

Assoc. Prof. Serço Serkis YEŞİLKAYA

Personal Information

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Education Information

Doctorate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Fizik, Turkey 1999 - 2004

Postgraduate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Fizik, Turkey 1996 - 1999

Undergraduate, Yildiz Technical University, Faculty Of Arts & Science, Fizik, Turkey 1990 - 1994

Foreign Languages

English, C1 Advanced

Research Areas

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

Academic Titles / Tasks

Associate Professor, Yildiz Technical University, Faculty Of Arts & Science, Department Of Physics, 2015 - Continues

Assistant Professor, Yildiz Technical University, Faculty Of Arts & Science, Department Of Physics, 2005 - 2015

Lecturer PhD, Yildiz Technical University, Faculty Of Arts & Science, Department Of Physics, 2005 - 2005

Research Assistant, Yildiz Technical University, Faculty Of Arts & Science, Department Of Physics, 1996 - 2005

Courses

Physics 3, Undergraduate, 2021 - 2022

PHYSICS 2, Undergraduate, 2019 - 2020, 2018 - 2019

Physics Laboratory 1, Undergraduate, 2018 - 2019

PHYSICS 1, Undergraduate, 2019 - 2020, 2018 - 2019

Solid State Physics 2, Undergraduate, 2017 - 2018

Hydrogen Energy, Undergraduate, 2012 - 2013

Advising Theses

Yeşilkaya S. S., Semiconducting Junctions for Solar Energy Production, Doctorate, H.M.(Student), 2021

Yeşilkaya S. S., Fabrication, Characterization and Solar Cell Applications of Zinc Sulfide Thin Films, Doctorate,

Ü.Ulutaş(Student), 2019

Jury Memberships

Doctorate, Doctorate, İstanbul Teknik Üniversitesi, April, 2020
Doctorate, Doctorate, İstanbul Teknik Üniversitesi, March, 2020
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, İstanbul Teknik Üniversitesi, January, 2019
Doctorate, Doctorate, Yıldız Teknik Üniversitesi, November, 2018
Doctorate, Doctorate, İstanbul Teknik Üniversitesi, January, 2018
Doctorate, Doctorate, Yıldız Teknik Üniversitesi, October, 2017
Post Graduate, Post Graduate, İstanbul Teknik Üniversitesi, May, 2017
Doctorate, Doctorate, İstanbul Teknik Üniversitesi, January, 2017
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, İstanbul Teknik Üniversitesi, January, 2017
Doctorate, Doctorate, Yıldız Teknik Üniversitesi, August, 2016
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, İstanbul Teknik Üniversitesi, January, 2015
Post Graduate, Post Graduate, Kocaeli Üniversitesi, June, 2011

Designed Lessons

Yeşilkaya S. S., Hydrogen Energy, Undergraduate, 2012 - 2013

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Effect of Na doping and heat treatment on the characteristics of ZnO thin films and ZnO/Si cells**
Yeşilkaya S. S., Abd Alqader H. M.
Materials Letters, vol.328, 2022 (SCI-Expanded)
- II. **Influence of indium on the parameters of ZnS thin films and ZnS/CuInS₂ cells**
Serkis Yesilkaya S. S., Ulutas U.
Materials Letters, vol.315, 2022 (SCI-Expanded)
- III. **Effect of Na Doping on the Properties of ZnS Thin Films and ZnS/Si Heterojunction Cells**
Yeşilkaya S. S., Ulutas U., Alqader H. M. A.
Materials Letters, vol.288, pp.1-4, 2021 (SCI-Expanded)
- IV. **Effect of borax additive on the dielectric response of polypyrrole**
Kılıç M., Karabul Y., Ozdemir Z., Erdonmez S., Bulgurcuoğlu A. E., Yeşilkaya S. S., Okutan M., İçelli O.
Bulletin of Materials Science, vol.41, no.2, 2018 (SCI-Expanded)
- V. **Investigating the performance of P3HT:PCBM organic solar cells involving gamma-irradiated PEDOT:PSS layer**
YAĞCi Ö., YEŞİLKAYA S. S., Okutan M., İÇELLİ O.
RADIATION EFFECTS AND DEFECTS IN SOLIDS, vol.172, pp.805-814, 2017 (SCI-Expanded)
- VI. **Electrical and impedance properties of composites: Volcanic basalt rocks**
Yeşilkaya S. S., Ozdemir Z., Canli N., Yıldız A., İçelli O., Okutan M.
COMPOSITES PART B-ENGINEERING, vol.95, pp.488-492, 2016 (SCI-Expanded)
- VII. **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 (SCI-Expanded)
- VIII. **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 (SCI-Expanded)

