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International Researcher IDs

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Education

Doctorate 1988 - 1995	Middle East Technical University, Graduate School Of Natural And Applied Sciences, Fizik, Turkey
Postgraduate 1985 - 1988	Middle East Technical University, Graduate School Of Natural And Applied Sciences, Fizik, Turkey
Undergraduate 1980 - 1985	Middle East Technical University, Fen Edebiyat, Fizik, Turkey

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, Oscillatory magnetoresistance in two dimensional semiconductor structures, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Fizik, 1995

Postgraduate, Self-consistent field calculations for the electronic properties of semiconductor superlattices, Middle East Technical University, Fen Bilimleri Enstitüsü, Fizik, 1988

Academic Titles / Tasks

Associate Professor 2018 - Continues	Cukurova University, Fen-Edebiyat Fakültesi, Fizik
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Assistant Professor

2018 - 2019

Cukurova University, Fen-Edebiyat Fakültesi, Fizik

Assistant Professor

1996 - 2018

Cukurova University, Fen-Edebiyat Fakültesi, Fizik

Supported Projects

1. ÖZDEMİR B., Project Supported by Higher Education Institutions, Manyetik Alan Altındaki İki Boyutlu Elektron Gazının Kimyasal Potansiyeli, Isı Sığası ve Manyetizasyon, 2013 - 2016
2. ÖZDEMİR B., Project Supported by Higher Education Institutions, Katmanlı İki Boyutlu Yapıların Elektronik Özellikleri, 2013 - 2016

Published journal articles indexed by SCI, SSCI, and AHCI

1. **Mobility Characteristics of ZnMgO/ZnO Heterostructures with Screening Effects**
Yarar Z., Alyörük M., Çekil H., ÖZDEMİR B., ÖZDEMİR M.
Physics of the Solid State, vol.66, no.4, pp.91-98, 2024 (SCI-Expanded)
2. **Screening effects on the mobility properties in AlGaN/GaN heterostructures with varied Al content**
Yarar Z., Cesur D., Alyoruk M. D., Cekil H. C., ÖZDEMİR B., ÖZDEMİR M.
INTERNATIONAL JOURNAL OF MODERN PHYSICS C, vol.33, no.12, 2022 (SCI-Expanded)
3. **Electron transport properties of silicene: Intrinsic and dirty cases with screening effects**
Ozdemir M., Cekil H. C., Atasever O., Ozdemir B., Yarar Z., Ozdemir M.
JOURNAL OF MOLECULAR STRUCTURE, vol.1199, 2020 (SCI-Expanded)
4. **Transport Properties of Graphene and Suspended Graphene with EMC: The Role of Various Scattering Mechanisms**
Ozdemir M. D., ATASEVER O. S., ÖZDEMİR B., Yarar Z., ÖZDEMİR M.
JOURNAL OF ELECTRONIC MATERIALS, vol.45, no.8, pp.4468-4475, 2016 (SCI-Expanded)
5. **Electron-Transport Properties of a ZnMgO/ZnO Hetero Structure and the Effect of Interface Roughness and ZnMgO Thickness**
ÖZDEMİR B., Yarar Z., Ozdemir M. D., ATASEVER O. S., ÖZDEMİR M.
JOURNAL OF ELECTRONIC MATERIALS, vol.44, no.10, pp.3733-3737, 2015 (SCI-Expanded)
6. **A comparative study of transport properties of monolayer graphene and AlGaN-GaN heterostructure**
Ozdemir M. D., ATASEVER O., ÖZDEMİR B., Yarar Z., ÖZDEMİR M.
AIP ADVANCES, vol.5, no.7, 2015 (SCI-Expanded)
7. **Tritium activity levels in drinking water of Adana, Turkey**
Goren E., Turhan S., Ugur F. A., Gezer F., ÖZDEMİR B., UFUKTEPE Y.
JOURNAL OF RADIOANALYTICAL AND NUCLEAR CHEMISTRY, vol.299, no.3, pp.1427-1431, 2014 (SCI-Expanded)
8. **Transport and mobility properties of bulk indium nitride (InN) and a two-dimensional electron gas in an InGaN/GaN quantum well**
YARAR Z., Ozdemir B., OZDEMİR M.
JOURNAL OF ELECTRONIC MATERIALS, vol.36, no.10, pp.1303-1312, 2007 (SCI-Expanded)
9. **Electron mobility in a modulation doped AlGaN/GaN quantum well**
YARAR Z., Ozdemir B., OZDEMİR M.
EUROPEAN PHYSICAL JOURNAL B, vol.49, no.4, pp.407-414, 2006 (SCI-Expanded)
10. **Mobility of electrons in a AlGaN/GaN QW: Effect of temperature, applied field, surface roughness**

