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International Researcher IDs

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

ScopusID: 7004336995

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

Optics and Photonics, Optical Materials and Devices, Optoelectronic Materials and Devices, Semiconducting Materials and Devices, Physics, Interdisciplinary Physics and Related Science and Technology Areas, Materials Science, Condensed Matter 1: Structural, Mechanical and Thermal Properties, 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

Solid State Physics, Undergraduate, 2022 - 2023
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 İLETKENLERDE KUANTUM 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
Katıların 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 II, 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., Development and Characterization of Lead Zirconate Titanate (PZT) Based Detectors, Doctorate, A.Ünverdi(Student), Continues
Erol A., Piroelektrik Tabanlı Dedektörlerin Geliştirilmesi ve Karakterizasyonu, Doctorate, M.Büyükharman(Student), Continues
Erol A., InGaAs Gunn diyodu tabanlı ışık yayan aygıt üretimi ve karakterizasyonu, Postgraduate, G.KALYON(Student), 2022
Erol A., InGaAs epitaksiyel tabakaların optik ve elektriksel karakterizasyonu, Postgraduate, S.MOHAMMAD(Student), 2022
Erol A., Güver T., FABRICATION AND CHARACTERIZATION OF DEVICES BASED ON III-V GROUP SEMICONDUCTORS, Postgraduate, B.Kay(Student), 2021
Erol A., Characterization of quasi and 2D semiconductors, Doctorate, A.AB.MA.RAJHI(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.Çokduygulular(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 - Associate Professorship, Appointment to Academic Staff - Associate Professorship,

İstanbul Üniversitesi, October, 2023

Appointment to Academic Staff-Assistant Professorship, Appointment to Academic Staff-Assistant Professorship, İstanbul Üniversitesi, September, 2023

Appointment to Academic Staff-Assistant Professorship, Appointment to Academic Staff-Assistant Professorship, İstanbul Üniversitesi, September, 2023

Appointment to Academic Staff-Professorship, Appointment to Academic Staff-Professorship, Piri Reis Üniversitesi, August, 2023

Appointment to Academic Staff-Professorship, Appointment to Academic Staff-Professorship, Bahçeşehir Üniversitesi, May, 2023

Associate Professor Exam, Associate Professor Exam, Istanbul University, March, 2023

Appointment to Academic Staff - Associate Professorship, Appointment to Academic Staff - Associate Professorship, İstanbul Üniversitesi, February, 2023

Appointment to Academic Staff-Professorship, Appointment to Academic Staff-Professorship, Akdeniz Üniversitesi, October, 2022

Appointment to Academic Staff - Associate Professorship, Appointment to Academic Staff - Associate Professorship, İstanbul Üniversitesi, July, 2022

Appointment to Academic Staff - Associate Professorship, Appointment to Academic Staff - Associate Professorship, İstanbul Üniversitesi, April, 2022

Appointment to Academic Staff-Professorship, Appointment to Academic Staff-Professorship, İstanbul Üniversitesi, November, 2021

Appointment to Academic Staff-Professorship, Appointment to Academic Staff-Professorship, Dokuz Eylül Üniversitesi, November, 2021

Appointment to Academic Staff-Professorship, Appointment to Academic Staff-Professorship, İstanbul Üniversitesi, November, 2021

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

Doctorate, Doktora Tez Savunma, Anadolu Üniversitesi, June, 2010

Doctoral Examination, Doktora Yeterlik Sınavı, İSTANBUL ÜNİVERSİTESİ FEN BİLİMLERİ ENSTİTÜSÜ, 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. **The impact of a-tomatine on shear bonding strength in different dentin types and on cariogenic microorganisms: an in vitro and in silico study**
Ucuncu M. K., Ucuncu M. Y., TOPCUOĞLU E. N., KITIN E., YAZICIOĞLU O., Ortaakarsu A. B., AYDIN M., EROL A.
BMC Oral Health, vol.24, no.1, 2024 (SCI-Expanded)
- II. **Characterization of composition dependence of properties of a MgNiO-based MSM structure**
Dogan U., SARCAN F., HUT E., Achinuq B., Althumali A., Aldawood I., Kerrigan A., Lazarov V. K., EROL A.

