

Assoc. Prof. HÜLYA DOĞAN

Personal Information

Office Phone: [+90 346 219 1010](tel:+903462191010) Extension: 2241-3522

Email: hdogan@cumhuriyet.edu.tr

Web: <https://avesis.cumhuriyet.edu.tr/hdogan>

International Researcher IDs

ORCID: 0000-0002-5501-2194

Publons / Web Of Science ResearcherID: AAE-8027-2020

ScopusID: 56745058000

Yoksis Researcher ID: 148479

Education Information

Doctorate, Ataturk University, Fen Fakültesi, Fizik, Turkey 2001 - 2006

Dissertations

Doctorate, Isıl olarak tavllanmış Ni/n-GaAs/In schottky diyotların deneysel karakteristiklerinin engel inhomojenlik modeline göre belirlenmesi, Ataturk University, Fen Fakültesi, 2006

Postgraduate, n-tipi GaAs yarı iletkeni üzerine oluşturulan Sn/n-Ga As kontak yapılarında arayüzey parametrelerinin belirlenmesi, Ataturk University, Fen Fakültesi, Fizik, 2001

Research Areas

Plating, Nanomaterials, Physics, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Natural Sciences

Academic Titles / Tasks

Associate Professor, Sivas Cumhuriyet University, Mühendislik Fakültesi, Elektrik Elektronik Mühlen., 2017 - Continues

Assistant Professor, Sivas Cumhuriyet University, Mühendislik Fakültesi, Elektrik Elektronik Mühlen., 2008 - 2017

Academic and Administrative Experience

Head of Department, Sivas Cumhuriyet University, Mühendislik Fakültesi, Elektrik Elektronik Mühlen., 2020 - Continues

Head of Department, Sivas Cumhuriyet University, Mühendislik Fakültesi, Elektrik Elektronik Mühlen., 2020 - Continues

Head of Department, Sivas Cumhuriyet University, Mühendislik Fakültesi, Elektrik Elektronik Mühlen., 2008 - 2020

Deputy Head of Department, Sivas Cumhuriyet University, Mühendislik Fakültesi, Elektrik Elektronik Mühlen., 2008 - 2015

Farabi Coordinator, Sivas Cumhuriyet University, Mühendislik Fakültesi, Elektrik Elektronik Mühlen., 2011 - 2013

Courses

Elektrik elektronik mühendisliğine giriş 2, Undergraduate, 2020 - 2021, 2021 - 2022
Yarıiletken Elektronik, Postgraduate, 2009 - 2010, 2020 - 2021, 2021 - 2022
Undergraduate, 2008 - 2009, 2009 - 2010, 2010 - 2011, 2011 - 2012, 2012 - 2013, 2014 - 2015, 2015 - 2016, 2016 - 2017, 2017 - 2018, 2018 - 2019, 2019 - 2020
Bitirme Ödevi, Undergraduate, 2019 - 2020
Elektromagnetik Alan Teorisi, Undergraduate, 2019 - 2020
Elektromagnetik Alan Teorisi, Undergraduate, 2019 - 2020
Bitirme Ödevi, Undergraduate, 2019 - 2020
Elektromagnetik Dalga Teorisi, Undergraduate, 2018 - 2019
Elektrik Elektronik Müh. Malzeme Bilgisi, Undergraduate, 2018 - 2019
Elektrik Elektronik Mühendisliği Malzeme Bilgisi, Undergraduate, 2008 - 2009, 2009 - 2010, 2012 - 2013, 2013 - 2014, 2015 - 2016, 2016 - 2017, 2017 - 2018, 2018 - 2019
Elektrik Elektronik Müh. Malzeme Bilgisi, Undergraduate, 2018 - 2019
Elektromanyetik Dalga Teorisi, Undergraduate, 2008 - 2009, 2009 - 2010, 2010 - 2011, 2011 - 2012, 2012 - 2013, 2014 - 2015, 2015 - 2016, 2016 - 2017, 2017 - 2018, 2018 - 2019
Elektromagnetik Dalga Teorisi, Undergraduate, 2018 - 2019
Uzmanlık Alan Dersi, Postgraduate, 2018 - 2019
Tez Çalışması, Postgraduate, 2018 - 2019
Bitirme Ödevi, Undergraduate, 2009 - 2010, 2010 - 2011, 2011 - 2012, 2012 - 2013, 2015 - 2016, 2016 - 2017, 2017 - 2018, 2018 - 2019
Temel Elektrik Lab., Undergraduate, 2017 - 2018
Temel Elektrik Lab., Undergraduate, 2017 - 2018
Mühendislik Projeleri, Undergraduate, 2017 - 2018
Mühendislik Projeleri, Undergraduate, 2017 - 2018
Sayısal Elektronik Laboratuvarı, Undergraduate, 2014 - 2015
Sayısal Elektronik Laboratuvarı, Undergraduate, 2014 - 2015
Malzeme Bilgisi, Undergraduate, 2009 - 2010
Genel Fizik II, Undergraduate, 2009 - 2010
Genel Fizik II, Undergraduate, 2009 - 2010
Genel Fizik I, Undergraduate, 2009 - 2010
Genel Fizik I, Undergraduate, 2009 - 2010

