

Assoc. Prof. Gökhan ALGÜN

Personal Information

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International Researcher IDs

ORCID: 0000-0002-4607-3382

Publons / Web Of Science ResearcherID: AAE-5537-2020

ScopusID: 6505877338

Yoksis Researcher ID: 175415

Education Information

Doctorate, Istanbul University, Institute of Graduate Studies In Sciences, Fizik, Turkey 1997 - 2005

Postgraduate, Istanbul University, Institute of Graduate Studies In Sciences, Fizik, Turkey 1993 - 1997

Undergraduate, Karadeniz Technical University, Fen Edebiyat Fakültesi, Fizik Bölümü, Turkey 1988 - 1992

Foreign Languages

English, B1 Intermediate

Dissertations

Doctorate, Düşük Boyutlu Yarıiletken Yapılarda Sıcak Elektronların Enerji Kayıp Mekanizmalarının İncelenmesi, Istanbul University, Institute of Graduate Studies In Sciences, Fizik / Katıhal Fiziği, 2005

Postgraduate, Gözenekli Silisyum'da Elektriksel Olayların İncelenmesi, Istanbul University, Institute of Graduate Studies In Sciences, Fizik / Genel Fizik, 1997

Research Areas

Physics, Condensed Matter 1: Structural, Mechanical and Thermal Properties, Transport Phenomena in Condensed Matter, Surfaces, Interfaces, Thin Films and Nanosystems, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Spectroscopy of Matter, Natural Sciences

Academic Titles / Tasks

Associate Professor, Istanbul University, Faculty of Science, Department of Physics, 2021 - Continues

Assistant Professor, Istanbul University, Faculty of Science, Department of Physics, 2018 - 2021

Assistant Professor, Istanbul University, Faculty of Science, Department of Physics, 2008 - 2018

Research Assistant PhD, Istanbul University, Faculty of Science, Department of Physics, 2005 - 2008

Research Assistant, Istanbul University, Faculty of Science, Department of Physics, 1997 - 2005

Courses

OCCUPATIONAL HEALTH AND SAFETY, Undergraduate, 2019 - 2020
THE PHYSICS OF SOLAR CELL, Postgraduate, 2019 - 2020
INTRODUCTION TO SOL-GEL METHOD, Postgraduate, 2019 - 2020
ADVANCED APPLICATIONS IN PHYSICS II, Undergraduate, 2019 - 2020
İş Sağlığı ve Güvenliği, Undergraduate, 2019 - 2020
İŞ SAĞLIĞI VE GÜVENLİĞİ, Undergraduate, 2019 - 2020, 2018 - 2019
İŞ SAĞLIĞI VE GÜVENLİĞİ, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018
İleri Fizik Uygulamaları I, Undergraduate, 2019 - 2020
FİZİK III, Undergraduate, 2018 - 2019
İLERİ FİZİK UYGULAMALARI, Undergraduate, 2017 - 2018
SEMINAR, Doctorate, 2017 - 2018
İŞ SAĞLIĞI VE GÜVENLİĞİ, Undergraduate, 2017 - 2018
Öğretmenlik Uygulaması , Undergraduate, 2016 - 2017, 2015 - 2016, 2013 - 2014
FİZİK I, Undergraduate, 2017 - 2018
İleri Fizik Uygulamaları, Undergraduate, 2016 - 2017, 2013 - 2014
TEMEL BİLGİ TEKNOLOJİSİ KULLANIMI, Undergraduate, 2017 - 2018
Genel Fizik II, Undergraduate, 2016 - 2017
Seminer, Postgraduate, 2016 - 2017, 2012 - 2013
ANALİZ I, Undergraduate, 2017 - 2018
İş Sağlığı ve Güvenliği, Undergraduate, 2016 - 2017
Fizik I, Undergraduate, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014
Bilgi Teknolojileri, Undergraduate, 2013 - 2014
Öğretmenlik Uygulaması, Undergraduate, 2012 - 2013
İleri Fizik Uygulamaları, Undergraduate, 2012 - 2013
İleri Fizik Uygulamaları, Undergraduate, 2012 - 2013
Temel Bilgi Teknolojileri Kullanımı, Undergraduate, 2013 - 2014
Bilgi Teknolojileri, Undergraduate, 2012 - 2013
Bilgi Teknolojileri, Undergraduate, 2012 - 2013
Fizik 1, Undergraduate, 2012 - 2013
Fizik 1, Undergraduate, 2012 - 2013
Temel Bilgi Teknolojileri Kullanımı, Undergraduate, 2012 - 2013
Öğretmenlik Uygulaması, Undergraduate, 2011 - 2012
İleri Fizik Uygulamaları, Undergraduate, 2011 - 2012, 2010 - 2011, 2009 - 2010, 2008 - 2009
Fizik, Undergraduate, 2011 - 2012, 2010 - 2011, 2009 - 2010
Fizik, Undergraduate, 2008 - 2009
Öğretim Teknolojileri ve Materyal Tasarımı, Undergraduate, 2009 - 2010

