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International Researcher IDs

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Publons / Web Of Science ResearcherID: AAD-1416-2020

Yoksis Researcher ID: 108291

Education Information

Doctorate, University of Essex, Electronic System Engineering, Electronic System Engineering, United Kingdom 2001 - 2002

Doctorate, Istanbul University, Institute of Graduate Studies In Sciences, Fizik/Katıhal Fiziği, Turkey 1997 - 2002

Postgraduate, Istanbul University, Fen/Fen Bilimleri, Fizik, Turkey 1994 - 1997

Undergraduate, Istanbul University, Fen/Fen Bilimleri, Fizik, Turkey 1990 - 1994

Foreign Languages

English, B2 Upper Intermediate

Certificates, Courses and Trainings

Quality Management, Kalite Yönetim Sertifikası, Türk Standartları Enstitüsü, 2011

Education Management and Planning, Pedagojik Formasyon, İstanbul Üniversitesi/Hasan Ali Yücel Eğitim Fakültesi Dekanlığı, 2003

IT, Internet Web Tasarım, T.C. Milli Eğitim Bakanlığı/Brain Bilişim Akademisi, 2000

IT, Web Enabling:Technologies & Authorin Tools, Abdus Salam International Centre for theoretical Physics, 1999

Dissertations

Doctorate, INVESTIGATION OF BRAGG REFLECTION EFFECTS IN LOW DIMENSIONAL SURFACE EMITTING STRUCTURES, Istanbul University, Institute of Graduate Studies In Sciences, Fizik/Katıhal Fiziği Anabilim Dalı, 2002

Postgraduate, Düşük Boyutlu Yarıiletken Yapılarda Optik Olaylar, Istanbul University, Fen Bilimleri Estitüsü, Fzik/Katıhal Fiziği Anabilim Dalı, 1997

Research Areas

Optical Materials and Devices, Optoelectronic Materials and Devices, Semiconducting Materials and Devices, Physics, Interdisciplinary Physics and Related Science and Technology Areas, Materials Science, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Optical Properties, Spectroscopy of Matter, Natural Sciences, Engineering and Technology

Academic Titles / Tasks

Professor, Istanbul University, Faculty of Science, Department of Physics, 2013 - Continues
Other, University of Essex, School Of Computer Science And Electronic System Engineering, Electronic System Engineering, 2015 - 2015
Other, University of Essex, School Of Computer Science And Electronic System Engineering, Electronic System Engineering, 2014 - 2014
Other, University of Essex, School Of Computer Science And Electronic System Engineering, Electronic System Engineering, 2013 - 2013
Associate Professor, Istanbul University, Faculty of Science, Department of Physics, 2007 - 2013
Assistant Professor, Istanbul University, Faculty of Science, Department of Physics, 2004 - 2007
Research Assistant, Istanbul University, Faculty of Science, Department of Physics, 1998 - 2004

Academic and Administrative Experience

İstanbul Üniversitesi, 2018 - Continues
İstanbul Üniversitesi, Katıhal Fiziği, 2014 - Continues
İstanbul Üniversitesi, 2017 - 2018
İstanbul Üniversitesi, Fizik, 2013 - 2014
İstanbul Üniversitesi, Faculty of Science, 2012 - 2014
İstanbul Üniversitesi, Fizik, Fizik, 2009 - 2011