- IX. **Characteristics of CoPc/CdS hybrid diode device**
Çalışkan M., Yeşilkaya S. S., Canlıca M.
BULLETIN OF MATERIALS SCIENCE, vol.38, pp.1439-1442, 2015 (SCI-Expanded)
- X. **Surface and electrical properties of electro-coagulated thermal waste**
Yeşilkaya S. S., Okutan M., İçelli O., Yalçın Z.
High Temperature Materials and Processes, vol.34, no.3, pp.285-290, 2015 (SCI-Expanded)
- XI. **Au/Porous silicon-based sodium borohydride fuel cells**
DZHAFAROV T. D., Lus C. O., YÜKSEL S., ÇALIŞKAN M., YEŞİLKAYA S. S.
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.34, no.15, pp.1386-1392, 2010 (SCI-Expanded)
- XII. **Photostimulated changes of properties of CdTe films**
DZHAFAROV T. D., Yesilkaya S. S.
CRYSTAL RESEARCH AND TECHNOLOGY, vol.42, no.8, pp.834-837, 2007 (SCI-Expanded)
- XIII. **Diffusion and influence of Cu on properties of CdTe thin films and CdTe/CdS cells**
DZHAFAROV T., Yesilkaya S. S., Canli N., Caliskan M.
SOLAR ENERGY MATERIALS AND SOLAR CELLS, vol.85, no.3, pp.371-383, 2005 (SCI-Expanded)

Articles Published in Other Journals

- I. **Band gap modification of spray pyrolysed ZnS films by doping and thermal annealing**
Yeşilkaya S. S., Ulutaş Ü.
Research on Engineering Structures and Materials, vol.5, pp.1-8, 2019 (Peer-Reviewed Journal)
- II. **Surface Characterization of Irradiated ZnO:Al Thin Film by Reactor Neutrons**
Çilingiryan K., Tuğrul A. B., Cimenoglu H., YEŞİLKAYA S. S.
Defect and Diffusion Forum, pp.294-296, 2013 (Scopus)

Books & Book Chapters

- I. **I-V Characterization of the Irradiated ZnO:Al Thin Film on P-Si Wafers By Reactor Neutrons**
Günaydın E., Canci Matur U., Baydoğan N., Tuğrul A. B., Çimenoglu H., Yeşilkaya S. S.
in: Energy Systems and Management, Ali Nezihi Bilge, Ayhan Özgür Toy, Mehmet Erdem Günay, Editor, Springer, London/Berlin , Basel, pp.171-178, 2015

Refereed Congress / Symposium Publications in Proceedings

- I. **Modifying the parameters of ZnS thin films via impurity doping**
Yeşilkaya S. S., Ulutaş Ü.
International Conference on Nuclear Technology, Radiation Safety and Advanced Technological Researchers (ICNRA 2021), İstanbul, Turkey, 10 - 11 December 2021, pp.1
- II. **Effect of Thickness on the Optical and Electrical Properties of ZnO Thin Films**
Muneer Abd Alqader H., Yeşilkaya S. S.
International Conference on Engineering and Technology, Computer, Basic and Applied Sciences, İstanbul, Turkey, 18 - 19 January 2020, pp.12
- III. **Tuning The Band Gap Energy Of ZnS Thin Films**
Yeşilkaya S. S., Ulutaş Ü.
Turkish Physical Society, 35th Physics Congress, Muğla, Turkey, 4 - 08 September 2019, pp.227
- IV. **Kimyasal Püskürtme ile Büyütülmüş ZnS Filmlerin Yasak Enerji Aralığının Katkı ve Tavlamayla Değiştirilmesi**
Yeşilkaya S. S., Ulutaş Ü.

