGa<sub>N</sub>/Al<sub>N</sub>/Ga<sub>N</sub> heterostructures**  
TAŞÇIOĞLU İ., AYDEMİR U., ŞAFAK ASAR Y., ÖZBAY E.  
13 th European Conferance on Appliacations of Surface and interface Analysis (ECASIA "19), 18 - 23 October 2009
- XXV. **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

## Peer Reviews in Scientific Publications

July 2023	2D Materials, SCI Journal
June 2023	NANOTECHNOLOGY, SCI Journal
May 2023	JOURNAL OF ELECTRONIC MATERIALS, SCI Journal
January 2023	PHYSICA SCRIPTA, SCI Journal
November 2022	JOURNAL OF CHEMICAL PHYSICS, SCI Journal
August 2022	2D Materials, SCI Journal
May 2022	NEW JOURNAL OF PHYSICS, SCI Journal
April 2022	NEW JOURNAL OF PHYSICS, SCI Journal
March 2022	IEEE SENSORS JOURNAL, SCI Journal

February 2022	JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, SCI Journal
March 2021	NANOTECHNOLOGY, SCI Journal
February 2021	SEMICONDUCTOR SCIENCE AND TECHNOLOGY, SCI Journal
January 2021	2D MATERIALS, SCI Journal
November 2020	JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, SCI Journal
September 2020	SEMICONDUCTOR SCIENCE AND TECHNOLOGY, SCI Journal
August 2020	NANOTECHNOLOGY, SCI Journal
July 2020	MATERIALS RESEARCH EXPRESS, SCI Journal
May 2020	SEMICONDUCTOR SCIENCE AND TECHNOLOGY, SCI Journal
April 2020	2D MATERIALS, SCI Journal
January 2020	2D MATERIALS, SCI Journal
November 2019	SEMICONDUCTOR SCIENCE AND TECHNOLOGY, SCI Journal
June 2019	2D MATERIALS, SCI Journal
June 2019	JOURNAL OF PHYSICS D-APPLIED PHYSICS, SCI Journal
March 2019	2D MATERIALS, SCI Journal
March 2019	SEMICONDUCTOR SCIENCE AND TECHNOLOGY, SCI Journal
February 2019	2D MATERIALS, SCI Journal
November 2018	2D MATERIALS, SCI Journal
July 2018	2D MATERIALS, SCI Journal

## Scientific Project Refereeing

February 2023	TUBITAK Project, 1007 - Public Institutions Research and Development Projects DP, Tübitak UZAY, Turkey
December 2020	TUBITAK Project, 1002 - Quick Support Program, Bursa Uludağ University, Turkey
January 2020	TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Bursa Uludağ University, Turkey

## Metrics

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