Jury Memberships

Doctorate, Doktora Tez Savunma Jürisi, Yıldız Teknik Üniversitesi, December, 2018
Doctorate, Doktora Tez Savunma Jürisi, Yıldız Teknik Üniversitesi, December, 2018
Post Graduate, Yüksek Lisans Tez Savunma Jürisi, İstanbul Üniversitesi, July, 2018
Doctoral Examination, Doktora Yeterlilik Sınavı Jürisi, Yıldız Teknik Üniversitesi, October, 2015
Doctoral Examination, Doktora Yeterlilik Sınavı Jürisi, Yıldız Teknik Üniversitesi, October, 2015
Post Graduate, Yüksek Lisans Tez Savunma Jürisi, İstanbul Üniversitesi, January, 2015

Published journal articles indexed by SCI, SSCI, and AHCI

1. Enhanced sensing characteristics of relative humidity sensors based on Al and F co-doped ZnO

nanostructured thin films

Algun G., Akcay N.

JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.30, no.17, pp.16124-16134, 2019 (SCI-Expanded)

II. **The role of etching current density and porous structure on enhanced photovoltaic performance of ZnO/PS heterojunction solar cells**

Algun G., Akcay N.

APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.125, no.8, 2019 (SCI-Expanded)

III. **Humidity sensing properties of fluorine doped zinc oxide thin films**

Algun G.

JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.29, no.19, pp.17039-17046, 2018 (SCI-Expanded)

IV. **Influence of back gate voltage on electrical transport in $Zn_{1-(y+x)}(Al_x, Eu_y)O$ thin films**

Algun G., Akcay N., Can M. M., Kaneko S.

MATERIALS RESEARCH EXPRESS, vol.5, no.10, 2018 (SCI-Expanded)

V. **Structural, optical, electrical and humidity sensing properties of (Y/Al) co-doped ZnO thin films**

Uzar N., Algun G., Akcay N., Akcan D., Arda L.

JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.28, no.16, pp.11861-11870, 2017 (SCI-Expanded)

VI. **Europium dependent absorption properties of $Zn_{1-(y+0.01)}(Al_{0.01}, Eu(y))O$ ($y=0.00, 0.01, 0.03$ and 0.05) thin films grown on the soda-lime glass substrates by spin coating**

Akcay N., Algun G., Kilic N., Shawuti S., Can M. M.

JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.28, pp.4492-4497, 2017 (SCI-Expanded)

VII. **Zinc oxide nanoparticles induced cyto- and genotoxicity in kidney epithelial cells**

Uzar N., Abudayyak M. F., Akcay N., Algun G., Ozhan G.

TOXICOLOGY MECHANISMS AND METHODS, vol.25, no.4, pp.334-339, 2015 (SCI-Expanded)

Articles Published in Other Journals

I. **ZnO Kaplama Miktarının n-ZnO/p-Si Heteroeklem Güneş Hücresinin Verimliliğine Etkisi**

Algün G.

Süleyman Demirel Üniversitesi Fen Edebiyat Fakültesi Fen Dergisi, vol.13, no.2, pp.154-163, 2018 (Peer-Reviewed Journal)

II. **GaAs/Al_xGa_{1-x}As Kuantum Kuyulu Yapılarda Dikey Transport Esnasında Bariyer Yüksekliğinin Belirlenmesi**

Algün G.

Sigma Journal of Engineering and Natural Sciences, vol.26, no.3, pp.206-215, 2008 (ESCI)

III. **THE DETERMINATION OF BARRIER HEIGHT DURING VERTICAL TRANSPORT IN GaAs/Al_xGa_{1-x}As QUANTUM WELL STRUCTURES**

Algun G.

SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BILIMLERI DERGISI, vol.26, no.3, pp.206-215, 2008 (ESCI)

IV. **An Investigation of Electrical Properties of Porous Silicon**

Algün G., Arıkan M. Ç.

