

Assoc. Prof. Gökhan ALGÜN

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: AAS-4820-2020

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

Certificates, Courses and Trainings

Vocational Training, Eğitimde Ölçme-Değerlendirme İlkelerine Uygun Sınav Hazırlama Yöntemleri, İstanbul Üniversitesi, 2021

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, 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

- I. **Improved humidity sensing performances of boron doped ZnO nanostructured thin films depending on boron concentration**
ALGÜN G., Alshater M., AKÇAY N.
Physica Scripta, vol.99, no.5, 2024 (SCI-Expanded)
- II. **Synthesis and ultrafast humidity sensing performance of Sr doped ZnO nanostructured thin films: the effect of Sr concentration**
ALGÜN G., AKÇAY N., Öztel H. O., CAN M. M.
JOURNAL OF SOL-GEL SCIENCE AND TECHNOLOGY, vol.107, no.3, pp.640-658, 2023 (SCI-Expanded)
- III. **Fabrication of ultra-sensitive humidity sensors based on Ce-doped ZnO nanostructure with superfast response and recovery time**
AKÇAY N., ALGÜN G., Öztel H. O.
Journal of Materials Science: Materials in Electronics, vol.34, no.20, 2023 (SCI-Expanded)
- IV. **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)
- V. **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)
- VI. **Influence of back gate voltage on electrical transport in $\text{Zn}_{1-(y+x)}(\text{Al}_x\text{Eu}_y)\text{O}$ thin films**
Algun G., Akcay N., Can M. M., Kaneko S.
MATERIALS RESEARCH EXPRESS, vol.5, no.10, 2018 (SCI-Expanded)
- VII. **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)
- VIII. **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)
- IX. **Europium dependent absorption properties of $\text{Zn}_{1-(y+0.01)}(\text{Al}_{0.01}\text{Eu}_y)\text{O}$ ($y=0.00, 0.01, 0.03$ 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)
- X. **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/AlXGa1-XAs KUANTUM KUYULU YAPILARDA DİKEY TRANSPORT ESNASINDA BARIYER YÜKSEKLİĞİNİN BELİRLENMESİ**
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/AlXGa1-XAs QUANTUM WELL STRUCTURES**
Algün G.
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BİLİMLERİ DERGİSİ, 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. **Biyojenik Çinko Nanopartikülünün Farklı Buğday Türlerinde Çimlenme Ve Büyüme Karakterleri Üzerine Etkisinin İncelenmesi**
Duraklı Y., Yüzbaşıoğlu E., Dalyan E., Akçay N., Algün G.
25. Ulusal Biyoloji Kongresi, İzmir, Turkey, 13 - 15 July 2023, pp.113
- II. **NANOTECHNOLOGICAL SOLUTIONS FOR THE AVIATION INDUSTRY**
Özpolat Y., Algün G.
TURKISH PHYSICAL SOCIETY 38TH INTERNATIONAL PHYSICS CONGRESS, Muğla, Turkey, 31 August - 04 September 2022, pp.128
- III. **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
- IV. **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
- V. **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
- VI. **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
- VII. **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
- VIII. **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

- IX. **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
- X. **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
- XI. **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
- XII. **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
- XIII. **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
- XIV. **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
- XV. **Çok Kuvantumlu 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

YÜZBAŞIOĞLU E., DURAKLI Y., DALYAN E., AKÇAY N., ALGÜN G., Project Supported by Higher Education Institutions, Çeşitli bitki özütleri kullanılarak Gümüş (Ag), Çinko (Zn) ve Titanyum (Ti) nanopartiküllerin yeşil sentezi ve tohum çimlenmesi ile genotoksiste üzerine etkilerinin incelenmesi, 2022 - Continues

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., TUBITAK 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

