

## Personal Information

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## Education Information

Doctorate, Odtü, Fen Edebiyat, Fizik, Turkey Continues

Odtü, Fen Edebiyat, Fizik, Turkey Continues

Under Graduate, Orta Doğu Teknik Üniversitesi, Fen Edebiyat, Fizik, Turkey Continues

## Research Areas

Physics, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Electrical properties of electronic structures, interfaces, thin films and low-dimensional structures, Natural Sciences

## Academic Titles / Tasks

Professor, Yıldız Teknik Üniversitesi, Fen Edebiyat, Fizik, 2014 - Continues

## Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- **Transport and storage dynamics of 30% In-rich InGaN/GaN MQW LED p-i-n structure**  
ÖZDEMİR O., BOZKURT K., Kuruoglu N. A. , BAŞ H., ALSHEHRI B., DOGHECHE K., GAIMARD Q., RAMDANE A., DOGHECHE E.  
JOURNAL OF PHYSICS D-APPLIED PHYSICS, vol.52, no.0, 2019 (Journal Indexed in SCI)
- **Impact of trap states on inductive phenomena in 30% InGaN/GaN MOW LED devices**  
BOZKURT K., ÖZDEMİR O., KURUOGLU N., ALSHEHRI B., DOGHECHE K., Gaimard Q., Ramdane A., DOGHECHE E.  
JOURNAL OF PHYSICS D-APPLIED PHYSICS, vol.52, 2019 (Journal Indexed in SCI)
- **Dc and ac electrical response of MOCVD grown GaN in p-i-n structure, assessed through I-V and admittance measurement**  
Kuruoglu N., ÖZDEMİR O., BOZKURT K., Sundaram S., Salvestrini J., Ougazzaden A., Gaimard Q., BELAHSENE S., Merghem K., RAMDANE A.  
JOURNAL OF PHYSICS D-APPLIED PHYSICS, vol.50, 2017 (Journal Indexed in SCI)
- **Betavoltaic study of a GaN p-i-n structure grown by metal-organic vapour phase epitaxy with a Ni-63 source**  
Kuruoglu N., ÖZDEMİR O., BOZKURT K.  
THIN SOLID FILMS, vol.636, pp.746-750, 2017 (Journal Indexed in SCI)
- **Simultaneous Determination of Electron and Hole Mobilities in InP/InGaAsP/InAs/InP Laser Heterostructure by Admittance Spectroscopy**  
Kuruoglu N., ÖZDEMİR O., BOZKURT K., BELAHSENE S., MARTINEZ A., RAMDANE A.  
IEEE TRANSACTIONS ON ELECTRON DEVICES, vol.64, pp.2881-2885, 2017 (Journal Indexed in SCI)
- **Anomalous Capacitance Behavior of Sol-Gel Deposited V2O5 Film on Crystalline Silicon**  
BULGURCUOĞLU A. E. , GOKDEMİR F. P. , ÖZDEMİR O., Kutlu K.  
JOURNAL OF NANOELECTRONICS AND OPTOELECTRONICS, vol.12, pp.146-151, 2017 (Journal Indexed in SCI)
- **Asymmetric band offsets in silicon heterojunction solar cells: Impact on device performance**  
Seif J. P. , Menda D., Descoedres A., Barraud L., ÖZDEMİR O., Ballif C., De Wolf S.

JOURNAL OF APPLIED PHYSICS, vol.120, 2016 (Journal Indexed in SCI)

- **Discrimination of Carrier Conduction Mechanisms of InP/InGaAsP/InAs/InP Laser Structure Through J-V-T Measurements**

Ayarci N., ÖZDEMİR O., BOZKURT K., RAMDANE A., BELAHSENE S., MARTINEZ A.

IEEE TRANSACTIONS ON ELECTRON DEVICES, vol.63, pp.1866-1870, 2016 (Journal Indexed in SCI)

- **Structural, optical and electrochromic properties of cerium dioxide thin films prepared by sol-gel dip coating method**

GOKDEMİR F. P. , Saatci A. E. , ÖZDEMİR O., KESKİN B., Kutlu K.

MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.38, pp.300-305, 2015 (Journal Indexed in SCI)

- **Structural and interfacial properties of large area n-a-Si:H/i-a-Si:H/p-c-Si heterojunction solar cells**

Pehlivan O., Menda D., Yılmaz O., Kodolbas A. O. , ÖZDEMİR O., Duygulu O., Kutlu K., Tomak M.

MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.22, pp.69-75, 2014 (Journal Indexed in SCI)

- **Comparison of Structural and Electrochemical Properties of V2O5 Thin Films Prepared by Organic/Inorganic Precursors**

Gokdemir F. P. , ÖZDEMİR O., Kutlu K.