PHYSICA SCRIPTA, no.9, 2024 (SCI-Expanded)

- III. **A novel InGaN-based bidirectional wavelength converter and optical amplifier based on hot electron-induced blue light-emitting device**
MUTLU S., EROL A., TIRAS E.
JOURNAL OF LUMINESCENCE, vol.272, 2024 (SCI-Expanded)
- IV. **Electric field dependence of the electron drift velocity in n-type In_xGa_{1-x}As_{1-y}Bi_y epilayer**
AYDIN M., BORK J., ZIDE J., EROL A., DÖNMEZ Ö.
Physica B: Condensed Matter, vol.685, 2024 (SCI-Expanded)
- V. **Light Logic Gates with GaAs-Based Structures**
SONMEZ F., ARDALI S., ARPAPAY B., MUTLU S., ERGURHAN A. A., SENEL O., SERINCAN U., EROL A., TIRAS E.
PHYSICA STATUS SOLIDI-RAPID RESEARCH LETTERS, 2024 (SCI-Expanded)
- VI. **Characterization of induced quasi-two-dimensional transport in n-type In_xGa_{1-x}As_{1-y}Bi_y bulk layer**
AYDIN M., YILMAZ S. N., BORK J., ZIDE J., EROL A., DÖNMEZ Ö.
Applied Physics A: Materials Science and Processing, vol.130, no.7, 2024 (SCI-Expanded)
- VII. **Effect of water-based electrolyte on surface, mechanical and tribological properties of ZrO₂ nanotube arrays produced on zirconium**
DURDU S., AKTAS S., SARCAN F., AKAGUNDUZ E., GULTEKIN B., EROL A., USTA M.
Journal of the Australian Ceramic Society, vol.60, no.3, pp.833-848, 2024 (SCI-Expanded)
- VIII. **Effect of doping on transport properties of InSb epilayers grown by MOCVD and MBE**
GÜNEŞ M., AYDIN M., DÖNMEZ Ö., GÜMÜŞ C., EROL A., MARROQUIN J., FELIX J., YOSHIKAWA A., GEKA H., KUZE N., ET AL.
Materials Science and Engineering: B, vol.305, 2024 (SCI-Expanded)
- IX. **Reduced trap-density and boosted performance of CH₃NH₃PbI₃ solar cells by 1-Pentanethiol enhanced anti-solvent washing route**
GOKDEMİR CHOI F. P., KURUOĞLU F., MOEINI ALISHAH H., BOZAR S., KAHVECI C., CANTÜRK RODOP M., EROL A., GÜNEŞ S.
Nanotechnology, vol.35, no.21, 2024 (SCI-Expanded)
- X. **A Dual-Channel MoS₂-Based Selective Gas Sensor for Volatile Organic Compounds**
KUŞ E., ALTINDEMİR G., BOSTAN Y. K., TAŞALTIN C., EROL A., WANG Y., SARCAN F.
Nanomaterials, vol.14, no.7, 2024 (SCI-Expanded)
- XI. **Enhancement of light emission characteristic of a GaAs-based Gunn light emitting diode with a quasi-cavity**
MUTLU S., KALYON G., SARCAN F., ERBAŞ Ö. G., EROL A.
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.169, 2024 (SCI-Expanded)
- XII. **Ultraviolet-Ozone Treatment: An Effective Method for Fine-Tuning Optical and Electrical Properties of Suspended and Substrate-Supported MoS₂**
SARCAN F., ARMSTRONG A. J., BOSTAN Y. K., KUS E., MCKENNA K. P., EROL A., WANG Y.
NANOMATERIALS, vol.13, no.23, 2023 (SCI-Expanded)
- XIII. **Determination of electronic band structure of quaternary ferromagnetic Ga_{0.97}-yMn_{0.03}CryAs epitaxial layers**
DÖNMEZ Ö., GÜNEŞ M., HENİNİ M., EROL A.
PHYSICA B-CONDENSED MATTER, vol.665, 2023 (SCI-Expanded)
- XIV. **InGaAs-based Gunn light emitting diode**
KALYON G., MUTLU S., KURUOĞLU F., PERTİKEL İ., DEMİR İ., EROL A.
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.159, 2023 (SCI-Expanded)
- XV. **Relation between thermal quenching of photoluminescence and negative capacitance on InGaN/GaN multiple quantum wells in p-i-n structure**
ÖZDEMİR O., BAŞ H., AYARCI KURUOĞLU N., BOZKURT K., AYDIN M., SARCAN F., EROL A., ALSHEHRI B., DOGHECHE K., DOGHECHE E.
JOURNAL OF LUMINESCENCE, vol.257, 2023 (SCI-Expanded)
- XVI. **Analysis of mixed optical transitions in dilute magnetic AlAs/GaAs/ GaMnAs quantum wells grown on high substrate index by molecular beam epitaxy**