Courses

Semiconductor Devices, Undergraduate, 2021 - 2022
EXPERIMENTAL TECHNIQUES IN SEMICONDUCTOR RESEARCH, Postgraduate, 2021 - 2022
Linear Algebra, Undergraduate, 2021 - 2022
Nanotechnology, Undergraduate, 2019 - 2020
SEMICONDUCTOR DEVICES, Doctorate, 2018 - 2019, 2017 - 2018
ELECTRONIC AND OPTOELECTRONIC PROPERTIES OF SEMICONDUCTOR STRUCTURES, Doctorate, 2018 - 2019
YARIİLETKENLERDE KUANTUM OLAYLARI, Doctorate, 2018 - 2019
ELECTRONIC AND OPTOELECTRONIC PROPERTIES OF SEMICONDUCTOR STRUCTURES, Doctorate, 2017 - 2018
Malzeme Bilimi, Undergraduate, 2016 - 2017, 2015 - 2016
Optoelektronik, Undergraduate, 2017 - 2018
Optoelektronik, Undergraduate, 2017 - 2018
Yarıiletken Aygıtlar, Doctorate, 2016 - 2017
YARI İLETKENLERDEKUANTUM OLAYLARI, Doctorate, 2016 - 2017
Yarıiletkenlerde Kuantum Olayları, Doctorate, 2016 - 2017
Katıhal Fiziği, Undergraduate, 2016 - 2017
Yarıiletkenler Fiziği, Undergraduate, 2012 - 2013, 2011 - 2012, 2009 - 2010
Yarıiletken Aygıtlar, Doctorate, 2012 - 2013, 2010 - 2011

Yarıiletken Yapıların Elektronik ve Optoelektronik Özellikleri, Doctorate, 2012 - 2013, 2011 - 2012, 2009 - 2010
Modern Optik Uygulamaları, Undergraduate, 2012 - 2013, 2011 - 2012, 2009 - 2010
Katların Optik Özellikleri, Postgraduate, 2010 - 2011
Kathal Fiziği I, Undergraduate, 2008 - 2009, 2007 - 2008
Kathal Fiziği II, Undergraduate, 2007 - 2008
Bilgi İşlem II, Undergraduate, 2006 - 2007
Bilgi İşlem I, Undergraduate, 2006 - 2007
Fizik II, Undergraduate, 2005 - 2006
Fizik I, Undergraduate, 2005 - 2006

Advising Theses

EROL A., Süperiletken Bobin Üretiminde Yeni Bir Yöntem ve Manyetik Enerji Depolama Sistemi Optimizasyonu, Doctorate, S.Tunç(Student), Continues
Erol A., Güver T., FABRICATION AND CHARACTERIZATION OF DEVICES BASED ON III-V GROUP SEMICONDUCTORS, Postgraduate, B.Kay(Student), 2021
Erol A., PREPARATION AND CHARACTERIZATION OF POLYMER-BASED ELECTROCHROMIC FILMS, Postgraduate, S.JUSUFOVIC(Student), 2020
Erol A., Bessel Beam Generation and Characterisation by Surface Acoustic Waves in Microfluidic Systems, Postgraduate, Y.Yalçın(Student), 2019
Erol A., RESONANT CAVITY ENHANCED GaInNAs-BASED IR PHOTODETECTORS WITH GAIN, Doctorate, F.Sarcan(Student), 2018
Erol A., INVESTIGATION OF STRUCTURAL, OPTICAL AND ELECTRONIC PROPERTIES OF BISMUTH CONTAINING III-V GROUP HIGHLY MISMATCHED SEMICONDUCTOR ALLOYS, Postgraduate, T.ERUŞAR(Student), 2017
Erol A., ELECTRONIC TRANSPORT in III-N-V and III-Bi-V SEMICONDUCTOR ALLOYS, Postgraduate, E.Çokduygular(Student), 2017
Erol A., INVESTIGATION of ELECTRICAL and OPTICAL PROPERTIES of SOLAR CELLS BASED on III-V GROUP SEMICONDUCTORS, Postgraduate, A.MUHAMMETGULYYEV(Student), 2017
Erol A., INVESTIGATION of LIGHT EMISSION BASED on GUNN EFFECT in III-V GROUP ALLOY SEMICONDUCTOR, Postgraduate, Ç.Çetinkaya(Student), 2016
Erol A., INVESTIGATION of OPTICAL and ELECTRICAL PROPERTIES of MODULATION DOPED GaInNAs/GaAs QUANTUM WELL STRUCTURES, Postgraduate, F.Sarcan(Student), 2012
Erol A., ZnO Nanoyapıların Sentezlenmesi ve Sensör Özelliklerinin İncelenmesi, Postgraduate, N.Aşar(Student), 2011
Erol A., SYNTHESIS AND CHARACTERISATION OF ZnO QUANTUM DOTS BY SOLGEL METHOD, Postgraduate, B.Comba(Student), 2009

