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Education Information

Post Doctorate, University of Durham, Applied Physics Group, Physics, United Kingdom 1997 - 1998

Doctorate, Middle East Technical University, Faculty of Arts and Sciences, Department of Physics, Turkey 1992 - 1997

Postgraduate, Middle East Technical University, Faculty of Arts and Sciences, Department of Physics, Turkey 1989 - 1992

Undergraduate, Middle East Technical University, Faculty of Arts and Sciences, Department of Physics, Turkey 1984 - 1989

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Preparation and electrical structural optical characterization of In Se thin films, Middle East Technical University, 1997

Postgraduate, Effects of The Growth On The Properties of CdS Thin Films, Middle East Technical University, Faculty of Arts and Sciences, Department of Physics, 1993

Research Areas

Physics, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Electrical properties of electronic structures, interfaces, thin films and low-dimensional structures, Natural Sciences

Academic Titles / Tasks

Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Physics, 2001 - Continues

Advising Theses

- PARLAK M., Growth, characterization and device applications of cadmium zinc telluride thin films, Doctorate, Ç.DOĞRU(Student), 2022
- PARLAK M., Structural, optical and electrical characterization of CDSEXTTE1-X thin films, Postgraduate, M.Demir(Student), 2020
- Parlak M., CZTSSe thin film: growth, characterization and solar cell applications, Doctorate, M.TERLEMEZOĞLU(Student), 2019
- TURAN R., PARLAK M., Investigation of electronic properties of detector grade cadmium zinc telluride crystals and development of electrodes for x-ray and gamma ray applications, Postgraduate, D.BENDER(Student), 2019
- PARLAK M., Deposition of Cu-Zn-Sn-Se (CZTSe) thin films and investigation of their device properties, Doctorate, Ö.BAYRAKLI(Student), 2018
- AYDINOL M. K., PARLAK M., Production and characterization of carbon-silicon nanocomposite anode materials for secondary lithium batteries, Doctorate, B.MİSER(Student), 2017
- PARLAK M., ERÇELEBİ A. Ç., Investigation on the incorporation of quantum dot thin film layers in the organic and inorganic solar cell structures, Doctorate, İ.CANDAN(Student), 2016
- PARLAK M., ERÇELEBİ A. Ç., Material and device characterization of ZnInSe₂ and Cu_{0.5}Ag_{0.5}InSe₂ thin films for photovoltaic applications, Doctorate, H.HÜSEYİN(Student), 2016
- BEŞİKCİ C., PARLAK M., Molecular beam epitaxy growth of InP/InGaAs structures for short wavelength infrared photodetectors, Postgraduate, O.TEMEL(Student), 2014
- ÖZENBAŞ A. M., PARLAK M., Effect of transition metal substitution on high-temperature properties of thermoelectric materials, Doctorate, M.GÜNEŞ(Student), 2014
- BEŞİKCİ C., PARLAK M., Fabrication and characterization of InP based quantum well infrared photodetectors, Postgraduate, G.TORUNOĞLU(Student), 2012
- BEŞİKCİ C., PARLAK M., Molecular beam epitaxy growth and characterization of mercury cadmium telluride epilayers for infrared detector applications, Postgraduate, A.TOLUNGÜÇ(Student), 2011
- PARLAK M., AKATA KURÇ B., Synthesis and characterization of titanosilicate ETS-10 for potential photovoltaic applications, Postgraduate, S.GALİOĞLU(Student), 2010
- PARLAK M., Investigation of structural, electrical and optical properties of Cu_{1-x}Ag_xInSe₂ thin films as a function of x content, Postgraduate, H.HÜSEYİN(Student), 2010
- PARLAK M., Investigation of electrical and optical properties of Ag-In-Se based devices, Doctorate, M.KALELİ(Student), 2010
- PARLAK M., Electrical, structural and optical properties of AgGaSe_{2-x}S_x thin films grown by sintered powder, Doctorate, H.KARAAĞAÇ(Student), 2010
- PARLAK M., Growth and characterization of CuIn_{1-x}Ga_xSe₂ (CIGS) thin films for solar cell structures, Postgraduate, İ.CANDAN(Student), 2009
- PARLAK M., Design and production of antireflection coating for Ge, ZnSe and ZnS in 8-12 micrometer wavelength region, Postgraduate, B.ÜÇER(Student), 2009
- PARLAK M., The effects of post-annealing process on the physical properties of silver-indium-selenium ternary semiconductor thin films deposited by electron beam technique, Doctorate, T.ÇOLAKOĞLU(Student), 2009
- KARAKAŞ G., PARLAK M., PRODUCTION OF TITANIUM DIOXIDE THIN FILMS WITH IMPROVED PHOTOCATALYTIC ACTIVITY: THE USE OF BACTERIA AS 3D TEMPLATES, Postgraduate, B.KOÇ(Student), 2009
- PARLAK M., Physical properties of CdSe thin films produced by thermal evaporation and e-beam techniques, Postgraduate, Ş.MUSTAFA(Student), 2006
- PARLAK M., Structural, electrical and optical characterization of Ge-implanted GaSe single crystal grown by Bridgman method, Postgraduate, H.KARAAĞAÇ(Student), 2005
- PARLAK M., Electrical and structural characterization of bismuth thin films, Postgraduate, G.DURKAYA(Student), 2005
- PARLAK M., Growth and characterization of InSe single crystals, Postgraduate, D.DENİZ(Student), 2004
- PARLAK M., Investigation of InSe thin film based deviges, Doctorate, K.YILMAZ(Student), 2004
- PARLAK M., Investigation of inse thin film based devices, Doctorate, K.Yılmaz(Student), 2004
- AKINOĞLU B. G., PARLAK M., Structural electrical and optical characterization of N- and Si-implanted GaSe single crystal