Advising Theses

Doğan H., Metal/III-V yarıiletken schottky diyotların karakteristik parametrelerinin deneysel ve teorik olarak hesaplanması, Postgraduate, S.KOÇKANAT(Student), 2010

Jury Memberships

Appointment Academic Staff, Appointment Academic Staff, Sivas Cumhuriyet Üniversitesi, January, 2020
Appointment Academic Staff, Appointment Academic Staff, Sivas Cumhuriyet Üniversitesi, January, 2020
Appointment Academic Staff, Appointment Academic Staff, Sivas Cumhuriyet Üniversitesi, September, 2019
Appointment Academic Staff, Appointment Academic Staff, Sivas Cumhuriyet Üniversitesi, April, 2018

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Neural network estimations of annealed and non-annealed Schottky diode characteristics at wide temperatures range**
DOĞAN H., Duman S., TORUN Y., AKKOYUN S., Doğan S., ATİCİ U.
Materials Science in Semiconductor Processing, vol.149, 2022 (Peer-Reviewed Journal)
- II. **The effects of electron irradiation on the current-voltage and capacitance-voltage measurements of Sn/p-GaAs/Au diodes**
Duman S., Kaya F. Ş., Doğan H., Turgut G., Şahin Y.
RADIATION PHYSICS AND CHEMISTRY, vol.193, 2022 (Peer-Reviewed Journal)
- III. **Modeling of Schottky diode characteristic by machine learning techniques based on experimental data with wide temperature range**
TORUN Y., DOĞAN H.
Superlattices and Microstructures, vol.160, 2021 (Peer-Reviewed Journal)
- IV. **CURRENT-VOLTAGE CHARACTERISTICS OF THERMALLY ANNEALED Ni/n-GaAs SCHOTTKY CONTACTS**
Yıldırım N., Türüt A., Doğan H.
SURFACE REVIEW AND LETTERS, vol.25, 2018 (Peer-Reviewed Journal)
- V. **The interface state density characterization by temperature-dependent capacitance-conductance-frequency measurements in Au/Ni/n-GaN structures**
Turut A., Dogan H., Yildirim N.
MATERIALS RESEARCH EXPRESS, vol.2, 2015 (Peer-Reviewed Journal)
- VI. **Capacitance-conductance-frequency characteristics of Au/Ni/n-GaN/undoped GaN Structures**
Doğan H., Yıldırım N., Orak I., Elagöz S., Türüt A.
PHYSICA B-CONDENSED MATTER, vol.457, pp.48-53, 2015 (Peer-Reviewed Journal)
- VII. **Temperature-dependent electrical transport properties of (Au/Ni)/n-GaN Schottky barrier diodes**
Doğan H., Elagöz S.
PHYSICA E-LOW-DIMENSIONAL SYSTEMS & NANOSTRUCTURES, vol.63, pp.186-192, 2014 (Peer-Reviewed Journal)
- VIII. **The parameter extraction of the thermally annealed Schottky barrier diode using the modified artificial bee colony**
KARABOĞA N., KOÇKANAT S., DOĞAN H.
APPLIED INTELLIGENCE, vol.38, no.3, pp.279-288, 2013 (Peer-Reviewed Journal)
- IX. **DEPENDENCE OF CHARACTERISTIC DIODE PARAMETERS IN Ni/n-GaAs CONTACTS ON THERMAL ANNEALING AND SAMPLE TEMPERATURE**
Yildirim N., Dogan H., Korkut H., Turut A.
INTERNATIONAL JOURNAL OF MODERN PHYSICS B, vol.23, no.27, pp.5237-5249, 2009 (Peer-Reviewed Journal)
- X. **Analysis of current-voltage-temperature characteristics and T₀ anomaly in Cr/n-GaAs Schottky diodes fabricated by magnetron sputtering technique**
Korkut H., Yildirim N., Turut A., Dogan H.
Materials Science and Engineering B: Solid-State Materials for Advanced Technology, vol.157, pp.48-52, 2009 (Peer-Reviewed Journal)
- XI. **Thermally annealed Ni/n-GaAs(Si)/In Schottky barrier diodes**
DOĞAN H., YILDIRIM N., Turut A.
Microelectronic Engineering, vol.85, no.4, pp.655-658, 2008 (Peer-Reviewed Journal)
- XII. **Prediction of lateral barrier height in identically prepared Ni/n-type GaAs Schottky barrier diodes**
Doğan H., Korkut H., Yıldırım N., Turut A.
Applied Surface Science, vol.253, pp.7467-7470, 2007 (Peer-Reviewed Journal)
- XIII. **The conductance and capacitance-frequency characteristics of Au/pyrroline-B/p-type Si/Al contacts**
Cakar M., Yildirim N., Dogan H., Turut A.
APPLIED SURFACE SCIENCE, vol.253, no.7, pp.3464-3468, 2007 (Peer-Reviewed Journal)
- XIV. **Determination of the characteristic parameters of Sn/n-GaAs/Al-Ge Schottky diodes by a barrier height inhomogeneity model**
Doğan H., Yıldırım N., Turut A., Biber M., Ayyıldız E., Nuhoğlu Ç.

Articles Published in Other Journals

- I. **Photovoltaic and Electrical Properties of Al/ Ruthenium (II)-complex / p-Si Photodiode**
Doğan H., Orak İ., Yıldırım N.
Cumhuriyet Science Journal, vol.38, no.2, pp.329, 2017 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Estimation of neutron irradiation damages in Ni/n-GaAs Schottky contact layers via FLUKA Monte Carlo simulations**
Doğan H.
in: Transworld Research Network, Turgay Korkut, Editor, Nuclear Science and Technology, Karnul, pp.51-58, 2012