Jury Memberships

Appointment to Academic Staff-Assistant Professorship, Profesörlük Ataması, İzmir Katip Çelebi Üniversitesi, June, 2017
Associate Professor Exam, Doçentlik Sınav Jürisi, ODTÜ, April, 2017
Appointment to Academic Staff-Assistant Professorship, Profesör Kadrosuna Atama, İTÜ, April, 2015
Doctoral Examination, Yeterlik Sınavı, Anadolu Üniversitesi, May, 2014
Appointment to Academic Staff-Assistant Professorship, Yardımcı Doçent Kadrosuna Atanma Jüri Üyeliği, İstanbul Üniversitesi, March, 2014
Appointment to Academic Staff-Assistant Professorship, Profesör Kadrosuna Atanma Jüri Üyeliği, İstanbul Üniversitesi, January, 2014
Appointment to Academic Staff-Assistant Professorship, Yardımcı Doçent Kadrosuna Atanma Jüri Üyeliği, İstanbul Üniversitesi, November, 2013
Doctoral Examination, Doktora Yeterlik Sınavı, İSTANBUL ÜNİVERSİTESİ FEN BİLİMLERİ ENSTİTÜSÜ, January, 2013

Doctoral Examination, Doktora Yeterlilik Sınavı, İSTANBUL ÜNİVERSİTESİ FEN BİLİMLERİ ENSTİTÜSÜ, May, 2011
Doctoral Examination, Doktora Yeterlik Sınavı, İSTANBUL ÜNİVERSİTESİ FEN BİLİMLERİ ENSTİTÜSÜ, February, 2011
Doctoral Examination, Doktora Yeterlik Sınavı, İSTANBUL ÜNİVERSİTESİ FEN BİLİMLERİ ENSTİTÜSÜ, June, 2010
Doctorate, Doktora Tez Savunma, Anadolu Üniversitesi, June, 2010
Doctoral Examination, Doktora Yeterlik Sınavı, İSTANBUL ÜNİVERSİTESİ FEN BİLİMLERİ ENSTİTÜSÜ, January, 2009
Doctoral Examination, Doktora Yeterlik Sınavı, İSTANBUL ÜNİVERSİTESİ FEN BİLİMLERİ ENSTİTÜSÜ, January, 2008