13. Ulusal kimya mühendisliği kongresi, Van, Turkey, 03 September 2018, pp.149

- V. **Optimization Of Zns Film Parameters For Optoelectronic Applications**
Ulutaş Ü., Yeşilkaya S. S.
IMSMATEC 2018, İzmir, Turkey, 10 April 2018, pp.5
- VI. **Effect of Impurity Doping on the Optical Properties ZnS Films**
Ulutaş Ü., YEŞİLKAYA S. S., KARABUL Y., YAĞCI Ö.
TPS-33 International Physics Congress, Muğla, Turkey, 06 September 2017, pp.603
- VII. **Effect of Low Dose Gamma Radiation on Boricacid doped PEDOT PSS films**
YAĞCI Ö., YEŞİLKAYA S. S., İÇELLİ O.
TFD 32 International Physics ConferenceI, 6 - 09 September 2016
- VIII. **Characteristics of Spray Pyrolised ZnS/CuInS₂ Solar Cells**
YEŞİLKAYA S. S., Bozar S., Karabul Y., İçelli O.
TPS-32 International Physics Conference., 01 September 2016
- IX. **Use of boron mineral wastes in the photovoltaic applications**
YAĞCI Ö., YEŞİLKAYA S. S., İÇELLİ O.
TFD31, 21 - 24 July 2016
- X. **Effect f ZnS Band Gap on the Photovoltaic Properties of ZnS P3HT Hybrid Solar Cells**
Ünzile U., YEŞİLKAYA S. S., Fatih O., GÜNEŞ S.
1st International Conference on Organic Electronic Material Technologies, 25 - 27 March 2015
- XI. **In the Room Conditions Improved Efficiency of Organic Solar Cells Using of Boron Compounds**
Yağci Ö., Yeşilkaya S. S., Aydın Yüksel S., Ongül F., Türkoğlu Bozar S., Güneş S., İçelli O.
1st International Conference on Organic Electronic Material Technologies, Elazığ, Turkey, 25 - 27 March 2015, pp.105
- XII. **OPTICAL AND ELECTRICAL PROPERTIES OF SPRAY PYROLISED CuInS₂ THIN FILMS**
Yeşilkaya S. S., Ulutas Ü., Ongül F.
TPS-31 International Physics Conference., Muğla, Turkey, 21 - 24 July 2014, pp.50
- XIII. **I-V Characterization of The Irradiated ZnO:Al Thin Film on p-Si Wafers by Reactor Neutrons**
Canci Matur U., Baydogan N., Tugrul A. B., Cimenoglu H., YEŞİLKAYA S. S.
ICEM 2014, International Conference on Energy and Management, 01 June 2014
- XIV. **Thickness Dependent Optical Properties of ZnS Films**
YEŞİLKAYA S. S.
TPS 30th. International Physics Congress, 01 September 2013
- XV. **Surface Characterization of Irradiated ZnO:Al Thin Film by Reactor Neutrons**
Baydoğan N., Cilingiryan K., Tugrul A. B., Çimenoğlu H., YEŞİLKAYA S. S.
8th International Conference on Diffusion in Solids Liquids (DSL 2012), İstanbul, Turkey, 25 - 29 June 2012, vol.334-335, pp.294-295
- XVI. **Degradation in CdS/CdTe Cells**
Yeşilkaya S. S., Dzhafarov T.
Turkish Physical Society 28th International Physics Congress, Muğla, Turkey, 6 - 09 September 2011, pp.811
- XVII. **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
- XVIII. **Photovoltaic Characteristics of CdS/Sb₂S₃ Heterojunctions**
YEŞİLKAYA S. S.
TPS-26 International Physics Conference, Bodrum, Muğla, Turkey, 01 September 2009, vol.1, pp.520
- XIX. **Characterization of CoPc/CdS Hybrid Heterojunctions**
Canlıca M., Çalışkan M., Yeşilkaya S. S.
Characterization of CoPc/CdS Hybrid Heterojunctions," Turkish Physical Society, 25. International Physics Conference, Muğla, Turkey, 14 October 2008, pp.447
- XX. **Influence of Chemical Etching on the Properties of CdTe films and CdTe/CdS Cells**
YEŞİLKAYA S. S.

TPS-25 International Physical Congress, Bodrum, Muğla, Turkey., 01 September 2008, vol.1, pp.521