Project Supported by Higher Education Institutions, BAP Other, Eskisehir Osmangazi University, Turkey, March 2023
PHYSICA SCRIPTA, SCI Journal, January 2023
JOURNAL OF MATERIALS SCIENCE: MATERIALS IN ELECTRONICS, SCI Journal, December 2022
Project Supported by Higher Education Institutions, BAP Other, Eskisehir Osmangazi University, Turkey, December 2022
JOURNAL OF ALLOYS AND COMPOUNDS, SCI Journal, June 2022

JOURNAL OF MATERIALS SCIENCE: MATERIALS IN ELECTRONICS, SCI Journal, May 2022
MATERIALS TODAY COMMUNICATIONS, SCI Journal, May 2022
NANO EXPRESS, Journal Indexed in SCI-E, April 2022
MATERIALS CHEMISTRY AND PHYSICS, SCI Journal, April 2022
JOURNAL OF PHYSICS D - APPLIED PHYSICS, SCI Journal, February 2022
MATERIALS CHEMISTRY AND PHYSICS, SCI Journal, January 2022
JOURNAL OF PHYSICS D - APPLIED PHYSICS, SCI Journal, December 2021
NANOTECHNOLOGY, SCI Journal, October 2021
JOURNAL OF ALLOYS AND COMPOUNDS, SCI Journal, June 2021
PHYSICA B: CONDENSED MATTER, SCI Journal, June 2021
SÜLEYMAN DEMİREL ÜNİVERSİTESİ FEN EDEBİYAT FAKÜLTESİ FEN DERGİSİ = SÜLEYMAN DEMİREL UNIVERSITY
FACULTY OF ARTS AND SCIENCE JOURNAL OF SCIENCE, National Scientific Refreed Journal, May 2021
Project Supported by Higher Education Institutions, BAP Research Project, Bursa Uludağ University, Turkey, May 2021
JOURNAL OF PHYSICS D - APPLIED PHYSICS, SCI Journal, April 2021
JOURNAL OF ALLOYS AND COMPOUNDS, SCI Journal, April 2021
JOURNAL OF MATERIALS SCIENCE: MATERIALS IN ELECTRONICS, SCI Journal, March 2021
JOURNAL OF PHYSICS D - APPLIED PHYSICS, SCI Journal, March 2021
Project Supported by Higher Education Institutions, BAP PhD, Yildiz Technical University, Turkey, March 2021
JOURNAL OF ALLOYS AND COMPOUNDS, SCI Journal, February 2021
JOURNAL OF MATERIALS SCIENCE: MATERIALS IN ELECTRONICS, SCI Journal, February 2021
JOURNAL OF ALLOYS AND COMPOUNDS, SCI Journal, January 2021
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 Materials Science: Materials in Electronics, SCI Journal, December 2019
Journal of Physics D: Applied Physics, SCI Journal, December 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, 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 Physics D: Applied Physics, SCI Journal, August 2019
Journal of Materials Science: Materials in Electronics, SCI Journal, August 2019
Journal of Alloys and Compounds, 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
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 Research Express, 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
Materials Chemistry and Physics, SCI Journal, October 2018
Journal of Materials Science: Materials in Electronics, SCI Journal, October 2018

Journal of Materials Science: Materials in Electronics, SCI Journal, October 2018
Journal of Materials Science: Materials in Electronics, SCI Journal, September 2018
Journal of Alloys and Compounds, SCI Journal, August 2018
Türk Fizik Dergisi, National Scientific Refreed 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
Materials Chemistry and Physics, SCI Journal, May 2018
Journal of Materials Science: Materials in Electronics, SCI Journal, May 2018
Journal of Materials Science: Materials in Electronics, SCI Journal, May 2018
Journal of Alloys and Compounds, 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: 29
Citation (WoS): 72
Citation (Scopus): 80
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

Awards

Algün G., Outstanding Reviewer Awards 2022, Iop Publishing, March 2023
Algün G., Outstanding Reviewer Awards 2021, Iop Publishing, April 2022
Algün G., IOP Trusted Reviewer, Iop Publishing, April 2022