Turkish Journal of Physics, vol.23, pp.789-797, 1999 (Scopus)

Refereed Congress / Symposium Publications in Proceedings

- I. **OPTICAL BAND GAP VARIATION BY THE ADDITION OF DOPANT ELEMENTS INTO ZnO NANOSTRUCTURED THIN FILMS**
ALGÜN G.
4. International Material Science and Technology Conference, Ankara, Turkey, 18 - 20 October 2019, pp.868
- II. **SYNTHESIS AND CHARACTERISATION OF EUROPIUM DOPED ZnGa₂O₄**
Karaman T., ALGÜN G.
TURKISH PHYSICAL SOCIETY 35th INTERNATIONAL PHYSICS CONGRESS, Muğla, Turkey, 4 - 07 September 2019, pp.218
- III. **Active Deep Energy Levels on Gas Sensing Performance of (Zn, Co)Ga₂O₄ thin films**
CAN M. M. , Shawuti S., AKÇAY N., ALGÜN G.
Science and Applications of Thin Films, Conference & Exhibition (SATF 2018), İzmir, Turkey, 17 - 21 September 2018, pp.59
- IV. **The Effect Of Eu Doping On The Electrical Characteristic In ZnO:Al Nanocomposite Films Prepared By Sol Gel Method**
ALGÜN G.
Turkish Physical Society 32nd International Physics Congress, Muğla, Turkey, 6 - 09 September 2016, pp.81
- V. **Understanding The Gas Sensing Ability of (Zn,Co)Ga₂O₄ Thin Films Via Optical, Thermal Transport and DC Conductivity Measurements**
CAN M. M. , SHAWUTI S., AKÇAY N., ALGÜN G.
2016 MRS spring Meeting&Exhibit, Phoenix, United States Of America, 28 March - 01 April 2016, pp.1-5
- VI. **THE EFFECT OF ZnO NANOPARTICLES ON SENSING PROPERTIES OF POROUS SILICON**
ALGÜN G., AKÇAY N., ÜZAR KILIÇ N., Dağ M.
Turkish Physical Society, 31th International Physics Congress, Muğla, Turkey, 21 - 24 July 2014, pp.118
- VII. **ELECTRICAL PROPERTIES OF ZNO NANOPARTICLES ON POROUS SILICON**
AKÇAY N., ALGÜN G., Dağ M., ÜZAR KILIÇ N.
Turkish Physical Society, 31th International Physics Congress, Muğla, Turkey, 21 - 24 July 2014, pp.117
- VIII. **SYNTHESIS AND TOXICITY PROFILES OF ZnO NANOPARTICLES**
ÜZAR KILIÇ N., AKÇAY N., ALGÜN G., Dağ M., Abudayyak M., ÖZHAN G.
Turkish Physical Society, 31th International Physics Congress, Muğla, Turkey, 21 - 24 July 2014, pp.153
- IX. **Structural Properties of Nano Zinc Oxide Synthesized By Sol-Gel Method**
DAĞ M., AKÇAY N., ALGÜN G., ÜZAR KILIÇ N.
Turkish Physical Society 31th International Physics Congress, Muğla, Turkey, 21 - 24 July 2014, pp.126
- X. **The Electrical Resistance Change in Bulk- and Nano- ZnO Crystal Structures**
Algün G., Comba B., Akçay N., Ünsalan O.
Turkish Physical Society, 28th International Physics Congress, Muğla, Turkey, 1 - 04 September 2011, pp.542
- XI. **Storage and Access Time of QD Memory Structures**
Akçay N., Öncan N., Algün G., Marent A., Bimberg D.
Turkish Physical Society, 28th International Physics Congress, Muğla, Turkey, 1 - 04 September 2011, pp.123
- XII. **A Study of Vertical Transport in GaAs/Al_xGa_{1-x}As Quantum Well Structures Sandwiched Between Symmetrical Graded Barriers**
ALGÜN G.
Turkish Physical Society, 23rd. International Physics Congress, Turkey, 1 - 04 September 2005, pp.536
- XIII. **Çok Kuantumlu Kuyulu Yapılarda Elektronların Dikey Transportu**
ALGÜN G.
Düzensiz sistemler: Teori ve Uygulamalar Çalışma Grubu, V.Ulusal Sempozyumu, İzmir, Turkey, 1 - 04 August 2005, pp.2

Supported Projects

ALGÜN G., AKÇAY N., CAN M. M. , Project Supported by Higher Education Institutions, Mg katkılı ZnO nanoyapıların nem

sensörü özelliklerinin incelenmesi, 2019 - 2022

AKÇAY N., CAN M. M. , ALGÜN G., Project Supported by Higher Education Institutions, Mg katkılı ZnO nanoparçacıkların Optik Özellikleri, 2018 - 2021

Can M. M. , Algün G., Akçay N., TÜBİTAK Project, Katkı Atomlarının İyonik Durumlarına ve Konumlarına Bağlı Olarak Oksit Yarıiletken Heteroyapılarda Karbon Salınımı Düşük Yakıt Gazlarının Algılanması, Tutma ve Bırakma Kabiliyetinin Belirlenmesi, 2017 - 2020