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Comprehensively analysis of hot electron transport in as-grown and thermally annealed n-type modulation-doped Al_{0.15}Ga_{0.85}As/GaAs_{0.96}Bi_{0.4} quantum well structure**
Dönmez Ö., Aydın M., Mutlu S., Puustinen J., Hilska J., Guina M., Erol A.
Materials Science in Semiconductor Processing, vol.154, 2023 (SCI-Expanded)
- II. **High-Field Electron-Drift Velocity in n-Type Modulation-Doped GaAs_{0.96}Bi_{0.04} Quantum Well Structure**
Aydın M., Mutlu S., Erol A., Puustinen J., Hilska J., Guina M., Dönmez Ö.
PHYSICA STATUS SOLIDI-RAPID RESEARCH LETTERS, vol.16, no.11, 2022 (SCI-Expanded)
- III. **Boron- and Boric Acid-Treated Titanium Implant Surfaces in Sheep Tibia: A Histologic, Histomorphometric and Mechanical Study**
Aysesek N., ARISAN V., Balcioglu N. B., EROL A., KURUOĞLU F., SOLUK TEKKEŞİN M., ERSANLI S.
BIOENGINEERING-BASEL, vol.9, no.11, 2022 (SCI-Expanded)
- IV. **Surface acoustic wave quasi-Bessel beams generated by symmetrically tilted interdigital transducers**
Uluğ B., Kuruoglu F., Yalcin Y., Erol A., Sarcan F., Şahin A., Çiçek A.
JOURNAL OF PHYSICS D-APPLIED PHYSICS, vol.55, no.22, 2022 (SCI-Expanded)
- V. **PREVENTIVE EFFECTS OF MATRIX-METALLOPROTEINASE INHIBITORS ON DENTAL EROSION**
Koruyucu M., İlisulu C., Sarcan F., Kuruoğlu F., Erol A., Seymen F.
FLUORIDE - QUARTERLY REPORTS, vol.55, no.2, pp.154-165, 2022 (SCI-Expanded)
- VI. **Effects of annealing temperature on a ZnO thin film-based ultraviolet photodetector**
Dogan U., SARCAN F., Koc K. K., KURUOĞLU F., EROL A.
PHYSICA SCRIPTA, vol.97, no.1, 2022 (SCI-Expanded)
- VII. **A novel hot carrier-induced blue light-emitting device**
Mutlu S., Erol A., Arslan E., Ozbay E., Lişesivdin S. B., Tiras E.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.881, 2021 (SCI-Expanded)
- VIII. **A quantitative analysis of electronic transport in n- and p-type modulation-doped GaAsBi/AlGaAs quantum well structures**
Dönmez Ö., Erol A., Çetinkaya Ç., Cokduygulular E., Aydın M., Yıldırım S., Puustinen J., Hilska J., Guina M.
SEMICONDUCTOR SCIENCE AND TECHNOLOGY, vol.36, no.11, 2021 (SCI-Expanded)
- IX. **Integer quantum Hall effect measurement analysis in Ga_{0.68}In_{0.32}N_{0.017}As/GaAs quantum wells with various annealing time**
Ardali S., TIRAŞ E., Erol A.
PHYSICA B-CONDENSED MATTER, vol.621, 2021 (SCI-Expanded)
- X. **Temperature-dependent sandwich and in-plane optical characterization of ternary chalcogenide TlSbS₂**
Sarcan F., Aydın M., Kuruoğlu F., Dönmez Ö., Yıldırım S., Erol A.
Materials Science and Engineering B: Solid-State Materials for Advanced Technology, vol.272, 2021 (SCI-Expanded)
- XI. **Improvement of fill factor by the utilization of Zn-doped PEDOT:PSS hole-transport layers for p-i-n planar type of perovskite solar cells**
Alishah H. M., Choi F. P., Kuruoglu F., Erol A., Güneş S.
ELECTROCHIMICA ACTA, vol.388, 2021 (SCI-Expanded)

