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Research Areas

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

Academic Titles / Tasks

Associate Professor, Yıldız Technical University, Fen Edebiyat Fakültesi, Fizik, 2017 - Continues

Courses

Physics of Semiconductors, Undergraduate, 2018 - 2019

X-rays, Undergraduate, 2018 - 2019

Physics-2, Undergraduate, 2018 - 2019

Physics-1, Undergraduate, 2017 - 2018

Solid state Physics-1, Undergraduate, 2018 - 2019

Physics-1, Undergraduate, 2017 - 2018

Advising Theses

AYDIN YÜKSEL S., Etanol ve diğer alkoller ile yıkamanın Gözenekli Silisyum tabanlı Yakıt pillerinin verimine etkisinin İncelenmesi, Postgraduate, F.Dilara(Student), 2017

Jury Memberships

Post Graduate, Post Graduate, Kocaeli Üniversitesi, June, 2017

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Characteristic, electrical and optical properties of potassium borate (KB5O8 center dot 4H(2)O) hydrothermally synthesized from different boron sources**
Dumanli F. T. S. , Ozen M. Y. , Asensio M. O. , Yuksel S. A. , KIPÇAK A. S. , Derun E.
RESEARCH ON CHEMICAL INTERMEDIATES, vol.47, no.12, pp.5353-5368, 2021 (Journal Indexed in SCI)
- II. **In-situ photochemical synthesis and dielectric properties of nanocomposite thin films containing Au, Ag and MnO nanoparticles**

Mutlu S., Metin E., Yuksel S. A. , Bayrak U., NUHOĞLU Ç., ARSU N.

EUROPEAN POLYMER JOURNAL, vol.144, 2021 (Journal Indexed in SCI)