grown by bridgman method, Doctorate, O.Karabulut(Student), 2003

PARLAK M., The growth and characterization of gallium selenide thin films, Postgraduate, T.Çolakoğlu(Student), 2003

PARLAK M., The growth and characterization of GaSe thin films, Postgraduate, T.ÇOLAKOĞLU(Student), 2003

PARLAK M., Structural, electrical and optical characterization of N-and Si-implanted GaSe single crystal grown by Bridgman method, Doctorate, O.KARABULUT(Student), 2003

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Exploring Temperature-Dependent bandgap and Urbach energies in CdTe thin films for optoelectronic applications**
Surucu O., Sürücü G., Hasanli N., Parlak M., Isik M.
Materials Letters, vol.373, 2024 (SCI-Expanded)
- II. **Performance analysis of CuSbSe₂ thin-film solar cells with Cd-free window layers**
SÜRÜCÜ G., Bal E., Gencer A., PARLAK M., Surucu O.
Materials Letters, vol.363, 2024 (SCI-Expanded)
- III. **A new method to determine the continuous refractive index of an absorbing film by Generalized Stockwell Transform**
Coşkun E., Emir C., Selamet S., Parlak M., Özder S.
Optics and Laser Technology, vol.167, 2023 (SCI-Expanded)
- IV. **Nanowire geometry effects on devices and transport mechanisms: SnS₂/SiNW heterojunction**
COŞKUN E., Emir C., TERLEMEZOĞLU BİLMİŞ M., PARLAK M.
Journal of Materials Science, vol.58, no.38, pp.15132-15143, 2023 (SCI-Expanded)
- V. **Production of detector grade CdZnTe crystal with VGF furnace by analyzing segregation of Zn and In**
Ünal M., Balbaşı Ö. B., Sedani S. H., Karaman M. C., Çelik G., Bender D., Genç A. M., Parlak M., Turan R.
Journal of Crystal Growth, vol.615, 2023 (SCI-Expanded)
- VI. **Physical characterization of thermally evaporated Sn–Sb–Se thin films for solar cell applications**
Bektas T., Surucu O., Terlemezoğlu Bilmiş M., Parlak M.
Applied Physics A: Materials Science and Processing, vol.129, no.5, 2023 (SCI-Expanded)
- VII. **Temperature effects on optical characteristics of thermally evaporated CuSbSe₂ thin films for solar cell applications**
Surucu O., Isik M., Terlemezoglu M., Bektas T., Hasanli N., Parlak M.
Optical Materials, vol.133, 2022 (SCI-Expanded)
- VIII. **Structural, morphological and temperature-tuned bandgap characteristics of CuS nano-flake thin films**
Isik M., Terlemezoglu M., Hasanli N., Parlak M.
Physica E: Low-Dimensional Systems and Nanostructures, vol.144, 2022 (SCI-Expanded)
- IX. **Production of High-Performance CdZnTe Crystals Grown by THM for Radiation Detection Applications**
Ünal M., Balbaşı Ö. B., Karaman M. C., Genç A. M., Parlak M., Turan R.
Journal of Electronic Materials, vol.51, no.9, pp.4675-4680, 2022 (SCI-Expanded)
- X. **Investigation of seeded vertical gradient freeze (VGF) growth of CdZnTe bulk crystals**
Balbaşı Ö. B., Ünal M., Genç A. M., Çelik G., Parlak M., Turan R.
Journal of Crystal Growth, vol.584, 2022 (SCI-Expanded)
- XI. **Interface stability problem towards the end of THM growth of cadmium zinc telluride crystals**
Ünal M., Balbaşı Ö. B., Genç A. M., Parlak M., Turan R.
Journal of Crystal Growth, vol.584, 2022 (SCI-Expanded)
- XII. **Growth and optical characterization of Sn_{0.6}Sb_{0.4}Se layer single crystals for optoelectronic applications**
Bektas T., Terlemezoglu M., Surucu O., Isik M., Parlak M.
Materials Science in Semiconductor Processing, vol.141, 2022 (SCI-Expanded)