and well width

YARAR Z., Ozdemir B., OZDEMİR M.

PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS, vol.242, no.14, pp.2872-2884, 2005 (SCI-Expanded)

11. **SELF-CONSISTENT FIELD CALCULATIONS FOR GAAS/GAALAS SAWTOOTH SUPERLATTICES**

USLU B., ERKOC S.

SOLID STATE COMMUNICATIONS, vol.68, no.2, pp.277-281, 1988 (SCI-Expanded)

Articles Published in Other Journals

1. **MANYETİK ALAN ALTINDAKİ İKİ BOYUTLU ELEKTRON GAZININ KİMYASAL POTANSİYELİ ISI SIĞASI VE MANYETİZASYONU**

Tekin M., ÖZDEMİR B.

Ç.Ü. Fen ve Mühendislik Bilimleri Dergisi, 2016 (Peer-Reviewed Journal)

2. **KATMANLI GRAFENİN ELEKTRONİK ÖZELLİKLERİNİN MONTE CARLO YÖNTEMİ İLE HESABI VE GRAFENİN OPTİK ÖZELLİKLER**

Atasever Ö., ÖZDEMİR B.

Ç.Ü Fen ve Mühendislik Bilimleri Dergisi, vol.33, no.1, 2015 (Peer-Reviewed Journal)

3. **Adana İçme Sularında Trityum Aktivitesinin Belirlenmesi**

Gören E., ÖZDEMİR B.

ÇÜ Fen Bilimleri Enstitüsü Fen ve Mühendislik Bilimleri Dergisi, vol.30, no.5, pp.65-68, 2013 (Peer-Reviewed Journal)

4. **Delta Katkılı Yarıiletkenlerin Elektronik Özellikleri**

Öznur S., ÖZDEMİR B.

ÇÜ Fen Bilimleri Enstitüsü Fen ve Mühendislik Bilimleri Dergisi, vol.25, no.2, pp.190-199, 2011 (Peer-Reviewed Journal)

5. **ELECTRON TRANSPORT AND MOBILITY CALCULATION IN A ALGAAS GAAS 2DEG BY MONTE CARLO METHOD**

YARAR Z., ÖZDEMİR B., ÖZDEMİR M.

Erciyes Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.21, pp.13-23, 2005 (Peer-Reviewed Journal)

6. **Variation of Chemical Potential Oscillations of a 2DEG in a Quantum Well Under a Magnetic Field for Multiple Sub-Band Occupation as Function of Temperature and Level-Broadening**

Özdemir B., Yayar Z., ÖZDEMİR M.

Turkish Journal of Physics, vol.28, pp.1-15, 2004 (Scopus)

7. **Manyetik Alan Altındaki İki Boyutlu Bir Elektron Gazında Fermi Enerjisinin Sıcaklığa Bağımlılığı**
ÖZDEMİR B.

SDÜ Fen Bilimleri Enstitüsü Dergisi, vol.8, no.2, pp.193-196, 2004 (Peer-Reviewed Journal)

Papers Published in Refereed Scientific Meetings

1. **ENERGY BAND STRUCTURE AND ELECTRON-PHONON SCATTERING PROPERTIES OF TWO DIMENSIONAL ZrS₂**

Çekil H. C., Özdemir B., Yıldız N. T., Sabaner M. A., Dömekeli Ü., Işık F., Şengül S., Özdemir M.