- III. **Influences of CdSe NCs on the photovoltaic parameters of BHJ organic solar cells**
ONGÜL F., AYDIN YÜKSEL S., Allahverdi C., Bozar S., KAZİCİ M., GÜNEŞ S.
Spectrochimica Acta Part A-Molecular And Biomolecular Spectroscopy, vol.194, pp.50-56, 2018 (Journal Indexed in SCI)
- IV. **Lanthanum borate synthesis via the solid-state method from a La₂O₃ precursor: Electrical and optical properties**
Sari S., SENBERBER F. T. , Yildirim M., KIPÇAK A. S. , Yuksel S., Derun E.
MATERIALS CHEMISTRY AND PHYSICS, vol.200, pp.196-203, 2017 (Journal Indexed in SCI)
- V. **Elucidation of the pore size and temperature dependence of the oxygen diffusion into porous silicon**
Gelir A., Yargı Ö., Yuksel S.
THIN SOLID FILMS, vol.636, pp.602-607, 2017 (Journal Indexed in SCI)
- VI. **Effects of different formulation PEDOT:PSS hole transport layers on photovoltaic performance of organic solar cells**
Ongul F., YUKSEL S., Kazici M., BOZAR S., GUNBATTI A., GÜNEŞ S.
POLYMERS FOR ADVANCED TECHNOLOGIES, vol.28, no.8, pp.947-951, 2017 (Journal Indexed in SCI)
- VII. **Inverted Polymer Solar Cells Using CdS Thin Film Grown by Successive Ionic Layer Adsorption and Reaction Method as Electron Transport Layer**
Selcuk M. Z. , Ongül F., Boroglu M. S. , Boz I., Yuksel S.
JOURNAL OF NANOELECTRONICS AND OPTOELECTRONICS, vol.12, no.7, pp.642-650, 2017 (Journal Indexed in SCI)
- VIII. **Effect of boric acid doped PEDOT:PSS layer on the performance of P3HT: PCBM based organic solar cells**
YAĞCI Ö., YEŞİLKAYA S. S. , Yuksel S., Ongul F., VARAL N. M. , KUS M., GÜNEŞ S., İÇELLİ O.
SYNTHETIC METALS, vol.212, pp.12-18, 2016 (Journal Indexed in SCI)
- IX. **The Characterization and Physical Properties of Hydrated Zinc Borates Synthesized from Sodium Borates**
Kipçak A. S. , ŞENBERBER F. T. , YILDIRIM M., AYDIN YÜKSEL S., DERUN E., TUĞRUL N.
Main Group Chemistry, vol.39, pp.59-66, 2016 (Journal Indexed in SCI)
- X. **Synthesis of dehydrated zinc borates using the solid-state method: Characterization and investigation of the physical properties**
KIPÇAK A. S. , ACARALI N., SENBERBER F. T. , Yildirim M., KOC S. N. T. , Yuksel S., PİŞKİN M. B. , Derun E., TUĞRUL N.
MAIN GROUP CHEMISTRY, vol.15, no.4, pp.301-313, 2016 (Journal Indexed in SCI)
- XI. **Influences of annealing temperature and thickness on ZnS buffer layers for inverted hybrid solar cells**
Ongul F., Ulutaş Ü., Aydın Yüksel S., Yeşilkaya S. S. , Güneş S.
Synthetic Metals, vol.220, pp.1-7, 2016 (Journal Indexed in SCI Expanded)
- XII. **Theoretical and Experimental Investigations of 2,4-dichlorophenyl-3,5-dicyano-2-phenylethenyl-furan acrylonitrile Molecule as a Potential Acceptor in Organic Solar Cells**
KAZİCİ M., Bozar S., AYDIN YÜKSEL S., Ongül F., Gökçe H., GÜNEŞ S., YÖRÜR GÖRECİ Ç.
Nanotechnology, vol.27, 2016 (Journal Indexed in SCI Expanded)
- XIII. **Synthesis, characterisation, electrical and optical properties of copper borate compounds**
KIPÇAK A. S. , SENBERBER F. T. , Yuksel S. A. , Derun E., Piskin S.
MATERIALS RESEARCH BULLETIN, vol.70, pp.442-448, 2015 (Journal Indexed in SCI)
- XIV. **Improvement of Photovoltaic Performance and Stability of AnE PV PCBM Based Organic Solar Cells Using Solution Processed Inverted Geometry**
AYDIN YÜKSEL S., Ongül F., Sinem B., VARAL N. M. , KUŞ M., Gülbeden Ç., GÜNEY H. Y. , Daniel Ayuk Mbi E., GÜNEŞ S.
Vacuum, vol.122, pp.161-167, 2015 (Journal Indexed in SCI Expanded)
- XV. **The effect of functionalized single walled carbon nanotube with octadecylamine on efficiency of poly-(3-hexylthiophene): [(6,6)] phenyl C61 butyric acid methyl ester organic solar cells**