- XIII. **Temperature-dependent optical characteristics of sputtered NiO thin films**
Terlemezoglu M., Surucu O., Isik M., Hasanli N., Parlak M.
APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.128, no.1, 2022 (SCI-Expanded)
- XIV. **Characterization of Cu-rich and Zn-poor Cu₂ZnSnS₄ single crystal grown by vertical Bridgman technique**
Peksu E., Terlemezoglu M., Parlak M., Karaagaç H.
Journal of Crystal Growth, vol.574, 2021 (SCI-Expanded)
- XV. **Fabrication of CdSexTe1-x thin films by sequential growth using double sources**
Demir M., Gullu H., Terlemezoglu M., Parlak M.
Physica B: Condensed Matter, vol.619, 2021 (SCI-Expanded)
- XVI. **Illumination and voltage effects on the forward and reverse bias current-voltage (I-V) characteristics in In/In₂S₃/p-Si photodiodes**
Yukselturk E., Surucu O., Terlemezoglu M., PARLAK M., ALTINDAL Ş.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.32, no.17, pp.21825-21836, 2021 (SCI-Expanded)
- XVII. **Structural and temperature-tuned bandgap characteristics of thermally evaporated beta-In₂S₃ thin films**
Surucu O., Isik M., Terlemezoglu M., Hasanli N., Parlak M.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.32, no.12, pp.15851-15856, 2021 (SCI-Expanded)
- XVIII. **Temperature effects on optical characteristics of CdSe thin films**
Gullu H. H., Isik M., Surucu O., Hasanli N., Parlak M.
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.123, 2021 (SCI-Expanded)
- XIX. **Improvement of electrical characteristics of SnSe/Si heterostructure by integration of Si nanowires**
Coskun E., Gullu H. H., Emir C., Parlak M.
PHYSICA B-CONDENSED MATTER, vol.604, 2021 (SCI-Expanded)
- XX. **Temperature-dependent optical characteristics of sputtered Ga-doped ZnO thin films**
Gullu H. H., Isik M., Hasanli N., Parlak M.
MATERIALS SCIENCE AND ENGINEERING B-ADVANCED FUNCTIONAL SOLID-STATE MATERIALS, vol.263, 2021 (SCI-Expanded)
- XXI. **Towards the fabrication of third generation solar cells on amorphous, flexible and transparent substrates with well-ordered and disordered Si-nanowires/pillars**
Peksu E., Gullu O., PARLAK M., Islam M. S., Karaagaç H.
PHYSICA E-LOW-DIMENSIONAL SYSTEMS & NANOSTRUCTURES, vol.124, 2020 (SCI-Expanded)
- XXII. **Temperature-tuned band gap properties of MoS₂ thin films**
Surucu O., Isik M., Gasanly N., Terlemezoglu M., Parlak M.
MATERIALS LETTERS, vol.275, 2020 (SCI-Expanded)
- XXIII. **Temperature dependent band gap in SnS_{2-x}Se(2-2x) (x=0.5) thin films**
Delice S., Isik M., Gullu H. H., Terlemezoglu M., Surucu O. B., Gasanly N., Parlak M.
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.114, 2020 (SCI-Expanded)
- XXIV. **Investigation of band gap energy versus temperature for SnS₂ thin films grown by RF-magnetron sputtering**
Isik M., Gullu H. H., Terlemezoglu M., Surucu O. B., PARLAK M., Gasanly N.
PHYSICA B-CONDENSED MATTER, vol.591, 2020 (SCI-Expanded)
- XXV. **Influence of temperature on optical properties of electron-beam-evaporated ZnSe thin film**
Gullu H. H., Isik M., Gasanly N., PARLAK M.
PHYSICA SCRIPTA, vol.95, no.7, 2020 (SCI-Expanded)
- XXVI. **Material and Si-based diode analyses of sputtered ZnTe thin films**
Gullu H. H., Surucu O. B., Isik M., Terlemezoglu M., Parlak M.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.31, no.14, pp.11390-11397, 2020 (SCI-Expanded)