- XII. **Photoluminescence characteristic of as-grown and thermally annealed n-and p-type modulation-doped Ga(0.68)In(0.32)N(x)AS(1-x)/GaAs quantum well structures**
Donmez O., Sarcan F., Erol A., Urgan F., Sari H.
THIN SOLID FILMS, vol.732, 2021 (SCI-Expanded)
- XIII. **Determination of the acoustic phonon-hot carriers interaction in n- and p-type modulation-doped GaInNAs/GaAs quantum wells**
Dönmez Ö., Sarcan F., Erol A.
Physica B: Condensed Matter, vol.612, 2021 (SCI-Expanded)
- XIV. **The effect of strain and spatial Bi distribution on the band alignment of GaAsBi single quantum well structure**
Gunes M., Dönmez Ö., Gumus C., Erol A., Alghamdi H., Alhassan S., Alhassni A., Alotaibi S., Schmidbauer M., Galeti H. V. A., et al.
PHYSICA B-CONDENSED MATTER, vol.602, 2021 (SCI-Expanded)
- XV. **Investigation of V-groove fabricated GaInNAs nipi solar cell structure**
Muhammetgulyyev A., Yalçın Y., KURUOĞLU F., ÇOKDUYGULULAR E., KINACI B., EROL A.
Optical and Quantum Electronics, vol.53, no.1, 2021 (SCI-Expanded)
- XVI. **Effect of annealing process on hot-electron energy relaxation rates in n-type modulation-doped Ga0.68In0.32N0.017As/GaAs quantum wells via deformation potential and piezoelectric scatterings**
Ardali S., Taganov S., EROL A., Tiras E.
PHYSICA E-LOW-DIMENSIONAL SYSTEMS & NANOSTRUCTURES, vol.125, 2021 (SCI-Expanded)
- XVII. **Power loss mechanisms in n-type modulation-doped AlGaAs/GaAsBi quantum well heterostructures**
Dönmez Ö., Aydın M., Ardali S., Yildirim S., Tiras E., Erol A., Puustinen J., Hilska J., Guina M.
SEMICONDUCTOR SCIENCE AND TECHNOLOGY, vol.35, 2020 (SCI-Expanded)
- XVIII. **Ultraviolet Photodetector Based on Mg0.67Ni0.33O Thin Film on SrTiO3**
SARCAN F., Orchard S., Kuerbanjiang B., Skeparovski A., Lazarov V. K., EROL A.
PHYSICA STATUS SOLIDI-RAPID RESEARCH LETTERS, vol.14, no.8, 2020 (SCI-Expanded)
- XIX. **Well-ordered nanoparticle arrays for floating gate memory applications**
Kuruoglu F., Çalışkan M., Serin M., Erol A.
NANOTECHNOLOGY, vol.31, no.21, 2020 (SCI-Expanded)
- XX. **Electronic transport in n-type modulation-doped AlGaAs/GaAsBi quantum well structures: influence of Bi and thermal annealing on electron effective mass and electron mobility**
Donmez Ö., Aydın M., Ardali S., Yildirim S., Tiras E., Nutku F., Cetinkaya Ç., Cokduygulular E., Puustinen J., Hilska J., et al.
SEMICONDUCTOR SCIENCE AND TECHNOLOGY, vol.35, no.2, 2020 (SCI-Expanded)
- XXI. **Dilute nitride resonant-cavity light emitting diode**
Sarcan F., Wang Y., Krauss T. F., Erucar T., Erol A.
OPTICS AND LASER TECHNOLOGY, vol.122, 2020 (SCI-Expanded)
- XXII. **Effects of Thermal Annealing and Selective Chemical Etching on Structural and Optical Properties of GaAsBi Epilayer with Droplet Systems**
Erucar T., Kara K., Donmez Ö., Erol A., Arnoult A., Fontaine C.
JOURNAL OF NANOSCIENCE AND NANOTECHNOLOGY, vol.19, no.12, pp.7846-7852, 2019 (SCI-Expanded)
- XXIII. **Characterization of a GaAs/GaAsBi pin solar cell**
Muhammetgulyyev A., Erbas Ö. G., Kinaci B., Donmez Ö., Celebi Y. G., Erol A.
SEMICONDUCTOR SCIENCE AND TECHNOLOGY, vol.34, no.8, 2019 (SCI-Expanded)
- XXIV. **Influence of Bi on dielectric properties of GaAs1-xBix alloys**
Ulutas K., Yakut Ş., Bozoglu D., Deger D., Arslan M., Erol A.
MATERIALS SCIENCE-POLAND, vol.37, no.2, pp.244-248, 2019 (SCI-Expanded)
- XXV. **V-groove etched 1-eV-GaInNAs nipi solar cell**
Muhammetgulyyev A., Kinaci B., Aho A., Yalçın Y., Cetinkaya Ç., Kuruoglu F., Guina M., Erol A.
APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.125, no.1, 2019 (SCI-Expanded)
- XXVI. **Electron Beam Dose and PMMA Thickness Dependent Circularity and Diameter Analysis of Au**

Nanodots

Kuruoglu F., Yavuzçetin O., Erol A.