ELECTROCHIMICA ACTA, vol.121, pp.240-244, 2014 (Journal Indexed in SCI)

- **Electrical Characterization of Sol-Gel Derived TiO2 Film on c-Si Substrate by Admittance Measurement**

Saatci A. E. , ÖZDEMİR O.

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- **Structural Modification of Sol-Gel Synthesized V2O5 and TiO2 Thin Films with/without Erbium Doping**

Gokdemir F. P. , Saatci A. E. , ÖZDEMİR O., Kutlu K.

ADVANCES IN MATERIALS SCIENCE AND ENGINEERING, 2014 (Journal Indexed in SCI)

- **Excess current/capacitance observation on polymer-fullerene bulk heterojunction, studied through I-V and C/G-V measurements**

KAVAK P., Menda U. D. , Parlak E. A. , ÖZDEMİR O., Kutlu K.

SOLAR ENERGY MATERIALS AND SOLAR CELLS, vol.103, pp.199-204, 2012 (Journal Indexed in SCI)

- **Transport and storage properties of CrSi2/Si junctions made using the CAPVD technique**

Menda U. D. , ÖZDEMİR O., Tatar B., Urgen M., Kutlu K.

MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.13, pp.257-266, 2010 (Journal Indexed in SCI)

- **Excess Capacitance Due to Minority Carrier Injection in CrSi2/p-Type Crystalline Si Isotype Junction**

ÖZDEMİR O., Yilmazer U. D. , Tatar B., Urgen M., Kutlu K.

JAPANESE JOURNAL OF APPLIED PHYSICS, vol.49, 2010 (Journal Indexed in SCI)

- **Study of minority carrier injection phenomenon on Schottky and plasma deposited p-n junction diodes**

ÖZDEMİR O., SEL K.

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- **Correlation of DC and AC electrical properties of Al/p-Si structure by I-V-T and C(G/omega)-V-T measurements**

ÖZDEMİR O., Tatar B., YILMAZER D., GOKDEMİR P., KUTLU K.

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- **Electrical transport mechanism in boron nitride thin film**

ÖZDEMİR O., Anutgan M., Aliyeva-Anutgan T., Atilgan I., Katircioglu B.

JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.355, pp.851-859, 2009 (Journal Indexed in SCI)

- **Electrical and photovoltaic properties of Cr/Si Schottky diodes**

Tatar B., BULGURCUOĞLU A. E. , Gokdemir P., Aydogan P., Yilmazer D., ÖZDEMİR O., Kutlu K.

INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.34, pp.5208-5212, 2009 (Journal Indexed in SCI)

- **Annealing improvement on the localized states of plasma grown boron nitride film assessed through admittance measurements**

ÖZDEMİR O., Anutgan M., Aliyeva-Anutgan T., Atilgan I., Katircioglu B.

JOURNAL OF ALLOYS AND COMPOUNDS, vol.475, pp.794-803, 2009 (Journal Indexed in SCI)

- **Alternative Approach for Determination of Energy Band Gap of Semiconductors Through Electrical Analysis**

ÖZDEMİR O.

American Institute of Physics Conference Proceedings, vol.1203, pp.875-883, 2009 (Journal Indexed in SCI)

Expanded)