- XXVII. **Electrical characterization of CdZnTe/Si diode structure**
Balbasi C. D., Terlemezoglu M., Gullu H. H., Yildiz D. E., Parlak M.
APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.126, 2020 (SCI-Expanded)
- XXVIII. **Frequency effect on electrical and dielectric characteristics of HfO₂-interlayered Si-based Schottky barrier diode**
Gullu H. H., Yildiz D. E., Surucu O., Parlak M.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.31, no.12, pp.9394-9407, 2020 (SCI-Expanded)
- XXIX. **Temperature-dependent material characterization of CuZnSe₂ thin films**
Gullu H. H., Surucu O., Terlemezoglu M., Isik M., Ercelebi C., Gasanly N., Parlak M.
THIN SOLID FILMS, vol.701, 2020 (SCI-Expanded)
- XXX. **Temperature -dependent optical and electrical characterization of Cu-Ga-S thin films and their diode characteristics on n-Si**
Gullu H. H., Isik M., Gasanly N., PARLAK M.
OPTIK, vol.208, 2020 (SCI-Expanded)
- XXXI. **Synthesis and temperature-tuned band gap characteristics of magnetron sputtered ZnTe thin films**
Isik M., Gullu H. H., PARLAK M., Gasanly N.
PHYSICA B-CONDENSED MATTER, vol.582, 2020 (SCI-Expanded)
- XXXII. **Material and device properties of Si-based Cu_{0.5}Ag_{0.5}InSe₂ thin-film heterojunction diode**
Gullu H. H., Isik M., Delice S., Parlak M., Gasanly N.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.31, no.2, pp.1566-1573, 2020 (SCI-Expanded)
- XXXIII. **INVESTIGATION OF CONDUCTIVITY CHARACTERISTICS OF Zn-In-Se THIN FILMS**
Gullu H. H., Parlak M.
SURFACE REVIEW AND LETTERS, vol.27, no.1, 2020 (SCI-Expanded)
- XXXIV. **Characterization of one-step deposited Cu₂ZnSnS₄ thin films derived from a single crystalline powder**
Peksu E., TERLEMEZOĞLU M., PARLAK M., Karaağaç H.
RENEWABLE ENERGY, vol.143, pp.1133-1142, 2019 (SCI-Expanded)
- XXXV. **Investigation of electrical characteristics of Ag/ZnO/Si sandwich structure**
Gullu H. H., Surucu O. B., TERLEMEZOĞLU M., Yildiz D. E., PARLAK M.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.30, no.16, pp.15371-15378, 2019 (SCI-Expanded)
- XXXVI. **Temperature dependence of band gaps in sputtered SnSe thin films**
Delice S., Isik M., Gullu H., TERLEMEZOĞLU M., Bayrakli Surucu O., PARLAK M., Gasanly N.
JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS, vol.131, pp.22-26, 2019 (SCI-Expanded)
- XXXVII. **FABRICATION AND CHARACTERIZATION OF TiO₂ THIN FILM FOR DEVICE APPLICATIONS**
HOSSEINI A., GÜLLÜ H. H., COŞKUN E., PARLAK M., ERÇELEBİ A. Ç.
SURFACE REVIEW AND LETTERS, vol.26, no.6, 2019 (SCI-Expanded)
- XXXVIII. **CZTSSe thin films fabricated by single step deposition for superstrate solar cell applications**
TERLEMEZOĞLU M., Surucu O. B., Dogru C., Gullu H. H., ÇİFTPINAR E. H., Ercelebi C., PARLAK M.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.30, no.12, pp.11301-11306, 2019 (SCI-Expanded)
- XXXIX. **Electrical Characterization of ZnInSe₂/Cu_{0.5}Ag_{0.5}InSe₂ Thin-Film Heterojunction**
Gullu H. H., PARLAK M.
JOURNAL OF ELECTRONIC MATERIALS, vol.48, no.5, pp.3096-3104, 2019 (SCI-Expanded)
- XL. **Frequency effect on electrical and dielectric characteristics of In/Cu₂ZnSnTe₄/Si/Ag diode structure**
Gullu H. H., Surucu O. B., TERLEMEZOĞLU M., Yildiz D. E., PARLAK M.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.30, no.10, pp.9814-9821, 2019 (SCI-Expanded)
- XLI. **Analysis of temperature-dependent transmittance spectra of Zn_{0.5}In_{0.5}Se (ZIS) thin films**