CURRENT NANOSCIENCE, vol.15, no.5, pp.486-491, 2019 (SCI-Expanded)

- XXVII. **Optical properties of GaAs_{1-x}Bi_x/GaAs quantum well structures grown by molecular beam epitaxy on (100) and (311)B GaAs substrates**
Gunes M., Ukelge M. O., Donmez Ö., Erol A., Gumus C., Alghamdi H., Galeti H. V. A., Henini M., Schmidbauer M., Hilska J., et al.
SEMICONDUCTOR SCIENCE AND TECHNOLOGY, vol.33, no.12, 2018 (SCI-Expanded)
- XXVIII. **A study on the voltage-dependent response of a GaInNAs-based pin photodetector with a quasi-cavity**
Sarcan F., Nutku F., Nordin M. S., Vickers A. J., Ero A.
SEMICONDUCTOR SCIENCE AND TECHNOLOGY, vol.33, no.11, 2018 (SCI-Expanded)
- XXIX. **Thermal oxidation and hydrofluoric acid treatment on the sandblasted implant surface: A histologic histomorphometric and biomechanical study**
Qamheya A. H. A., Arisan V., Mutlu Z., Karabagli M., Tekkesin M., Kara K., Erol A., Ersanli S.
CLINICAL ORAL IMPLANTS RESEARCH, vol.29, no.7, pp.741-755, 2018 (SCI-Expanded)
- XXX. **A study of electric transport in n- and p-type modulation-doped GaInNAs/GaAs quantum well structures under a high electric field**
Sarcan F., Mutlu S., Cokduygular E., Donmez Ö., Erol A., Puustinen J., Guina M.
SEMICONDUCTOR SCIENCE AND TECHNOLOGY, vol.33, no.6, 2018 (SCI-Expanded)
- XXXI. **Optical properties of n- and p-type modulation doped GaAsBi/AlGaAs quantum well structures**
Cetinkaya C., Cokduygular E., Nutku F., Donmez Ö., Puustinen J., Hilska J., Erol A., Guina M.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.739, pp.987-996, 2018 (SCI-Expanded)
- XXXII. **Temporal Response of Dilute Nitride Multi-Quantum-Well Vertical Cavity Enhanced Photodetector**
Nordin M. S., Sarcan F., Güneş M., Boland-Thoms A., Erol A., Vickers A. J.
JOURNAL OF ELECTRONIC MATERIALS, vol.47, no.1, pp.655-661, 2018 (SCI-Expanded)
- XXXIII. **Characterization of emitted light from travelling Gunn domains in Al_{0.08}Ga_{0.92}As alloy based Gunn devices**
Cetinkaya C., Mutlu S., Donmez Ö., Erol A.
SUPERLATTICES AND MICROSTRUCTURES, vol.111, pp.744-753, 2017 (SCI-Expanded)
- XXXIV. **Raman and AFM studies on nominally undoped, p- and n-type GaAsBi alloys**
Erol A., Akalin E., Kara K., Aslan M., Bahrami-Yekta V., Lewis R. B., Tiedje T.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.722, pp.339-343, 2017 (SCI-Expanded)
- XXXV. **Characterization of temperature dependent operation of a GaInNAs-based RCEPD designed for 1.3 μm**
Sarcan F., Nordin M. S., Kuruoglu F., Erol A., Vickers A. J.
SUPERLATTICES AND MICROSTRUCTURES, vol.102, pp.27-34, 2017 (SCI-Expanded)
- XXXVI. **Effect of thermal annealing and nitrogen composition on quantum transport in GaInNAs alloy based modulation doped quantum well structures**
Nutku F., Donmez Ö., Cokduygular E., Sarcan F., Kuruoglu F., Mutlu S., Yildirim S., Erol A.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.695, pp.404-409, 2017 (SCI-Expanded)
- XXXVII. **Thermal annealing effects on optical and structural properties of GaBiAs epilayers: Origin of the thermal annealing-induced redshift in GaBiAs**
Donmez Ö., Kara K., Erol A., Akalin E., Makhloufi H., Arnoult A., Fontaine C.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.686, pp.976-981, 2016 (SCI-Expanded)
- XXXVIII. **Dilute nitride resonant cavity enhanced photodetector with internal gain for the lambda similar to 1.3 μm optical communications window**
Balkan N., Erol A., Sarcan F., Al-Ghuraibawi L. F. F., Nordin M. S.
SUPERLATTICES AND MICROSTRUCTURES, vol.86, pp.467-471, 2015 (SCI-Expanded)
- XXXIX. **Optical properties of GaBiAs single quantum well structures grown by MBE**
Donmez Ö., Erol A., Arikan M. C., Makhloufi H., Arnoult A., Fontaine C.