- Çakmak G., Güney H. Y. , Yuksel S., GÜNEŞ S.
Physica B: Condensed Matter, vol.461, pp.85-91, 2015 (Journal Indexed in SCI Expanded)
- XVI. **The Effect of Functionalized Single Wall Carbon Nanotube with Octadecylamine on Efficiency of Poly 3 hexyl thiophene 6 6 phenyl C61 Butyric Methyl Ester Organic Solar Cells**
ÇAKMAK G., AYDIN YÜKSEL S., GÜNEY H. Y. , GÜNEŞ S.
Physica B: Condensed Matter, 2015 (Journal Indexed in SSCI)
- XVII. **Synthesis, characterization, and electrical and optical properties of magnesium-type boracite**
IBROSKA T., KIPÇAK A. S. , AYDIN YÜKSEL S., DERUN E., PISKIN S.
TURKISH JOURNAL OF CHEMISTRY, vol.39, no.5, pp.1025-1037, 2015 (Journal Indexed in SCI)
- XVIII. **The characterisation of mcallisterite synthesised from bischofite via the hydrothermal method**
GURSES P., YILDIRIM M., KIPÇAK A. S. , YUKSEL S., DERUN E., PISKIN S.
MAIN GROUP CHEMISTRY, vol.14, no.3, pp.199-213, 2015 (Journal Indexed in SCI)
- XIX. **Synthesis Characterization Electrical And Optical Properties Of Copper Borate Compounds**
KIPÇAK A. S. , SENBERBER F. T. , AYDIN YÜKSEL S., DERUN E., PISKIN S.
Materials research bulletin, vol.70, pp.442-448, 2015 (Journal Indexed in SSCI)
- XX. **Resistivity, ESR, and Radiation Shielding Properties of the Volcanic Rock Materials**
NUHOĞLU Ç., TAPAN M., OKUTAN M., AYDIN S., YALÇIN Z., İÇELİ O., KAVANOZ H. B. , ORAK S.
ADVANCES IN CONDENSED MATTER PHYSICS, 2014 (Journal Indexed in SCI)
- XXI. **The Synthesis and Physical Properties of Magnesium Borate Mineral of Admontite Synthesized from Sodium Borates**
KIPÇAK A. S. , YILDIRIM M., AYDIN YÜKSEL S., DERUN E., PIŞKİN S.
Advances in Materials Science and Engineering, vol.2014, pp.1-9, 2014 (Journal Indexed in SCI Expanded)
- XXII. **The Synthesis and Physical Properties of Magnesium Borate Mineral of Admontite Synthesized from Sodium Borates**
KIPÇAK A. S. , YILDIRIM M., YUKSEL S. A. , DERUN E., PISKIN S.
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- XXIII. **Inverted Structure Hybrid Solar Cells Using CdS Thin Films**
YAVUZ N., KARSLI A., AYDIN YÜKSEL S., GÜNEŞ S.
Solar Energy Materials And Solar Cells, vol.116, pp.224, 2013 (Journal Indexed in SCI Expanded)
- XXIV. **Hybrid Solar Cells Using CdS Films Deposited via Spray Pyrolysis Technique**
AYDIN YÜKSEL S., GÜNEŞ S., GÜNEY H. Y.
Thin Solid Films, vol.540, pp.242, 2013 (Journal Indexed in SCI Expanded)
- XXV. **Structural and Optical Characterization of TiO₂ Thin Films Prepared by Sol Gel Process**
KARABAY I., AYDIN YÜKSEL S., ONGÜL F., ÖZTÜRK S., ASLI M.
Acta Physica Polonica A, vol.121, pp.265, 2012 (Journal Indexed in SCI Expanded)
- XXVI. **Effect of nanoporous silicon coating on silicon solar cell performance**
DZHAFAROV T., ASLANOV S., RAGİMOV S., SADİGOV M., AYDIN YÜKSEL S.
Vacuum, 2012 (Journal Indexed in SCI Expanded)
- XXVII. **Porous Silicon based Direct Hydrogen Sulphide Fuel Cells**
DZHAFAROV T., AYDIN YÜKSEL S.
Journal Of Nanoscience And Nanotechnology, vol.11, pp.9012, 2011 (Journal Indexed in SCI Expanded)
- XXVIII. **Au Porous Silicon based Sodium Borohydride Fuel Cells**
DZHAFAROV T., ORUÇ Ç., AYDIN YÜKSEL S., YEŞİLKAYA S. S. , ÇALIŞKAN M.
International Journal Of Energy Research, vol.34, pp.1386-1392, 2010 (Journal Indexed in SCI Expanded)
- XXIX. **Diffusion of hydrogen in porous silicon based sensors**
DZHAFAROV T., AYDIN YÜKSEL S.
Journal Of Porous Media, vol.13, 2010 (Journal Indexed in SCI Expanded)
- XXX. **Effect of indium diffusion on characteristics of CdS films and nCdS pSi heterojunctions**
DZHAFAROV T., ONGUL F., AYDIN YÜKSEL S.
Vacuum, vol.84, 2010 (Journal Indexed in SCI Expanded)
- XXXI. **Porous Silicon Based Gas Sensors and Miniature Hydrogen Cells**

T D D., Aydın Yüksel S., Oruç Ç.