- **Electroluminescence properties of a PIN structure made by nearly stoichiometric a-SiC<sub>x</sub>:H active layer**  
SEL K., Akaoglu B., ÖZDEMİR O., Atılğan I.  
VACUUM, vol.83, pp.813-818, 2009 (Journal Indexed in SCI)
- **OBSERVATION OF APPARENT MOS REGIMES ON AI/PECVD GROWN BORON NITRIDE/p-c-Si/AI MIS STRUCTURE, INVESTIGATED THROUGH ADMITTANCE SPECTROSCOPY**  
ÖZDEMİR O.  
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- **Temperature Dependence of PECVD Grown Boron Nitride Film in MIS structure**  
ÖZDEMİR O.  
American Institute of Physics Conference Proceedings, vol.1203, pp.870-875, 2009 (Journal Indexed in SCI Expanded)
- **Effect of heat treatment on stress and structure evolution in plasma deposited boron nitride thin films**  
Anutgan M., ÖZDEMİR O., Atılğan İ., Katircioğlu B.  
Surface and Coating Technology, vol.202, pp.3058-3066, 2008 (Journal Indexed in SCI Expanded)
- **Conduction mechanism analysis in beta-FeSi<sub>2</sub>/n-Si heterojunction through J-V-T measurement**  
ÖZDEMİR O., Tatar B., Yilmazer D., Gokdemir P., Kutlu K.  
SEMICONDUCTOR SCIENCE AND TECHNOLOGY, vol.23, 2008 (Journal Indexed in SCI)
- **Similar admittance behavior of amorphous silicon carbide and nitride dielectrics within the MIS structure**  
ÖZDEMİR O., Atılğan İ., Katircioğlu B.  
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ÖZDEMİR O., Anutgan M., Anutgan T. A. , Atılğan İ., Katircioğlu B.  
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- **Abnormal frequency dispersion of the admittance associated with a chromiumplasma deposited a-SiN<sub>x</sub>:Hp-Si structure**  
ÖZDEMİR O., Atılğan İ., Katircioğlu B.  
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.353, pp.2751-2757, 2007 (Journal Indexed in SCI Expanded)
- **Transport studies of carbon-rich a-SiC<sub>x</sub> : H film through admittance and deep-level transient spectroscopy measurements**  
Atılğan I., ÖZDEMİR O., Akaoglu B., Sel K., Katircioğlu B.  
PHILOSOPHICAL MAGAZINE, vol.86, pp.2771-2796, 2006 (Journal Indexed in SCI)
- **Frequency dependence of conductivity in intrinsic amorphous silicon carbide film, assessed through admittance measurement of metal insulator semiconductor structure**  
ÖZDEMİR O., Atılğan İ., Akaoglu B., Sel K., Katircioğlu B.  
THIN SOLID FILMS, vol.497, pp.149-156, 2006 (Journal Indexed in SCI)
- **Instability evolution within a-SiN<sub>x</sub> film assessed through MIS structure under bias and temperature stresses," J. Non-cryst. Sol., 296, 27-38, 2001.**  
ÖZDEMİR O., Atılğan i., Katircioğlu B.  
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- **Admittance analysis of an MIS structure made with PECVD deposited a-SiN<sub>x</sub>:H films**  
Özder S., ÖZDEMİR O., Katircioğlu B.  
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.249, pp.131-144, 1999 (Journal Indexed in SCI Expanded)

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- **Charge Transport in Bifidobacterium animalis subsp.lactis BB-12 under Various Atmospheres**  
Bozkurt K., Denктаş C., Özdemir O., Altındal A., Avdan Z., Bozkurt H. S.  
Open Journal of Applied Sciences, vol.9, pp.506-514, 2019 (Refereed Journals of Other Institutions)

- **Investigation of Carrier Conduction Mechanism over InAs/InP Quantum Dashes and InAs/GaAs Quantum Dots Based p-i-n Laser Heterostructures**  
Ayarıcı Kuruoğlu N., Özdemir O., Bozkurt K.  
Journal of Materials Science and Chemical Engineering, no.9, pp.1-9, 2017 (Refereed Journals of Other Institutions)
- **International Congress on Energy Efficiency and Energy Related Materials (ENEFM2013)**  
Gökdemir F. P. , Özdemir O., Keskin B., Kutlu K.  
Springer Proceedings in Physics, vol.155, pp.307-313, 2014 (Refereed Journals of Other Institutions)
- **Formation of TiO<sub>2</sub> thin films by a modified sol-gel route and characterization of structural, optical and electrochromic properties**  
Gökdemir F. P. , Yüzbaşıoğlu V. E. , Keskin B., Özdemir O., Kutlu K.  
Advanced Materials Letters, vol.5, pp.367-371, 2014 (Refereed Journals of Other Institutions)
- **Conduction Mechanism Analysis of Inversion Current in MOS Tunnel Diodes\**  
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- **Conduction Mechanism Analysis of Inversion Current in MOS Tunnel Diodes**  
Saatci A. E. , Özdemir O., Kutlu K.  
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- **Electroluminescence property of organic light emitting diode (OLED)**  
Gökdemir F. P. , Özdemir O., Bulgurcuoğlu A. E. , Kutlu K., Menda U. D. , Kavak P., Can N.  
AIP Conference Proceedings, vol.1569, pp.364-371, 2013 (International Conference Book)
- **Energy-band diagram of PCDTBT, PCBM and blend by cyclic voltammetry and UV-visible measurements**  
Gökdemir F. P. , Özdemir O., Bulgurcuoğlu A. E. , Kutlu K., Menda U. D. , Kavak P.  
AIP Conference Proceedings, vol.1569, pp.283-287, 2013 (International Conference Book)
- **Ionic conduction in different hydrated V<sub>2</sub>O<sub>5</sub> films**  
Gökdemir F. P. , Özdemir O., Bulgurcuoğlu A. E. , Kutlu K., Menda U. D. , Kavak P.  
AIP Conference Proceedings, vol.1476, pp.289-295, 2012 (International Conference Book)
- **SELF INVERSION PHENOMENON ON MOS STRUCTURE THROUGH ADMITTANCE SPECTROSCOPY**  
ÖZDEMİR O.  
Balkan Physics Letters, vol.18, pp.156-164, 2010 (Refereed Journals of Other Institutions)
- **Cr/p-Si MS YAPISINDAKİ İLETKENLİK MODÜLASYONUNUN AKIM-GERİLİM VE ADMİTTANS ÖLÇMELERİYLE İNCELENMESİ**  
ÖZDEMİR O.  
Sigma, vol.27, pp.236-241, 2009 (Other Refereed National Journals)
- **Investigation of PECVD Grown Hydrogenated Amorphous Silicon Nitride film Through DLTS Measurement**  
ÖZDEMİR O.  
Balkan Physics Letter, vol.16, 2009 (Refereed Journals of Other Institutions)
- **Electrical Properties of Cr/p-type Si Schottky Diodes at room Temperature**  
ÖZDEMİR O.  
Balkan Physics Letters, 2008 (Refereed Journals of Other Institutions)
- **The current-voltage characteristics of Al/SiO<sub>2</sub>/p-Si MIS type Schottky Diodes**  
ÖZDEMİR O.  
Balkan Physics Letters, 2008 (Refereed Journals of Other Institutions)