Refereed Congress / Symposium Publications in Proceedings

- I. **MODELLING of Al/p-Si SCHOTTKY PHOTO DIODE with GAUSSIAN PROGRESS REGRESSION**
Doğan H., Torun Y.
7th INTERNATIONAL ZEUGMA CONFERENCE ON SCIENTIFIC RESEARCHES, Gaziantep, Turkey, 21 - 23 January 2022, pp.258-259
- II. **Controlling The Distributed Energy Resources Using Smart Grid Standards**
ÜNSAL ÇELİMLİ D. B., DOĞAN H., TORUN Y., KOÇKANAT S.
International Conference on Innovative Engineering Applications 2018, Sivas, Turkey, 20 - 22 September 2018, pp.578-585
- III. **INVESTIGATION OF CURRENT AND VOLTAGE FLUCTUATIONS IN ELECTRIC ARC FURNACES WITH THE HELP OF PROBABILITY THEORY**
ŞEKER M., MEMMEDOV A., ÇIKAN M., DOĞAN H., KOÇKANAT S.
International Conference on Advanced Technology Sciences (ICAT 2017), İstanbul, Turkey, 9 May - 12 September 2017
- IV. **ANNEALING TEMPERATURE DEPENDENT CHARACTERIZATION OF NI AU N GAN SCHOTTKY DIODE USING ARTIFICIAL BEE COLONY ALGORITHM**
DOĞAN H., KOÇKANAT S., TÜRKAY Y., ŞEKER M., ÇIKAN M., ÜNSAL ÇELİMLİ D. B.
5th International Conference on Advanced Technology Sciences, 9 - 12 May 2017
- V. **DESIGN OF DIFFERENTIAL RELAY APPLICATION WITH MATLAB SIMULINK FOR PROTECTION OF TRANSFORMER IN ELECTRIC ARC FURNACE EAF LOADS**
ŞEKER M., ÇIKAN M., ARIF M., KOÇKANAT S., DOĞAN H.
5th International Conference on Advanced Technology Sciences, 9 - 12 May 2017
- VI. **ELECTRICAL PARAMETER DETERMINATION OF AL P SI SCHOTTKY DIODE FROM I V AND C V CURVES USING MABC BASED METHOD**
KOÇKANAT S., DOĞAN H., TÜRKAY Y., ÇIKAN M., ÜNSAL ÇELİMLİ D. B.
5th International Conference on Advanced Technology Sciences, 9 - 12 May 2017
- VII. **INVESTIGATION OF CURRENT AND VOLTAGE FLUCTUATIONS IN ELECTRIC ARC FURNACES WITH THE HELP OF PROBABILITY THEORY**
ŞEKER M., MEMMEDOV A., ÇIKAN M., DOĞAN H., KOÇKANAT S.
5th International Conference on Advanced Technology Sciences, 9 - 12 May 2017
- VIII. **PHOTOELECTRICAL PARAMETER CALCULATION OF METAL ORGANIC INORGANIC PHOTO DIODE USING AN APPROACH BASED MABC ALGORITHM**

DOĞAN H., KOÇKANAT S., TÜRKAY Y., ÇIKAN M., ÜNSAL ÇELİMLİ D. B.

5th International Conference on Advanced Technology Sciences, 9 - 12 May 2017

- IX. **CURRENT VOLTAGE CURVE PREDICTION OF ANNEALED Ni n GaAs SI IN SCHOTTKY BARRIER DIODE USING ANFIS**
KOÇKANAT S., DOĞAN H., TÜRKAY Y., ŞEKER M., ÜNSAL ÇELİMLİ D. B. , ÇIKAN M.