Japanese Journal Of Applied Physics, vol.47, pp.8204-8207, 2008 (Journal Indexed in SCI)

XXXII. **Humidity-voltaic characteristics of Au-porous silicon interfaces**

Dzhafarov T., Oruç Ç., Aydın S.

JOURNAL OF PHYSICS D-APPLIED PHYSICS, vol.37, no.3, pp.404-408, 2004 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **Effect of Ethanol Treatment on Characteristics of Micro-Porous Silicon Based Hydrogen Fuel Cells**
Yüksel S., Dzhafarov T. D. , NUHOĞLU Ç., Korpeoglu F. D. , Topkaya R.
ADVANCED POROUS MATERIALS, vol.6, no.1, pp.45-48, 2018 (Journal Indexed in ESCI)
- II. **Magnesium Type Boracite Synthesis Characterization Electrical And Optical Properties**
tuba İ., Kipcak A. S. , AYDIN YÜKSEL S., DERUN E., Piskin S.
Turkish Journal Of Chemistry, pp.1-13, 2015 (Refereed Journals of Other Institutions)
- III. **Nanoporous Silicon-Based Ammonia-Fed Fuel Cells**
Dzhafarov T., AYDIN YÜKSEL S., Aydın M.
Materials Sciences and Applications, vol.5, no.14, pp.1, 2014 (Refereed Journals of Other Institutions)
- IV. **Nanoporous silicon-based Direct Hydrochloric Acid Fuel Cell**
Dzhafarov T., AYDIN YÜKSEL S.
Journal of Technology Innovations in Renewable Energy, vol.2, no.2, pp.1-5, 2012 (Refereed Journals of Other Institutions)
- V. **NANO-POROUS SILICON FOR GAS SENSOR AND FUEL CELL APPLICATIONS**
Dzhafarov T., AYDIN YÜKSEL S.
Journal of Qafqaz University, vol.25, pp.1-10, 2009 (International Refereed University Journal)
- VI. **Effect of Diffusion of I Group Metal (Ag) on Characteristics of Metal/Porous Silicon Sensors**
CAFER T., AYDIN YÜKSEL S., ÖREN E. D.
Solid State Phenomena, pp.189-194, 2008 (Refereed Journals of Other Institutions)
- VII. **"The Structural and Electrical Characteristics of Ni/Si Junctions**
CAFER T., AYDIN YÜKSEL S., ÇELİK BOZDOĞAN A.
Balkan Physics Letter, pp.456-459, 2007 (Refereed Journals of Other Institutions)
- VIII. **Effect of Humidity on Optical and Electrical Properties of Free Standing Porous Silicon Films**
CAFER T., AYDIN YÜKSEL S., ORUÇ Ç.
FIZIKA, vol.13, no.5, pp.17-20, 2007 (Refereed Journals of Other Institutions)
- IX. **Diffusion of I Group Metals in Porous Silicon**
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Defect and Diffusion Forum, vol.258, no.258, pp.107-111, 2006 (Refereed Journals of Other Institutions)
- X. **Photo-electronic properties of Cu-doped CdS thin films**
CAFER T., Novruzov V., AYDIN YÜKSEL S., Altunbaş M., AYDIN YÜKSEL S., Tomakin M.
FIZIKA, no.4, pp.1-4, 2004 (Refereed Journals of Other Institutions)

Books & Book Chapters

- I. **Nano-Porous Silicon-Based Mini Hydrogen Fuel Cell**
Dzhafarov T., AYDIN YÜKSEL S.
in: Alternative Fuel, Manzanera M., Editor, Intech, Xx, pp.309-334, 2011