## Book & Book Chapters

- **in: International Congress on Energy Efficiency and Energy Related Materials ENEFM2013**  
Özdemir O., Gökdemir F. P. , Keskin B., Kutlu K.  
Influence of Heat Treatment on Structure and Charge Capacity of Sol-Gel Produced TiO<sub>2</sub> Films,  
Oral,A.Y.,Bahsi,Z.B.,Ozer,M., Editor, Springer, Zürich, pp.307-313, 2014

## Supported Projects

- ÖZDEMİR O., TUBITAK Project, Silisyum tabanlı ışık yayınlayan yapıların üretilmesi, Continues
- ÖZDEMİR O., TUBITAK Project, Silisyum nitrür filmlerin plazmayla büyütülmesi, amorf silisyum ince tabanlı ince film transistörlere uygulanması, Continues
- ÖZDEMİR O., Other Supported Projects, a-SiCx:H ince filmlerin üretilmesi ve ışyan PIN yapıya ayarlanması, Continues
- ÖZDEMİR O., Other Supported Projects, YTU Merkez Lab Kurulumu, Continues
- AYARCI KURUOĞLU N., ÖZDEMİR O., BOZKURT K., Project Supported by Higher Education Institutions, %30 In katkılı InxGa1-xN/GaN çoklu kuantum kuyuların optoelektronik özelliklerinin incelenmesi, 2018 - 2019
- ÖZDEMİR O., Project Supported by Higher Education Institutions, a-Si:H/c-Si Eklemin HIT Türü Güneş Piliindeki Rolü, 2012 - 2015
- ÖZDEMİR O., Project Supported by Higher Education Institutions, PECVD Yöntemiyle a-Si:H Tabanlı HIT Güneş Pili Üretimi ve Karakterizasyonu, 2012 - 2015
- ÖZDEMİR O., Project Supported by Higher Education Institutions, Erbiyum Katkılı/Katkısız İnce Filmlerin Elektrokromik Özelliklerinin İncelenmesi, 2012 - 2015
- ÖZDEMİR O., Project Supported by Higher Education Institutions, Yüksek Dielektrik Sabitli Alternatif Yalıtkan Filmlerin Metal/Yalıtkan/Yarıiletken (MIS) yapısında incelenmesi, 2011 - 2015
- ÖZDEMİR O., Project Supported by Higher Education Institutions, PECVD yöntemiyle büyütülmüş bor nitrür filmlerin elektriksel ve optiksel özelliklerinin incelenmesi ve tavlamanın film yapısına etkileri., 2008 - 2010
- ÖZDEMİR O., Other Supported Projects, PECVD YÖNTEMİYLE BÜYÜTÜLMÜŞ BOR NİTRÜR FİLİMLERİN, 2008 - 2010
- ÖZDEMİR O., Project Supported by Higher Education Institutions, Metal-yarıiletken yapıların elektriksel özelliklerinin incelenmesi., 2007 - 2009

## Scientific Refereeing

- Surface roughness and optoelectronic properties of intrinsic and doped nc-Si:H prepared by rf-magnetron sputtering at low temperature, SCI Journal, February 2014
- Journal of Non-Crystalline Solids, SCI Journal, January 2000

## Citations

Total Citations (WOS):202  
h-index (WOS):7