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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 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.
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- VIII. **High-energy e-Beam-induced effects in Au/n-Si diodes with pre-irradiated PTCDA interfacial layer**
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- X. **The Experimental Validation of Designed Fiber Optic Pressure Sensors With EPDM Diaphragm**
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- 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**
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- XIII. **A detailed comparative study on the main electrical parameters of Au/n-Si and Au/PVA:Zn/n-Si Schottky barrier diodes**
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- XIV. **A detailed study on current-voltage characteristics of Au/n-GaAs in wide temperature range**
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- 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**
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- XVI. **Forward and reverse bias current-voltage characteristics of Au/n-Si Schottky barrier diodes with and without SnO2 insulator layer**
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- 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.
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- 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.
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- XIX. **A comparative study on the electrical characteristics of Au/n-Si structures with anatase and rutile phase TiO₂ interfacial insulator layer**
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- XXI. **The explanation of barrier height inhomogeneities in Au/n-Si Schottky barrier diodes with organic thin interfacial layer**
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- 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-Pd₂Si/n-Si Schottky barrier diodes**
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- 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.
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- XXIV. **Interface state density analyzing of Au/TiO₂(rutile)/n-Si Schottky barrier diode**
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- XXVII. **Electrical characterization of current conduction in Au/TiO₂/n-Si at wide temperature range**
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- I. **50 GHz, 100 fs pulses at 100 W average power from a burst mode, all-single mode, Yb-doped fiber laser system**
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- II. **Fully Printed GaTe Based Photodetector on PET Substrate**
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- III. **GaSe-Based Fiber Optic Sensor for Human Health Monitoring**
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- IV. **The sensitivity improvement via TlInS₂ chalcogen flake-based PVP nanocomposite thin films for Silicon photodiodes**
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- V. **A Novel Fiber Optical Central Lighting System For Today and Futures Vehicles**
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- VI. **Support Vector Regression Method for Deflection and Frequency Analysis of Center Embossed Diaphragms**
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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 Photonic Education**
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- XII. **Photoelectric Characteristic of the Silicon Photodiode with BCP Interfacial Layer**
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- XIII. **The investigation of Au/n-Si Schottky diodes with Alq₃ organic interfacial layer: The effect of electron beam irradiation**
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- XIV. **A New Diaphragm Material for Fiber Optic Fabry-Perot Acoustic Sensors with 2D GaSe**
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- XV. **Au/n-Si Schottky Diodes with Electron Beam Irradiated PTCDA Interfacial Layer**
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- XVI. **Using of 2D In₂Se₃ Single Crystal for Fabry-Perot Fiber Optic Acoustic Sensors as a Diaphragm Material**

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- XVII. **Illumination Dependent Admittance Characteristics of Au/Zinc Acetate Doped Polyvinyl Alcohol (PVA:Zn)/n-Si Schottky Barrier Diodes (SBDs)**
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