Isik M., Gullu H. H., Delice S., Gasanly N., PARLAK M.

JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.30, no.10, pp.9356-9362, 2019 (SCI-Expanded)

- XLII. **Structural and temperature-dependent optical properties of thermally evaporated CdS thin films**
IŞIK M., Gullu H. H., Delice S., PARLAK M., Gasanly N.
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.93, pp.148-152, 2019 (SCI-Expanded)
- XLIII. **Temperature dependence of electrical properties in In/Cu₂ZnSnTe₄/Si/Ag diodes**
Gullu H. H., YILDIZ D. E., Surucu O. B., TERLEMEZOĞLU M., PARLAK M.
BULLETIN OF MATERIALS SCIENCE, vol.42, no.2, 2019 (SCI-Expanded)
- XLIV. **Effects of Si nanowire on the device properties of n-ZnSe/p-Si heterostructure**
COŞKUN E., Gullu H. H., Colakoglu T., Emir C., Bozdogan E., PARLAK M.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.30, no.5, pp.4760-4765, 2019 (SCI-Expanded)
- XLV. **PbS quantum dot enhanced p-CIGS/n-Si heterojunction diode**
Candan I., PARLAK M., Ercelebi C.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.30, no.3, pp.2127-2135, 2019 (SCI-Expanded)
- XLVI. **Construction of self-assembled vertical nanoflakes on CZTSSe thin films**
TERLEMEZOĞLU M., SURUCU O. B., COLAKOGLU T., ABAK M. K., Gullu H. H., Ercelebi C., PARLAK M.
MATERIALS RESEARCH EXPRESS, vol.6, no.2, 2019 (SCI-Expanded)
- XLVII. **INVESTIGATION ON DEVICE CHARACTERISTICS OF n-CdS/p-Ag(Ga-In)Te-2 HETEROJUNCTION DIODE**
Bayrakli O., Gullu H. H., PARLAK M.
SURFACE REVIEW AND LETTERS, vol.25, no.5, 2018 (SCI-Expanded)
- XLVIII. **Temperature dependence of electrical properties in Cu_{0.5}Ag_{0.5}InSe₂/Si heterostructure**
Gullu H. H., PARLAK M.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.29, no.13, pp.11258-11264, 2018 (SCI-Expanded)
- XLIX. **Investigation of carrier transport mechanisms in the Cu-Zn-Se based hetero-structure grown by sputtering technique**
Gullu H. H., TERLEMEZOĞLU M., Bayrakli O., Yildiz D. E., PARLAK M.
CANADIAN JOURNAL OF PHYSICS, vol.96, no.7, pp.816-825, 2018 (SCI-Expanded)
- L. **Analysis of current conduction mechanism in CZTSSe/n-Si structure**
TERLEMEZOĞLU M., Bayrakli O., Gullu H. H., COLAKOGLU T., Yildiz D. E., PARLAK M.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.29, no.7, pp.5264-5274, 2018 (SCI-Expanded)
- LI. **HRTEM Analysis of Crystallographic Defects in CdZnTe Single Crystal**
Yasar B., ERGUNT Y., KABUKCUOGLU M. P., PARLAK M., TURAN R., KALAY Y. E.
JOURNAL OF ELECTRONIC MATERIALS, vol.47, no.1, pp.778-784, 2018 (SCI-Expanded)
- LII. **Study on the electrical properties of ZnSe/Si heterojunction diode**
Gullu H. H., Bayrakli O., Yildiz D. E., PARLAK M.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.28, no.23, pp.17806-17815, 2017 (SCI-Expanded)
- LIII. **Optical and electrical characteristics of thermally evaporated Cu_{0.5}Ag_{0.5}InSe₂ thin films**
Gullu H. H., Bayrakli O., PARLAK M.
THIN SOLID FILMS, vol.639, pp.29-35, 2017 (SCI-Expanded)
- LIV. **Electric and photoelectric properties of n-AgInSe₂/p-Si heterojunction diode fabricated by successive layer deposition**
KALELİ M., ALDEMİR D. A., PARLAK M.
APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.123, no.9, 2017 (SCI-Expanded)
- LV. **Investigation of precursor sequence and post-annealing effects on the properties of Cu₂SnZnSe₄ thin films deposited by the elemental thermal evaporation**

