

Assoc. Prof. AYLİN YILDIZ TUNALI

Personal Information

Email: aylin.yildiz@deu.edu.tr

Web: <https://avesis.deu.edu.tr/aylin.yildiz>

International Researcher IDs

ScholarID: jabG3CkAAAAJ

ORCID: 0000-0001-8121-5756

Publons / Web Of Science ResearcherID: P-9817-2019

ScopusID: 56512182000

Yoksis Researcher ID: 137653

Education Information

Doctorate, Dokuz Eylul University, Fen Bilimleri Enstitüsü, Fizik (Dr), Turkey 2003 - 2009

Postgraduate, Dokuz Eylul University, Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli), Turkey 2001 - 2003

Undergraduate, Dokuz Eylul University, Buca Eğitim Fakültesi, Matematik ve Fen Bilimleri Eğitimi Bölümü, Turkey 1997 - 2001

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Quantum Monte Carlo investigations of quantum dots, Dokuz Eylul University, Fen Bilimleri Enstitüsü, Fizik (Dr), 2009

Postgraduate, Dopant and substitution effects on YBCO based superconductors, Dokuz Eylul University, Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli), 2003

Research Areas

Physics

Academic Titles / Tasks

Associate Professor, Dokuz Eylul University, Fen Fakültesi, Fizik Bölümü, 2022 - Continues

Research Assistant, Dokuz Eylul University, Fen Fakültesi, Fizik Bölümü, 2003 - 2018

Academic and Administrative Experience

Exam Program Preparation Commission Member, Dokuz Eylul University, Fen Fakültesi, Fizik Bölümü, 2021 - Continues

Curriculum Preparation Committee Member, Dokuz Eylul University, Fen Fakültesi, Fizik Bölümü, 2021 - Continues
Erasmus Program Department Coordinator, Dokuz Eylul University, Fen Fakültesi, Fizik Bölümü, 2020 - Continues
Deputy Head of Department, Dokuz Eylul University, Fen Fakültesi, Fizik Bölümü, 2019 - 2020

Courses

PHYSICS I, Undergraduate, 2022 - 2023
Mathematical Methods in Physics I, Undergraduate, 2022 - 2023
Kariyer Planlama, Undergraduate, 2022 - 2023
PHYSICS I, Undergraduate, 2022 - 2023
PHYSICS II, Undergraduate, 2021 - 2022
Mathematical Methods in Physics II, Undergraduate, 2021 - 2022
Bitirme Projesi (Hazırlık), Undergraduate, 2022 - 2023
Quantum Mechanics I, Undergraduate, 2021 - 2022
Physics I for Computer Sciences, Undergraduate, 2021 - 2022
Quantum Mechanics II, Undergraduate, 2020 - 2021
PHYSICS II, Undergraduate, 2019 - 2020
Quantum Mechanics II, Undergraduate, 2019 - 2020
PHYSICS I, Undergraduate, 2020 - 2021
PHY 1102 Physics II, Undergraduate, 2019 - 2020
PHY 3903 Quantum Mechanics I, Undergraduate, 2019 - 2020
PHY 1101 Physics I, Undergraduate, 2019 - 2020
FİZ 1101 Fizik I, Undergraduate, 2019 - 2020
PHY 3904 Quantum Mechanics II, Undergraduate, 2019 - 2020
PHY 1202 Physics II, Undergraduate, 2018 - 2019
PHY 3001 Quantum Physics, Undergraduate, 2018 - 2019
PHY 1201 Physics I, Undergraduate, 2018 - 2019
PHY 1204 Physics Laboratory, Undergraduate, 2018 - 2019
PHY 3002 Quantum Mechanics I, Undergraduate, 2018 - 2019