Refereed Congress / Symposium Publications in Proceedings

- I. **A Pre-evaluation of air quality in Sanliurfa in terms of physical characteristics of particulate matters**
RASTGELDİ DOĞAN T., NUHOĞLU Ç., NUHOĞLU Y., YAĞCI Ö., AYDIN YÜKSEL S.
6. Uluslararası GAP Mühendislik Kongresi, 8 - 10 October 2018
- II. **Novel Soluble Molecule for Organic Solar Cell Applications**
KAZICI M., bozar s., AYDIN YÜKSEL S., ONGÜL F., GÖKÇE H. E. , YÖRÜR GÖRECİ Ç., GÜNEŞ S.
International Symposium for the 80th Birthday of Prof. Alan J. Heeger , 2016, 21 March 2016
- III. **Perovskite Solar Cells Using Different Inorganic Semiconductor Electrodes Instead of TiO₂**
bozar s., yenel e., KAZICI M., KUŞ M., AYDIN YÜKSEL S., ONGÜL F., GÜNEŞ S.
International Symposium for the 80th Birthday of Prof. Alan J. Heeger , 2016, 21 March 2016
- IV. **Metal Doped Nanoporous Silicon to Enhance Gas Sensing**
V G L., T I G., V S S., T D D., AYDIN YÜKSEL S., ORUÇ Ç.
I. Advances in Appl Physics and Materials Science Congress & Exhibition, 16 - 19 April 2015
- V. **Application of Cd_{1-x}Zn_xS Thin Film Layer in Inverted Solar Cell as Electron Selective Layer**
bozar s., AYDIN YÜKSEL S., ONGÜL F., KAZICI M., GÜNEY H. Y. , GÜNEŞ S.
1st international Conference on Organic Electronic Material Technologies, 25 - 28 March 2015
- VI. **Effects of different PEDOT PSS layers on photovoltaic performance of organic solar cells**
KAZICI M., günbattı a., ONGÜL F., AYDIN YÜKSEL S., Bozar S., GÜNEŞ S.
1st International Conference on Organic Electronic Material Technologies (OEMT) , 2015, 25 - 28 March 2015
- VII. **AnE PVab PCBM Based Organic Solar Cell With TiO₂ Films Used As Electron Selective Layer In Inverted Configuration**
AYDIN YÜKSEL S., ONGÜL F., bozar s., çakmak g., yazmacıyan a., yenel e., KAZICI M., GÜNEY H. Y. , EGBE D. A. M. , GÜNEŞ S.
International Workshop on Flexible Bio- and Organic Printed Electronics (IWOBOE), 1 - 05 May 2014
- VIII. **Hybrid Solar Cells Using Inorganic Semiconductors and Conjugated Polymers**
GÜNEŞ S., AYDIN YÜKSEL S., bozar s., ONGÜL F.
International Semiconductor Science and Technology Conference (ISSTC), 13 - 15 January 2014
- IX. **Effect of Different PEDOT PSS Solution on Electrical Properties of PEDOT PSS Porous Silicon c Silicon Hybrid Structure**
Meral M. T. , ONGÜL F., GÜNEŞ S., AYDIN YÜKSEL S.
Turkish Physical Society 30th International Physics Conference (TPS), 2 - 05 September 2013
- X. **Investigation of Thin Films of Inorganic Semiconductors for Inverted Structure Hybrid Solar Cells**
GÜNEŞ S., AYDIN YÜKSEL S., bozar s., yazmacıyan a., ONGÜL F.
Solar Energy for World Peace, 17 - 19 August 2013
- XI. **EFFECT OF DEPOSITION TEMPERATURE OF CDS FILMS ON THE PERFORMANCE OF INVERTED TYPE SOLAR CELLS**
Çakmak g., AYDIN YÜKSEL S., GÜNEY H. Y. , GÜNEŞ S.
Solar Energy for World Peace, 17 - 19 August 2013
- XII. **The effect of functionalized single wall carbon nanotube on the stability of P3HT PCBM based bulk heterojunction solar cells**
çakmak g., GÜNEY H. Y. , AYDIN YÜKSEL S., GÜNEŞ S.
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- XIII. **Hybrid Solar Cells Employing CuxS CuOx Thin Films**
çakmak g., AYDIN YÜKSEL S., GÜNEY H. Y. , GÜNEŞ S.
Solar Energy for World Peace, 17 - 19 August 2013
- XIV. **Effect of Cobalt Doping on Electrical Properties of Au TiO₂ pSi Structure**
ÖZTÜRK S., AYDIN YÜKSEL S., Karabay ı., ONGÜL F., aslı m.
Turkish Physical Society 28th International Physics Conference (TPS), 6 - 09 September 2011
- XV. **Structural and Optical Characterization of Fe Doped TiO₂ Thin Films Prepared by Sol Gel Process**
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Turkish Physical Society 28th International Physics Conference (TPS), 6 - 09 September 2011
- XVI. **Photovoltaic Characteristics of CdS Sb₂S₃ Heterojunctions**