- Bayraklı O., TERLEMEZOĞLU M., Gullu H. H., PARLAK M.
MATERIALS RESEARCH EXPRESS, vol.4, no.8, 2017 (SCI-Expanded)
- LVI. **Deposition of CZTSe thin films and illumination effects on the device properties of Ag/n-Si/p-CZTSe/In heterostructure**
Bayraklı O., TERLEMEZOĞLU M., GULLU H. H., PARLAK M.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.709, pp.337-343, 2017 (SCI-Expanded)
- LVII. **Structural characterization of Zn-In-Se thin films**
Gullu H. H., PARLAK M.
MODERN PHYSICS LETTERS B, vol.31, no.5, 2017 (SCI-Expanded)
- LVIII. **Investigations of thermal annealing role on the optical properties of Zn-In-Se thin films**
Gullu H. H., COŞKUN E., PARLAK M.
OPTİK, vol.144, pp.603-612, 2017 (SCI-Expanded)
- LIX. **Structural characteristics of thermally evaporated Cu_{0.5}Ag_{0.5}InSe₂ thin films**
Gullu H. H., PARLAK M.
MATERIALS RESEARCH EXPRESS, vol.3, no.5, 2016 (SCI-Expanded)
- LX. **Cu(In,Ga)(Se,Te)₂ pentenary thin films formed by reaction of precursor layers**
Atasoy Y., Basol B. M., POLAT İ., TOMAKİN M., PARLAK M., BACAKSIZ E.
THIN SOLID FILMS, vol.592, pp.189-194, 2015 (SCI-Expanded)
- LXI. **Device behavior of an In/p-Ag(Ga,In)Te-2/n-Si/Ag heterojunction diode**
Coskun E., Gullu H. H., CANDAN İ., Bayraklı O., PARLAK M., Ercelebi C.
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.34, pp.138-145, 2015 (SCI-Expanded)
- LXII. **Study on the Structural and Electrical Properties of Sequentially Deposited Ag-Ga-In-Te Thin Films**
Coskun E., Gullu H. H., PARLAK M., Ercelebi C.
JOURNAL OF LOW TEMPERATURE PHYSICS, vol.178, pp.162-173, 2015 (SCI-Expanded)
- LXIII. **Investigation of structural and optical parameters of Cu-Ag-In-Se thin films deposited by thermal evaporation method**
Gullu H. H., CANDAN İ., COŞKUN E., PARLAK M.
OPTİK, vol.126, no.18, pp.1578-1583, 2015 (SCI-Expanded)
- LXIV. **Device application of AgGa_{0.5}In_{0.5}Se₂ thin films deposited by thermal sequential stacked layer method**
COŞKUN E., Gullu H. H., PARLAK M.
MATERIALS RESEARCH EXPRESS, vol.1, no.4, 2014 (SCI-Expanded)
- LXV. **Characterization of Co-evaporated Cu-Ag-In-Se Thin Films**
Gullu H. H., COŞKUN E., PARLAK M.
BRAZILIAN JOURNAL OF PHYSICS, vol.44, no.6, pp.719-725, 2014 (SCI-Expanded)
- LXVI. **SYNTHESIS AND APPLICATION OF RGD-BASED BIOSENSOR AND BIOIMAGING MATERIALS**
PARLAK M., ÖZÇUBUKÇU S.
JOURNAL OF PEPTIDE SCIENCE, vol.20, 2014 (SCI-Expanded)
- LXVII. **An instrument for the high temperature measurement of the Seebeck coefficient and electrical resistivity**
GÜNEŞ M., PARLAK M., Ozenbas M.
MEASUREMENT SCIENCE AND TECHNOLOGY, vol.25, no.5, 2014 (SCI-Expanded)
- LXVIII. **Production and characterization of layer by layer sputtered single-phase AgInSe₂ thin film by thermal selenization**
KALELİ M., ÇOLAKOĞLU T., PARLAK M.
APPLIED SURFACE SCIENCE, vol.286, pp.171-176, 2013 (SCI-Expanded)
- LXIX. **Silicon nanowire-silver indium selenide heterojunction photodiodes**
KULAKCI M., ÇOLAKOĞLU T., OZDEMİR B., PARLAK M., ÜNALAN H. E., TURAN R.
NANOTECHNOLOGY, vol.24, no.37, 2013 (SCI-Expanded)
- LXX. **Preparation and characterization of cost effective spray pyrolyzed absorber layer for thin film solar cells**