SEMICONDUCTOR SCIENCE AND TECHNOLOGY, vol.30, no.9, 2015 (SCI-Expanded)

- XL. **Quantum oscillations and interference effects in strained n- and p-type modulation doped GaInNAs/GaAs quantum wells**
Sarcan F., Nutku F., Donmez Ö., Kuruoglu F., Mutlu S., Erol A., Yildirim S., Arikan M. C.
JOURNAL OF PHYSICS D-APPLIED PHYSICS, vol.48, no.30, 2015 (SCI-Expanded)
- XLI. **Negative and positive magnetoresistance in GaInNAs/GaAs modulation-doped quantum well structures**
Nutku F., Donmez Ö., Sarcan F., Erol A., Puustinen J., Arikan M. C., Guina M.
APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.118, no.3, pp.823-829, 2015 (SCI-Expanded)
- XLII. **Analytic modeling of temperature dependence of 2D carrier mobility in as-grown and annealed GaInNAs/GaAs quantum well structures**
Donmez Ö., Sarcan F., Lisesivdin S. B., Vaughan M. P., Erol A., Gunes M., Arikan M. C., Puustinen J., Guina M.
SEMICONDUCTOR SCIENCE AND TECHNOLOGY, vol.29, no.12, 2014 (SCI-Expanded)
- XLIII. **Zero-bias offsets in I-V characteristics of the staircase type quantum well infrared photodetectors**
Nutku F., Erol A., Arikan M. C., Ergun Y.
APPLIED SURFACE SCIENCE, vol.318, pp.95-99, 2014 (SCI-Expanded)
- XLIV. **Anisotropic electron g factor as a probe of the electronic structure of GaBixAs1-x/GaAs epilayers**
Broderick C. A., Mazzucato S., Carrere H., Amand T., Makhloufi H., Arnoult A., Fontaine C., Donmez Ö., Erol A., Usman M., et al.
PHYSICAL REVIEW B, vol.90, no.19, 2014 (SCI-Expanded)
- XLV. **Bismuth-induced effects on optical, lattice vibrational, and structural properties of bulk GaAsBi alloys**
Sarcan F., Donmez Ö., Kara K., Erol A., Akalin E., Arikan M. C., Makhloufi H., Arnoult A., Fontaine C.
NANOSCALE RESEARCH LETTERS, vol.9, 2014 (SCI-Expanded)
- XLVI. **Magnetotransport study on as-grown and annealed n- and p-type modulation-doped GaInNAs/GaAs strained quantum well structures**
Donmez Ö., Sarcan F., Erol A., Gunes M., Arikan M. C., Puustinen J., Guina M.
NANOSCALE RESEARCH LETTERS, vol.9, 2014 (SCI-Expanded)
- XLVII. **Experimental investigation and numerical modelling of photocurrent oscillations in lattice matched Ga1-xInxNyAs1-y/GaAs quantum well p-i-n photodiodes**
Royall B., Khalil H., Mazzucato S., Erol A., Balkan N.
NANOSCALE RESEARCH LETTERS, vol.9, 2014 (SCI-Expanded)
- XLVIII. **Influence of nitrogen on hole effective mass and hole mobility in p-type modulation doped GaInNAs/GaAs quantum well structures**
Sarcan F., Donmez Ö., Erol A., Gunes M., Arikan M. C., Puustinen J., Guina M.
APPLIED PHYSICS LETTERS, vol.103, no.8, 2013 (SCI-Expanded)
- XLIX. **Effects of indium and nitrogen mole concentrations on the optical properties in a GaInNAs/GaAs quantum well under the intense laser field**
UNGAN F., Sakiroglu S., Yesilgul U., Erol A., KASAPOĞLU E., SARİ H., Sokmen I.
JOURNAL OF LUMINESCENCE, vol.134, pp.208-212, 2013 (SCI-Expanded)
- L. **A study of photomodulated reflectance on staircase-like, n-doped GaAs/Al (x) Ga1-x As quantum well structures**
Donmez Ö., Nutku F., Erol A., Arikan C. M., Ergun Y.
NANOSCALE RESEARCH LETTERS, vol.7, 2012 (SCI-Expanded)
- LI. **Excitation energy-dependent nature of Raman scattering spectrum in GaInNAs/GaAs quantum well structures**
Erol A., Akalin E., Sarcan F., Donmez Ö., Akyuz S., Arikan C. M., Puustinen J., Guina M.
NANOSCALE RESEARCH LETTERS, vol.7, 2012 (SCI-Expanded)
- LII. **Morphology-dependent humidity adsorption kinetics of ZnO nanostructures**
Aşar N., Erol A., Okur S., Arikan M. C.
SENSORS AND ACTUATORS A-PHYSICAL, vol.187, pp.37-42, 2012 (SCI-Expanded)