ALGÜN G., AKÇAY N., DEMİR B., ŞAFAK BOROĞLU M., Project Supported by Higher Education Institutions, NANOPARÇACIKLARIN GÜNEŞ PİLİ VERİMLİLİĞİNE ETKİSİ, 2015 - 2017

CAN M. M. , SHAWUTİ S., AKÇAY N., ALGÜN G., Project Supported by Higher Education Institutions, Understanding The Gas Sensing Ability of ZnCoGa₂O₄ Thin Films Via Optical Thermal Transport and DC Conductivity Measurements, 2016 - 2016

Scientific Refereeing

NANOTECHNOLOGY, SCI Journal, August 2020

JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, SCI Journal, June 2020

NANOTECHNOLOGY, SCI Journal, January 2020

JOURNAL OF ALLOYS AND COMPOUNDS, SCI Journal, January 2020

JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, SCI Journal, January 2020

Journal of Physics D: Applied Physics, SCI Journal, December 2019

Journal of Materials Science: Materials in Electronics, SCI Journal, December 2019

Journal of Physics D: Applied Physics, SCI Journal, November 2019

Materials Research Express, SCI Journal, November 2019

Journal of Materials Science: Materials in Electronics, SCI Journal, November 2019

Journal of Physics D: Applied Physics, SCI Journal, October 2019

Journal of Materials Science: Materials in Electronics, SCI Journal, October 2019

Journal of Alloys and Compounds, SCI Journal, August 2019

Journal of Physics D: Applied Physics, SCI Journal, August 2019

Journal of Materials Science: Materials in Electronics, SCI Journal, August 2019

Journal of Materials Science: Materials in Electronics, SCI Journal, July 2019

Journal of Materials Science: Materials in Electronics, SCI Journal, May 2019

Nanotechnology, SCI Journal, April 2019

Journal of Materials Science: Materials in Electronics, SCI Journal, February 2019

Materials Research Express, SCI Journal, January 2019

Journal of Materials Science: Materials in Electronics, SCI Journal, January 2019

Journal of Materials Science: Materials in Electronics, SCI Journal, January 2019

Journal of Materials Science: Materials in Electronics, SCI Journal, January 2019

Materials Chemistry and Physics, SCI Journal, January 2019

Journal of Materials Science: Materials in Electronics, SCI Journal, December 2018

Journal of Materials Science: Materials in Electronics, SCI Journal, November 2018

Journal of Materials Science: Materials in Electronics, SCI Journal, November 2018

Materials Research Express, SCI Journal, November 2018

Journal of Materials Science: Materials in Electronics, SCI Journal, October 2018

Journal of Materials Science: Materials in Electronics, SCI Journal, October 2018

Materials Chemistry and Physics, SCI Journal, October 2018

Journal of Materials Science: Materials in Electronics, SCI Journal, September 2018

Türk Fizik Dergisi, National Scientific Refreed Journal, August 2018

Journal of Alloys and Compounds, SCI Journal, August 2018

Journal of Materials Science: Materials in Electronics, SCI Journal, August 2018

Journal of Materials Science: Materials in Electronics, SCI Journal, June 2018

Journal of Alloys and Compounds, SCI Journal, May 2018
Journal of Materials Science: Materials in Electronics, SCI Journal, May 2018
Materials Chemistry and Physics, SCI Journal, May 2018
Journal of Materials Science: Materials in Electronics, SCI Journal, May 2018
Materials Chemistry and Physics, SCI Journal, April 2018
Materials Chemistry and Physics, SCI Journal, February 2018
Journal of Materials Science: Materials in Electronics, SCI Journal, February 2018
Journal of Materials Science: Materials in Electronics, SCI Journal, January 2018
Journal Of Materials Science: Materials in Electronics, SCI Journal, November 2017
Materials Chemistry and Physics, SCI Journal, June 2017

Metrics

Publication: 24
Citation (WoS): 58
Citation (Scopus): 58
H-Index (WoS): 5
H-Index (Scopus): 5

Congress and Symposium Activities

4. International Material Science and Technology Conference, Attendee, Ankara, Turkey, 2019
Turkish Physical Society 35th International Physics Congress, Attendee, Muğla, Turkey, 2019
Turkish Physical Society, 32nd International Physics Congress, Attendee, Turkey, 2016
Turkish Physical Society, 31th International Physics Congress, Attendee, Muğla, Turkey, 2014
Turkish Physical Society, 28th International Physics Congress, Attendee, Bodrum/Muğla, Turkey, 2011
Turkish Physical Society, 23rd. International Physics Congress, Attendee, Muğla, Turkey, 2005
Düzensiz sistemler: Teori ve Uygulamalar Çalışma Grubu, V.Ulusal Sempozyumu, Attendee, Karaburun/ İzmir, Turkey, 2005