YEŞİLKAYA S. S. , AYDIN YÜKSEL S., ONGÜL F.

Turkish Physical Society 26th International Physics Conference (TPS), 24 - 27 September 2009

XVII. Effect of Thermal Annealing on Photovoltaic Characteristics of nCdS pSi Heterojunctions

AYDIN YÜKSEL S., ONGÜL F., Dzhafarov T.

Turkish Physical Society 24th International Physics Conference, 28 - 31 August 2007

XVIII. Hydrogen Production From NaBH₄ Alloys By Out Diffusion

T D D., PIŞKİN S., AYDIN YÜKSEL S., ÇALIŞKAN M., ORUÇ Ç., YEŞİLKAYA S. S.

TPE 'nd International Conference on Technical and Physical Problems in Power Engineering, 6 - 08 September 2004

Supported Projects

AYDIN YÜKSEL S., Project Supported by Higher Education Institutions, CdS ve Metal (Zn,Cu,Ag,...) katkı CdS filmlerin tersine çevrilmiş ITO/CdS/(CdS/Metal)/P3HT:PCBM/Ag güneş pillerinin kullanılması, 2012 - Continues

AYDIN YÜKSEL S., TUBITAK Project, Bakır İndiyum Disülfid (CuInS₂), Kadmiyum Çinko Sülfür (CdZnS), CdTe Yarıiletkenlerinin Polimer Güneş Pillerinde Elektron Taşıyan Tabaka Olarak Kullanılması, 2013 - 2015

AYDIN YÜKSEL S., TUBITAK Project, GÜNEŞ İPLİĞİ (SOLAR FİBER), 2013 - 2014

AYDIN YÜKSEL S., Project Supported by Other Official Institutions, Yeni Hybrid Güneş Pillerinde Kullanılan İnorganik Yarı İletken Filmlerin Üretim Yöntem ve Şartlarının Pillerin Verimine Etkisinin İncelenmesi, 2011 - 2014

AYDIN YÜKSEL S., ORUÇ Ç., Other Supported Projects, Research and Development of Novel Microelectronics gas sensor based on nanostructured Porous-Layers for Environmental Monitoring,, 2007 - 2009

Patent

İçelli O., Güneş S., Aydın Yüksel S., Yeşilkaya S. S. , Yağcı Ö., PEDOT:PSS film üretiminde borik asit kullanımı, Patent, CHAPTER G Physics, The Invention Registration Number: TR201508718B , Standard Registration, 2021

İçelli O., Güneş S., Aydın Yüksel S., Yeşilkaya S. S. , Yağcı Ö., Okutan M., Ongül F., Bozar S., USAGE OF BORIC ACID IN THE PRODUCTION OF PEDOT:PSS FILM, Patent, CHAPTER G Physics, The Invention Registration Number: A.B.D./US 2018/0287083 , Standard Registration, 2016

Scientific Refereeing

Journal of Solid State Electrochemistry, SCI Journal, November 2017

Materials Chemistry and Physics, SCI Journal, September 2017

Journal of Solid State Electrochemistry, SCI Journal, February 2017

Citations

Total Citations (WOS):235

h-index (WOS):10