4 th International Natural Science, Engineering and Material Technologies Conference Sep 12-14, 2024 - İğneada / Kırklareli, Kırklareli, Turkey, 12 - 14 September 2024, pp.52

2. **Electron Mobility in a Si-delta doped GaAs: a Monte Carlo study**

Özdemir B.

2nd International Congress on Scientific Advances (ICONSAD'22), Konya, Turkey, 21 - 24 December 2022, pp.800

3. **Electronic Transport Properties of WS₂ With Ensemble Monte Carlo Method**

Alyörük M. D., Çekil H. C., Özdemir B., Yayar Z., Özdemir M.

9 th International Conference on Materials Science and Nanotechnology for Next Generation, Ankara, Turkey, 22 - 24 September 2022, pp.77

4. **Electron Transport Properties of Silicene: Intrinsic and Dirty Cases with Screening Effects**
ÖZDEMİR M. D., ÇEKİL H. C., YARAR Z., ATASEVER Ö., ÖZDEMİR B., ÖZDEMİR M.
5th International Conference on Materials Science and Nanotechnology For Next Generation (MSNG2018), Nevşehir, Turkey, 4 - 06 October 2018
5. **Transport properties of ZnMgO/ZnO structure with screening effects**
YARAR Z., Uslu S., ÖZDEMİR M. D., ÖZDEMİR B., Atasever Ö., ÖZDEMİR M.
INTERNATIONAL CONFERENCE ON CONDENSED MATTER AND MATERIAL SCIENCES, 11 - 15 October 2017
6. **Various Scattering Mechanisms in AlGa_N/Ga_N Hetero Structure and Investigation of Screening Effect**
YARAR Z., Cessur D., ÖZDEMİR M. D., ÖZDEMİR B., Atasever Ö., ÖZDEMİR M.
INTERNATIONAL CONFERENCE ON CONDENSED MATTER AND MATERIAL SCIENCES, 11 - 15 October 2017
7. **A Comparison of Silicene and Graphene Mobilities with an EMC Technique**
ÖZDEMİR M. D., Çekil C., Atasever Ö., ÖZDEMİR B., YARAR Z., ÖZDEMİR M.
INTERNATIONAL CONFERENCE ON CONDENSED MATTER AND MATERIAL SCIENCES, 11 - 15 October 2017
8. **Various Scattering Mechanisms in AlGa_N/Ga_N Hetero Structure and Investigation of Screening Effect**
YARAR Z., Cessur D., ÖZDEMİR M. D., ÖZDEMİR B., Atasever Ö., ÖZDEMİR M.
INTERNATIONAL CONFERENCE ON CONDENSED MATTER AND MATERIAL SCIENCES, 11 - 15 October 2017
9. **TRANSPORT CHARACTERISTICS OF AL DOPED GAN**
YARAR Z., Cessur D., ÖZDEMİR M. D., ÖZDEMİR B., Atasever Ö., ÖZDEMİR M.
TURKISH PHYSICAL SOCIETY 33rd INTERNATIONAL PHYSICS CONGRESS, 6 - 10 September 2017
10. **Ensemble Monte Carlo Analysis of Electron transport in Silicene**
ÖZDEMİR M. D., Atasever Ö., ÖZDEMİR B., YARAR Z., ÖZDEMİR M.
Türk Fizik Derneği 33. Uluslararası Fizik Kongresi, 6 - 10 September 2017
11. **THE EFFECT OF SCREENING ON THE PHONON SCATTERINGS IN ZNMGO/ZNO STRUCTURES**
YARAR Z., Uslu S., ÖZDEMİR M. D., ÖZDEMİR B., Atasever Ö., ÖZDEMİR M.
TURKISH PHYSICAL SOCIETY 33rd INTERNATIONAL PHYSICS CONGRESS, 6 - 10 September 2017
12. **Transport Properties of Intrinsic and Dirty Graphene with EMC The Role of Various Scattering Mechanisms**
ÖZDEMİR M. D., Atasever Ö., ÖZDEMİR B., YARAR Z., ÖZDEMİR M.
European Symposium on Surface Science, 21 - 23 September 2016
13. **Transport properties of intrinsic and dirty graphene The role of surface roughness scattering**
ÖZDEMİR M. D., atasever ö., YARAR Z., ÖZDEMİR B., ÖZDEMİR M.
European Graphene Forum, Advanced Materials World Congress 2015, 23 - 25 August 2015
14. **Calculation of The Low Field Mobility of Bilayer Graphene With Monte Carlo Method**
Atasever Ö., ÖZDEMİR M. D., ÖZDEMİR B., YARAR Z., ÖZDEMİR M.
9th International Physics Conference of the Balkan Physical Union, 24 - 27 August 2015
15. **Transport properties of intrinsic and dirty graphene The role of interface roughness scattering**
ÖZDEMİR M. D., Atasever Ö., YARAR Z., ÖZDEMİR B., ÖZDEMİR M.
European Graphene Forum 2015, 23 - 26 August 2015
16. **A Comparative Study of Transport Properties of Monolayer Graphene and AlGa_N/Ga_N Heterostructure**
Özdemir M. D., ATASEVER Ö. S., ÖZDEMİR B., YARAR Z., ÖZDEMİR M.
European Symposium on Surface Science, Roma, Italy, 26 November 2014, pp.1
17. **Dynamical Conductivity of a Single Layer Graphene**
Atasever Ö., ÖZDEMİR M. D., ÖZDEMİR B.
GRM2014-Graphene and Related Materials, İzmir, Turkey, 9 - 11 July 2014
18. **İki Boyutlu Yapılarda Perdeleme ve Elektron Saçılma Mekanizmalarına Etkisi**
Atasever Ö., ÖZDEMİR M. D., ÖZDEMİR B.
Türk Fizik Derneği 30. Uluslararası Fizik Kongresi, 2 - 05 September 2013
19. **Değiş Tokuş Potansiyelin Delta Katkılı Yarıiletkenlerin Elektronik Özelliklerine Etkisi**