Kerimova S., Dönmez Ö., Gunes M., Kuruoğlu F., Aydın M., Gümüş C., Erol A.
MATERIALS SCIENCE AND ENGINEERING B-ADVANCED FUNCTIONAL SOLID-STATE MATERIALS, vol.290, 2023
(SCI-Expanded)

- XVII. **Understanding the impact of heavy ions and tailoring the optical properties of large-area monolayer WS₂ using focused ion beam**
Sarcan F., Fairbairn N., Zotev P., Severs-Millard T., Gillard D. J., Wang X., Conran B., Heuken M., Erol A., Tartakovskii A., et al.
npj 2D Materials and Applications, vol.7, no.23, pp.1-7, 2023 (SCI-Expanded)
- XVIII. **Determination of band tail widths in MOCVD grown InGaN single layer within GaN based p-i-n LED structure through photo-induced measurements**
ÖZDEMİR O., BOZKURT K., AYARCI KURUOĞLU N., Baş H., SARCAN F., EROL A., Alshehri B., Dogheche K., Dogheche E.
JOURNAL OF LUMINESCENCE, vol.255, 2023 (SCI-Expanded)
- XIX. **A novel NiO-based p-i-n ultraviolet photodiode**
Sarcan F., Doğan U., Althumali A., Vasili H. B., Lari L., Kerrigan A., Kuruoğlu F., Lazarov V. K., Erol A.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.934, 2023 (SCI-Expanded)
- XX. **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_{0.04} 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)
- XXI. **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)
- XXII. **Boron- and Boric Acid-Treated Titanium Implant Surfaces in Sheep Tibia: A Histologic, Histomorphometric and Mechanical Study**
Aysesek N., ARISAN V., Balcioğlu N. B., EROL A., KURUOĞLU F., SOLUK TEKKEŞİN M., ERSANLI S.
BIOENGINEERING-BASEL, vol.9, no.11, 2022 (SCI-Expanded)
- XXIII. **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)
- XXIV. **PREVENTIVE EFFECTS OF MATRIX-METALLOPROTEINASE INHIBITORS ON DENTAL EROSION**
KORUYUCU M., İLİSULU S. C., SARCAN F., KURUOĞLU F., EROL A., SEYMEN F.
FLUORIDE - QUARTERLY REPORTS, vol.55, no.2, pp.11, 2022 (SCI-Expanded)
- XXV. **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)
- XXVI. **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)
- XXVII. **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)
- XXVIII. **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)
- XXIX. **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)

- XXX. **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)
- XXXI. **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., Ungan F., Sari H.
THIN SOLID FILMS, vol.732, 2021 (SCI-Expanded)
- XXXII. **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)
- XXXIII. **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)
- XXXIV. **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)
- XXXV. **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)
- XXXVI. **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)
- XXXVII. **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)
- XXXVIII. **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)
- XXXIX. **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)
- XL. **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)
- XLI. **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)
- XLII. **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)
- XLIII. **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)

XLIV. V-groove etched 1-eV-GaInNAs nipi solar cell

Muhammetgulyyev A., Kinaci B., Aho A., Yalcin Y., Cetinkaya Ç., Kuruoglu F., Guina M., Erol A.
APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.125, no.1, 2019 (SCI-Expanded)

XLV. Electron Beam Dose and PMMA Thickness Dependent Circularity and Diameter Analysis of Au Nanodots

Kuruoglu F., Yavuzçetin O., Erol A.
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Semiconductor Science and Technology, Committee Member, 2018 - Continues

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Nanoscale Research Letters, Special Issue Editor, 2013 - 2014

Physica Status Solidi C, Special Issue Editor, 2010 - 2010

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Memberships / Tasks in Scientific Organizations

Micro/Nanoteknolojiler ve Optoelektronik, Consultant, 2017 - Continues

Scientific Refereeing

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ICSNN 2012, Attendee, Dresden, Germany, 2012
ICTON 2011, Attendee, Sweden, 2011
European Materials Research Society (E-MRS) 2010 Spring Meeting, Attendee, Strasbourg, France, 2010
Nano-TR V, Attendee, Eskişehir, Turkey, 2010
Güneş Gözelerinin Fiziği ve Teknolojileri, Attendee, Sivas, Turkey, 2010
Nanotaşınım/Seyreltik Azot içeren yapılarda elektronik taşınımın incelenmesi, Attendee, İstanbul, Turkey, 2010
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British Chevening Scholarship, British Council, 2001 - 2002

Awards

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Non Academic Experience

TUBITAK, TÜBİTAK, TÜBİTAK