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Advising 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 Haberleşmesi
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

- 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)
- 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)
- 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., Odacı 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.
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- 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.
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- 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., Altındal 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., Altındal 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., Altındal 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**
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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**
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- 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.
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- 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., Altındal 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., Altındal 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.
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- XIX. **The explanation of barrier height inhomogeneities in Au/n-Si Schottky barrier diodes with organic thin interfacial layer**
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- 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**
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- 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.
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- 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.
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- 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.
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- XXV. **Electrical characterization of current conduction in Au/TiO₂/n-Si at wide temperature range**
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Refereed Congress / Symposium Publications in Proceedings

- 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. **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. **Fully Printed GaTe Based Photodetector on PET Substrate**
ODACI C., Khan M. S., Corzo D., Jose M., Roshanghias A., AYDEMİR U.
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- IV. **The sensitivity improvement via TlInS₂ chalcogen flake-based PVP nanocomposite thin films for Silicon photodiodes**
Uçman Y. K., Çetinkaya H. G., Aydemir U.

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- V. **A Novel Fiber Optical Central Lighting System For Today and Futures Vehicles**
Ozbek H., Aydemir U.
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- VI. **Support Vector Regression Method for Deflection and Frequency Analysis of Center Embossed Diaphragms**
Durmaz A., AYDEMİR U., HAYBER Ş. E., YİĞİT E.
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- VII. **Machine Learning-Based Estimation of Static and Dynamic Pressure Responses of Specially Designed Diaphragm Based Fabry-Perot Interferometer**
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- VIII. **A Thematic Review of the Present Photonics Education**
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- IX. **A Thematic Review of the Present Photonic Education**
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- X. **2D Materials/Ag Nanoparticles Coated Surface Plasmon Resonance Based U-shaped Fiber Optic Sensors for Bio-sensing Applications**
ODACI C., AYDEMİR U.
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- XI. **Photoelectric Characteristic of the Silicon Photodiode with BCP Interfacial Layer**
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- 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**
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- XIV. **Au/n-Si Schottky Diodes with Electron Beam Irradiated PTCDA Interfacial Layer**
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- XV. **Using of 2D In₂Se₃ Single Crystal for Fabry-Perot Fiber Optic Acoustic Sensors as a Diaphragm Material**
HAYBER Ş. E., TABARU T. E., AYDEMİR U., SARAÇOĞLU Ö. G.
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- 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.
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- XVII. **Admittance Spectroscopy Characteristics of Au/PVA/n-Si Schottky Barrier Diodes under Various Illumination Intensities**

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- XVIII. **Illumination Effect on the main electrical parameters of Schottky Barrier Diodes with organic interfacial alayer**

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- XIX. **The C-V-f and G/w-V-f Characteristics of Au/SrTiO₃/n-Si Schottky Barrier Diodes (SBDs) with Interfacial Layer**

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

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- XXI. **Interface states density analyzing of Au/TiO₂(Rutile)/n-Si Schottky barrier diodes**

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- XXII. **Deep Level Transient Spectroscopy of Au/SrTiO₃/n-Si Structures**

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

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- XXIV. **ON THE FREQUENCY AND VOLTAGE DEPENDENT INTERFACE STATES AND SERIES RESISTANCE IN Au/SrTiO₃/n-Si STRUCTURES**

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