5th International Conference on Advanced Technology Sciences, 9 - 12 May 2017
- X. **DESIGN OF DIFFERENTIAL RELAY APPLICATION WITH MATLAB SIMULINK FOR PROTECTION OF TRANSFORMER IN ELECTRIC ARCFURNACE EAF LOADS**
ŞEKER M., ÇIKAN M., MEMMEDOV A., KOÇKANAT S., DOĞAN H.
International Conference on Advanced Technology Sciences (ICAT 2017), İstanbul, Turkey, 9 - 12 May 2017
- XI. **Electrical and Photovoltaic Characterization of Al Ru II p Si Heterojunction Structures**
DOĞAN H., ORAK İ., YILDIRIM N.
NanoTR-12, 3 - 05 June 2016
- XII. **ABC method analysis for the Capacitance Voltage characteristics of Ni n GaAs In schottky barrier diode**
DOĞAN H., KOÇKANAT S., ÜNSAL ÇELİMLİ D. B.
NanoTR-12, 3 - 05 June 2016
- XIII. **The parameter extraction of Al Ruthenium II complex p Type Si Heterojunction diode using optimization method**
ÜNSAL ÇELİMLİ D. B. , DOĞAN H., KOÇKANAT S.
NANOTR12, 3 - 05 June 2016
- XIV. **ABC Artificial Bee Colony method analysis for the Capacitance Voltage characteristics of Ni n GaAs In schottky barrier diode**
ÜNSAL ÇELİMLİ D. B. , DOĞAN H., KOÇKANAT S.
NANOTR12, İzmit, Turkey, 3 - 05 June 2016
- XV. **ABC method analysis for the Capacitance Voltage characteristic of Ni n GaAs In schottky barrier diode**
DOĞAN H., KOÇKANAT S., ÜNSAL ÇELİMLİ D. B.
12th International Nanoscience and Nanotechnology Conference, 3 - 05 June 2016
- XVI. **Fabrication and Electrical Characterization of Al n ZnO p Si Al Heterojunction Diode**
DOĞAN H., ŞENADIM TÜZEMEN E., DUMAN S.
IPCAP 2016 (Internatinal physics conference at the anatolian peak), 25 - 27 February 2016
- XVII. **Characteristic Diode Parameters of Thermally Annealed Ni n GaAs Schottky Contacts Over a Wide Measurement Temperature Range**
TURUT A., YILDIRIM N., DOĞAN H.
IPCAP 2016, 25 - 27 February 2016
- XVIII. **Capacitance-Voltage Characteristics Of Ni/Au/n-GaN Contacts**
Doğan H.
International Semiconductor Science and Technology Conference-2014, İstanbul, Turkey, 13 January 2014, pp.2014
- XIX. **Parameter determination of the Schottky barrier diode using by artificial bee colony algorithm**
KARABOĞA N., KOÇKANAT S., DOĞAN H.
2011 International Symposium on INnovations in Intelligent SysTems and Applications, INISTA 2011, Istanbul-Kadikoy, Turkey, 15 - 18 June 2011, pp.6-10