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **The topological in-equivalence of Hall bar and Corbino geometries in coordinate space: Screening theory and direct transport experiments**
Sirt S., İren E., Ekşi D., Tunali A., Güvenilir E., Kendirlik E. M., Ofek N., Umansky V., Ludwig S., Siddiki A.
Physica E: Low-Dimensional Systems and Nanostructures, vol.153, 2023 (SCI-Expanded)
- II. **Ab Initio Calculations of Structural, Electronic, Elastic, Optical, and Dynamical Properties of Half-Heusler LiSiB Compound**
AKYÜZ G. B., Doğan E., BOZ YURDAŞAN N., YILDIZ TUNALI A., Erden Gülebağlan S.
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.35, no.6, pp.1517-1525, 2022 (SCI-Expanded)
- III. **First-principles calculations of structural and electronic properties of TlxGa1-xAs alloys**
AKYÜZ G. B., YILDIZ TUNALI A., Gulebağlan S. E., Yurdasan N.
CHINESE PHYSICS B, vol.25, no.2, 2016 (SCI-Expanded)
- IV. **Structural and electronic properties of GaxTl 1 - xP ternary alloys**
YILDIZ TUNALI A., Erden Gülebağlan S., BOZ YURDAŞAN N., Bilgeç Akyuz G.
Materials Science in Semiconductor Processing, vol.33, pp.58-66, 2015 (SCI-Expanded)
- V. **First-principles investigation of bowing parameter in zinc-blende ScxGa1-xN**
Yurdasan N., Gulebağlan S. E., YILDIZ TUNALI A., Akyuz G. B.
PHILOSOPHICAL MAGAZINE LETTERS, vol.94, no.11, pp.724-731, 2014 (SCI-Expanded)

- VI. **The Consequences of Bulk Compressibility on the Magneto-Transport Properties within the Quantized Hall State**
Yildiz A., Eksi D., Siddiki A.
JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN, vol.83, no.1, 2014 (SCI-Expanded)
- VII. **Dependence of the Structural, Electrical and Magnetic Properties of YBa₂Cu₃O_{7- δ} Bulk Superconductor on the Ag Doping**
Yildiz A., KOCABAŞ K., AKYÜZ G. B.
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.25, no.5, pp.1459-1467, 2012 (SCI-Expanded)
- VIII. **EXCITON STATES IN A QUANTUM DOT WITH PARABOLIC CONFINEMENT**
DOĞAN Ü., Sakiroglu S., Yildiz A., AKGÜNGÖR K., Epik H., Sokmen I.
INTERNATIONAL JOURNAL OF MODERN PHYSICS B, vol.25, no.32, pp.4489-4497, 2011 (SCI-Expanded)
- IX. **The Effects of Sb Substitution on Structural Properties in YBa₂Cu₃O₇ Superconductors**
AKYÜZ G. B., KOCABAŞ K., Yildiz A., Ozyuzer L., Ciftcioglu M.
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.24, no.8, pp.2189-2201, 2011 (SCI-Expanded)
- X. **VARIATIONAL COMPUTATIONS FOR EXCITONS IN QUANTUM DOTS: A QUANTUM MONTE CARLO STUDY**
Yildiz A., Sakiroglu S., DOĞAN Ü., AKGÜNGÖR K., Epik H., Sokmen I., Sari H., Ergun Y.
INTERNATIONAL JOURNAL OF MODERN PHYSICS B, vol.25, no.1, pp.119-130, 2011 (SCI-Expanded)
- XI. **Evanescence incompressible strips as origin of the observed Hall resistance overshoot**
Siddiki A., Gulebaglan S. E., Yurdasan N., Bilgec G., Yildiz A., Sokmen I.
EPL, vol.92, no.6, 2010 (SCI-Expanded)
- XII. **Characterization of platinum nitride from first-principles calculations**
Yildiz A., AKINCI Ü., Gulseren O., Sokmen I.
JOURNAL OF PHYSICS-CONDENSED MATTER, vol.21, no.48, 2009 (SCI-Expanded)
- XIII. **Fourier transform technique in variational treatment of two-electron parabolic quantum dot**
Sakiroglu S., Yildiz A., DOĞAN Ü., AKGÜNGÖR K., Epik H., Ergun Y., Sari H., Sokmen I.
CHINESE PHYSICS B, vol.18, no.8, pp.3508-3516, 2009 (SCI-Expanded)
- XIV. **Ground state energy of excitons in quantum dot treated variationally via Hylleraas-like wavefunction**
Sakiroglu S., DOĞAN Ü., Yildiz A., AKGÜNGÖR K., Epik H., Ergun Y., Sari H., Sokmen I.
CHINESE PHYSICS B, vol.18, no.4, pp.1578-1585, 2009 (SCI-Expanded)