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- XXIX. **Characterization of CuIn_{0.7}Ga_{0.3}Se₂ Thin Films Deposited by Single Stage Thermal Evaporation Process**
KARAAĞAÇ H., PEKSU E., BEHZAD H., AKGOZ S., PARLAK M.
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- XXX. **Preparation of CuIn_{0.7}Ga_{0.3}Se₂ Thin Films for the Fabrication of a Si-Nanowires Based Third Generation Solar Cell**
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- XXXII. **Theoretical and Experimental Investigation of Nano-mechanical Characteristics of SnTe Thin Films**
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- XXXIV. **Physical properties and device application of CZTSSe thin films deposited by thermal evaporation method**
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- XXXVI. **Synthesis and Structural Characterization on the (Cu,Ag)GaTe₂ Thin Films Deposited on Si Nanowires**
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- XXXVIII. **Deposition and characterization of ZTSeS thin films for photovoltaic applications**
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- XXXIX. **Investigation of Defects in CZT Single Crystals**
YAŞAR B., KABUKÇUOĞLU M., ERGUNT Y., PARLAK M., TURAN R., KALAY Y. E.
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- XL. **Zn Sn Se İnce Filmlerinin Üretimi ve Karakterizasyonu**
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- XLI. **Investigation of the device properties of CZTSe Thin Films for solar Cells**
BAYRAKLI Ö., GÜLLÜ H. H., PARLAK M.

- 2nd International Congress on the world of technology and advanced materials, 28 September - 02 October 2016
- XLII. **Fabrication and investigation of extremely thin CdTe absorber layer solar cells**
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- XLV. **Effects of Substrate Temperature on material characteristics of sputtered Aluminum doped ZnO thin films**
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- XLVI. **Design And device Application of Si based Cu Ag Ga Te thin film Heterostructure**
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- XLVII. **Effect of Zn Doping on CdS thin film deposited by RF magnetron sputtering**
TERLEMEZ OĞLU M., GÜLLÜ H. H., BAYRAKLI Ö., PARLAK M.
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- XLVIII. **Fabrication and characterization of p CuInSe₂ n Si Heterojunction Diode**
GÜLLÜ H. H., BAYRAKLI Ö., COŞKUN E., PARLAK M.
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- XLIX. **Improvement on the photovoltaic device performance of n CdS p Si heterojunction diode with the inclusion of Ag plasmonic layer**
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- L. **Plasmonic Enhancement for the Performance ofp CdTe n Si Heterojunction Diode**
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- LI. **Device Characterization of In p Cu_{0.5}Ag_{0.5}InSe₂ n Si Ag Heterojunction Diode V P2 8**
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- LII. **The effect of different annealing procedureds on CZTSe thin film properties V P3 4**
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- LIII. **Device Characterization of ZnInSe₂ Thin Films T P2 28**
GÜLLÜ H. H., PARLAK M.
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- LIV. **Device Characterization of Zn Sn Se ZTSe Thin Films for Solar Cells T P2 69**
BAYRAKLI Ö., GÜLLÜ H. H., COŞKUN E., PARLAK M.
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- LV. **Optical Behavior of Sequential ThermalEvaporated ZnInSe₂ Thin Films V P2 9**Hasan Huseyin Gullu
Emre Coskun OzgeBayrakli Mehmet Parlak
GÜLLÜ H. H., COŞKUN E., BAYRAKLI Ö., PARLAK M.
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- LVI. **Plasmonic Enhancement for the Performance of p CdTe n Si Heterojunction Diode T P2 33**Seda
Kayra Gullu Hasan Huseyin Gullu Mehmet Parlak Alban Bek
GÜLLÜ H. H., PARLAK M., GÜLLÜ KAYRA S., BEK A.
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- LVII. **Studies on Device Properties of n ZnSe p Si Heterojunction Diode T P1 63**