Supported Projects

Doğan H., Project Supported by Higher Education Institutions, Dört Rotorlu Döner Kanatlı İnsansız Hava Aracının Afet Yönetimi için Tasarımı ve Kontrolü, 2022 - 2023

Doğan H., Project Supported by Higher Education Institutions, Metal Organik inorganik fotodiyot yapıların elektriksel ve

fotovoltaik parametrelerinin deneysel ve ABC Artificial Bee Colony optimizasyon yöntemi ile hesaplanması ve karşılaştırılması, 2016 - 2019

Doğan H., Şenadım Tüzemen E., Project Supported by Higher Education Institutions, Metal Organik Kimyasal Buhar Depolama yöntemiyle üretilen GaN ve AlN ince filmlerinin optik geçirgenlik ve soğurma katsayılarının incelenmesi, 2010 - 2015

Doğan H., Türüt A., TUBITAK Project, Nanometre kalınlıklı reaktif metal III V yarıiletken kontakların potansiyel engelinin ısı tavlama ve numune sıcaklığına bağlılığı ve bu yapıların MESFET ve MOSFET devre elemanlarındaki kullanılabilirliğinin araştırılması, 2006 - 2009

Activities in Scientific Journals

Turkish Journal of Engineering and Environmental Sciences, Committee Member, 2020 - Continues

Scientific Refereeing

AVRUPA BİLİM VE TEKNOLOJİ DERGİSİ, National Scientific Refreed Journal, January 2022

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

Project Supported by Higher Education Institutions, BAP Research Project, Bingol University, Turkey, June 2020

JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS, SCI Journal, April 2020

JOURNAL OF ELECTRONIC MATERIALS, SCI Journal, February 2020

Project Supported by Higher Education Institutions, BAP MSc, Bingol University, Turkey, April 2017

Metrics

Publication: 36

Citation (WoS): 228

Citation (Scopus): 223

H-Index (WoS): 8

H-Index (Scopus): 8

Scholarships

Nanometre kalınlıklı reaktif metal III V yarıiletken kontakların potansiyel engelinin ısı tavlama ve numune sıcaklığına bağlılığı ve bu yapıların MESFET ve MOSFET devre elemanlarındaki kullanılabilirliğinin araştırılması, TUBITAK, 2006 - 2009