Articles Published in Other Journals

- I. **DFT Investigations on Structural, Electronic and Vibrational Properties of LuN under High Pressure**
Boz Yurdaşan N., Erden Gülebağlan S., Yıldız Tunali A., Bilgeç Akyüz G.
Yüzüncü Yıl Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.26, no.1, pp.45-52, 2021 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **2D Materials: Properties and Applications**
YILDIZ TUNALI A.
Enerji Aygıtları ve Malzemelerinin Modellenmesi-Üretimi Ulusal Yaz Okulu, Turkey, 1 - 07 July 2019
- II. **The Effect of Zeeman Energy on Quantum Hall Systems**
ERDEN GÜLEBAĞLAN S., YILDIZ TUNALI A., BOZ YURDAŞAN N., BİLGEÇ AKYÜZ G.
3.International Conference on Material Science and Technology in Cappadocia-IMSTEC 2018, 17 - 19 September 2018
- III. **First-Principles Study of Structural, Elastic and Electronic Properties of Samarium Selenide**
BOZ YURDAŞAN N., BİLGEÇ AKYÜZ G., YILDIZ TUNALI A., ERDEN GÜLEBAĞLAN S.
Turkish Physical Society 34th International Physics Congress, Herodot Cultural Center Bodrum, Muğla, Turkey, 5 -

09 September 2018

- IV. **Stable, Single-Layer XSe₂ and XTe₂ (X=Cr, Mo, W) Compounds in Honeycomb-like Structure**
BOZ YURDAŞAN N., YILDIZ TUNALI A., BİLGEÇ AKYÜZ G., ERDEN GÜLEBAĞLAN S.
Turkish Physical Society 34 th International Physics Congress, Herodot Cultural Center, Bodrum, Muğla, Turkey, 5 - 09 September 2018
- V. **Quantum Monte Carlo Investigations of Quantum Dots**
YILDIZ TUNALI A., SÖKMEN İ.
11th International Conference on Nanosciences & Nanotechnologies, 8 - 11 July 2014
- VI. **FIRST PRINCIPLES INVESTIGATION OF THE COMPOSITION EFFECT ON THE ELECTRONIC PROPERTIES AND GAP BOWING PARAMETERS OF CUBIC GaTIP AND TIGaP ALLOYS**
YILDIZ TUNALI A., ERDEN GÜLEBAĞLAN S., BOZ YURDAŞAN N., BİLGEÇ AKYÜZ G.
Turkish Physical Society 29th International Physics Congress, 5 - 08 September 2012
- VII. **Doping effect of Ag on magnetic behaviour of YBa₂Cu₃O₇ delta bulk superconductor**
YILDIZ TUNALI A., KOCABAŞ K., BİLGEÇ AKYÜZ G.
Turkish Physical Society 28th International Physics Congress, MUĞLA/BODRUM, Turkey, 6 - 09 September 2011
- VIII. **Topological analysis of the Integer Quantum Hall Effect**
YILDIZ TUNALI A., EKŞİ D., SİDDİKİ A., SÖKMEN İ.
Nanoscience and Nanotechnology Conference NanoTR VI, İZMİR/ÇEŞME, Turkey, 15 - 18 June 2010
- IX. **İlk prensip Hesaplardan Platinyum Nitrit in Özelliklerinin Karakterizasyonu**
YILDIZ TUNALI A., AKINCI Ü., GÜLSEREN O., SÖKMEN İ.
13. Yoğun Madde Fiziği Ankara Toplantısı, Ankara, Turkey, 03 November 2006
- X. **YBa₂Cu₃ xNixOy Süperiletken Seramiklerin Karakterizasyonu**
Kocabaş K., Yıldız Tunali A., Okumuş S., Çiftçioğlu M., Şakiroğlu S., Ercan İ.
TFD-21. Fizik Kongresi, Isparta, Turkey, 11 - 14 September 2002

Scientific Refereeing

MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, SCI Journal, January 2015

Metrics

Publication: 25

Citation (WoS): 80

Citation (Scopus): 82

H-Index (WoS): 6

H-Index (Scopus): 6

Scholarships

2219 - Yurt Dışı Doktora Sonrası Araştırma Burs Programı, TUBİTAK, 2010 - 2011

Avrupa Birliği Altıncı Çerçeve Programı kapsamında TR-ACCESS Mobilite Bursu, TUBİTAK, 2005 - 2006