Öznur S., ÖZDEMİR B.

Türk Fizik Derneği 27. Uluslararası Fizik Kongresi, 14 - 17 September 2010

20. **Manyetik Alan Altındaki İki Boyutlu Bir Elektron Gazında Fermi Enerjisinin Sıcaklığa Bağımlılığı**
ÖZDEMİR B.

Türk Fizik Derneği 21. Fizik Kongresi, 11 - 14 September 2002

Other Publications

1. **Optik (Bölüm Çevirisi)**

Özdemir B.

Other, pp.1-650, 2014

2. **Parçacıklar ve Sistemler için Klasik Dinamik (Bölüm Çevirisi)**

Özdemir B.

Other, pp.1-650, 2011

3. **Fen Bilimcileri ve Mühendisler için FİZİK (Bölüm çevirisi)**

Önengüt G., Özdemir B., Özdemir M.

Other, pp.1200, 2009

Courses

Doctorate

Kuantum Mekaniği II, Doctorate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020

Postgraduate

Analitik Mekaniik, Postgraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019

Düşük Boyutlu Kuantum Sistemleri II, Postgraduate, 2021 - 2022, 2020 - 2021

Düşük Boyutlu Kuantum Sistemleri I, Postgraduate, 2021 - 2022, 2020 - 2021

Undergraduate

Teorik Mekaniik II, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020

Kuantum Mekaniği II, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021

Physics II, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020

Malzeme Bilimine Giriş, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021

Physics I, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020

Kuantum Mekaniği I, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021

Teorik Mekaniik I, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020

Metrics

Publication: 41

Citation (WoS): 57

Citation (Scopus): 65

H-Index (WoS): 4

H-Index (Scopus): 5

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