- LIII. **Effects of an intense, high-frequency laser field on bound states in Ga_{1-x}In_xNyAs_{1-y}/GaAs double quantum well**
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Congress and Symposium Activities

1st International Eurasian Conference on Science, Engineering and Technology, Attendee, Ankara, Turkey, 2018
ICCMMS-2017, Attendee, Adana, Turkey, 2017
The Physics of Optoelectronics Devices and Materials, Attendee, London, United Kingdom, 2017
TPS 32.International Physics Congress, Attendee, Muğla, Turkey, 2016
TPS 32.International Physics Congress1, Attendee, İstanbul, Turkey, 2015
5th International Workshop on Bismuth-Containing Semiconductors, July 21-23, 2014, Cork, IRELAND, Attendee, CORK, Ireland, 2014
19. Yoğun Madde Fiziği Toplantısı, Attendee, ANKARA, Turkey, 2013
TPS 30th International Physics Congress, Attendee, İstanbul, Turkey, 2013
Novel Gain and Materials Based on III-N-V/Bi compounds, Attendee, İstanbul, Turkey, 2013
EURO MBE 2013, Attendee, Levi, Finland, 2013
TPS 29. International Physics Congress, Attendee, Bodrum, Turkey, 2012
ICSNN 2012, Attendee, Dresden, Germany, 2012
ICTON 2011, Attendee, Sweden, 2011
Nano-TR V, Attendee, Eskişehir, Turkey, 2010
European Materials Research Society (E-MRS) 2010 Spring Meeting, Attendee, Strasbourg, France, 2010
Güneş Gözellerinin Fiziği ve Teknolojileri, Attendee, Sivas, Turkey, 2010
Nanotaşımın/Seyreltik Azot içeren yapılarda elektronik taşınımın incelenmesi, Attendee, İstanbul, Turkey, 2010
NanoMats, Attendee, İstanbul, Turkey, 2009
14th International Conference on II-VI Compounds, Attendee, İstanbul, Turkey, 2009
COST 288 Workshop, Attendee, Metz, France, 2007
ICSNN 2006, Attendee, Toulouse, France, 2006

Nano-Ölçekli Optoelektronik Malzemeler Ulusal Çalıştayı, Attendee, Antalya, Turkey, 2006

TPS 23. International Physics Congress, Attendee, Muğla, Turkey, 2005

International Research Workshop Physics and Technology of Dilute Nitrides for Optical Communications, Attendee, İstanbul, Turkey, 2002

ICSNN 2002, Attendee, Toulouse, France, 2002

Scholarships

British Chevening Scholarship, British Council, 2001 - 2002

Awards

EROL A., TÜBA Desteklenmeye değer eser ödülü: Yarıiletkenler ve Optoelektronik Uygulamaları, TÜBA, June 2014

EROL A., Nazım Terzioğlu Ödülü, İstanbul Üniversitesi, May 2004