- GÜLLÜ H. H., BAYRAKLI Ö., COŞKUN E., PARLAK M.
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- LVIII. **Effect of nanowire length on device performance of n In₂Se₃ p Si nanowire heterojunctions** T P1
85Emre Coskun Tahir Colakoglu Hasan HuseyinGullu Ozge Bayraklı Mehmet Parlak
COŞKUN E., GÜLLÜ H. H., BAYRAKLI Ö., PARLAK M.
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- LXI. **Saçtırma Yöntemi ile Üretilen ITO İnce Filmlerinin Farklı Altaş ve Tavlama Sıcaklıklarına göre İncelenmesi**
GÜLLÜ H. H., BAYRAKLI Ö., PARLAK M.
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- LXII. **AgGa x In 1 x Te 2 İnce Filmlerin Üretilmesi ve Aygıt Özelliklerinin Belirlenmesi**
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- LXIV. **Üretim Sonrası Isıl İşlem Sıcaklığının ZnSe İnce Film Özellikleri Üzerine Etkisi**
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- LXV. **Synthesis and characterization of CuZnSe₂ thin film structures** II VI Conference Paris 2015
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GÜLLÜ H. H., BAYRAKLI Ö., PARLAK M., ERÇELEBİ A. Ç.
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- LXVI. **Investigation of Electrical Properties of Cu Ag In Se Thin Films Deposited by Thermal Evaporation Method**
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- LXVII. **Structural Characterization and Optical Properties of AgInSe₂Thin Films**
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- LXVIII. **Device Measurements and Analysis of Ag Ga In Te Based Thin Film Heterojunction Diode** Ö Bayraklı
H H Güllü and M Parlak SolarTR 3 3rd Turkish Solar Electricity Conference and Exhibition 27 29
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BAYRAKLI Ö., GÜLLÜ H. H., PARLAK M.
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Coşkun İ Candan M Parlak Ç Erçelebi
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- LXXI. **Preparation and Characterization of Sputtered CuZnSe₂ Thin Films**

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Supported Projects

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PARLAK M., TERLEMEZOĞLU M., DEMİR M., ERÇELEBİ A. Ç., Project Supported by Higher Education Institutions,

Alternatif soğurucu katman olarak Sn_{Sex}Te(1-x) ince film yapısının üretimi ve özelliklerinin araştırılması, 2018 - 2019

PARLAK M., BAYRAKLI Ö., TERLEMEZOĞLU M., ERÇELEBİ A. Ç., GÜLLÜ H. H., Project Supported by Higher Education

Institutions, Cu₂ZnSn(S,Se)₄ İnce Filmlerinin Fiziksel Buharlaştırma Tekniği ile Üretilmesi ve Özelliklerinin Belirlenmesi, 2017 - 2017

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KALAY Y. E., Başkan M., PARLAK M., TURAN R., Project Supported by Higher Education Institutions, ALTTAŞ OLARAK

KULLANILACAK Cd_{1-x}Zn_xTe (CZT) TEK KRİSTALLERİNİN MİKROYAPISAL KARAKTERİZASYONU, 2013 - 2013

PARLAK M., Project Supported by Higher Education Institutions, Zn(x)ln(1-X)te₂ İnce Filmlerinin Üretilmesi Ve Aygıt Özelliklerinin Belirlenmesi, 2012 - 2012

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Metrics

Publication: 202

Citation (WoS): 2199

Citation (Scopus): 2275

H-Index (WoS): 24

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Invited Talks

24. Yoğun Madde Fiziği-Ankara Toplantısı, Bilkent Üniversitesi 21 Aralık 2018, Seminar, İhsan Doğramacı Bilkent Üniversitesi, Turkey, December 2018

Non Academic Experience

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