- XXI. **An Investigation to Obtain a Diode from Cobalt(II)Phthalocyanine**
YEŞİLKAYA S. S.
International Workshop on Nanobiotechnology and Genome Technologies, Antalya, Turkey., 01 November 2007, vol.1, pp.17
- XXII. **A Comparision of Electrical Properties of Two Metallo Phthalocyanines for Using in Electronic Devices**
Canlıca M., Çalışkan M., Yeşilkaya S. S.
International Workshop on Nanobiotechnology&Genome Technologies, Nanomat 2007, Antalya, Turkey, 03 September 2007, pp.17
- XXIII. **An Investigation to Obtaine a Diode from Cobalt(II)Phthalocyanine**
Canlıca M., Çalışkan M., Yeşilkaya S. S.
" International Workskop on Nanobiotechnology&Genome Technologies, Nanomat 2007, Antalya, Turkey, 03 September 2007, pp.18
- XXIV. **Characteristics of CdTe Films and CdTe/CdS Solar Cells Fabricated by Photostimulated Sublimation**
YEŞİLKAYA S. S.
4th International Workshop "Quantum Particles and Fields", Baku, Azerbaijan., 01 June 2005, vol.1, pp.44-49
- XXV. **Hydrogen Production From NaBH₄ Alloys By Out Diffusion**
T D D., PİŞKİN S., AYDIN YÜKSEL S., ÇALIŞKAN M., ORUÇ Ç., YEŞİLKAYA S. S.
TPE 'nd International Conferance on Technical and Physical Problems in Power Engineering, 6 - 08 September 2004
- XXVI. **CdS/CdTe Heteroeklemlerin Karakteristikleri**
YEŞİLKAYA S. S.
TFD 21. Ulusal Fizik Kongresi, Isparta, Türkiye, 01 September 2002, vol.8, pp.221-223
- XXVII. **Magneto-Luminescence Study of (Si₆Ge₄)_p Superlattices**
YEŞİLKAYA S. S.
1st Hellenic-Turkish International Physics Conference, Bodrum-Turkey and Kos Greece, 01 September 2001, vol.1, pp.402-405
- XXVIII. **Polymers in Electronic Applications**
YEŞİLKAYA S. S.
3rd Summer School and Workshop on the Physics of Materials, Thessaloniki, Greece., 01 October 2000, vol.1, pp.38-43
- XXIX. **Effect of Photoannealing on the Photovoltaic Characteristics of Cu-GaAs Structures**
YEŞİLKAYA S. S.
3rd Summer School and Workshop on the Physics of Materials, Thessaloniki, Greece, 01 October 2000, vol.1, pp.115-119
- XXX. **Fototavlamanın Cu-GaAs Eklemlerin Karakteristiklerine Etkisi**
YEŞİLKAYA S. S.
YMF2000 TFD 2. Ulusal Yoğun Madde Kongresi, Erzurum, Türkiye, 01 June 2000, vol.1, pp.53
- XXXI. **Order and Disorder in Solids**
YEŞİLKAYA S. S.
2nd Summer School and Workshop on the Physics of Materials, Thessaloniki, Greece., 01 October 1999, vol.1, pp.41-47
- XXXII. **The Basic Principles of the Transmission Electron Microscope and Analysis of Structural Defects in GaN by High Resolution Electron Microscopy**
YEŞİLKAYA S. S.
Summer School and Workshop on the Physics of Materials, Thessaloniki, Greece., 01 October 1999, vol.1, pp.33-39
- XXXIII. **Bakır Elektrodifüzyonunun GaAs p-n Eklemlerinin Elektrik ve Fotoelektrik Özelliklerine Etkisi**
YEŞİLKAYA S. S., Şirin M.
TFD 17. Ulusal Fizik Kongresi, Alanya, Antalya, Türkiye., 01 October 1998, vol.1, pp.139

Supported Projects

Yeşilkaya S. S., Abd Alqader H. M. M., Project Supported by Higher Education Institutions, Semiconducting Junctions for Solar Energy Production, 2021 - 2022

Yeşilkaya S. S., Ulutaş Ü., Project Supported by Higher Education Institutions, Fabrication, Characterization and Solar Cell Applications of ZnS Thin Films, 2015 - 2019

Yeşilkaya S. S., İçelli O., TÜBİTAK Project, Usage of Boron Mineral Wastes in Photovoltaic Applications, 2014 - 2016

Yeşilkaya S. S., Çalışkan M., Caferov T., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, Çeşitli Bileşiklerden Hidrojen Üretimi ve Yakıt Pili Geliştirilmesi - Borda Hidrojen Difüzyonununun Araştırılması, 2003 - 2008

Caferov T., Karaoğlu B., Çalışkan M., Sadıgov M., Serin M., Yeşilkaya S. S., Karabay I., Ören D., Süngü Mısırlıoğlu B., Project Supported by Higher Education Institutions, Cu(InGa)Se₂ İnce Film Güneş Pillerinin Difüzyon ve İmplantasyon Yöntemleriyle Elde Edilmesi ve Araştırılması, 1998 - 2002

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

Activities in Scientific Journals

Turkish Journal of Physics, Editor, 2019 - Continues

Turkish Journal of Physics, Committee Member, 2018 - Continues

Memberships / Tasks in Scientific Organizations

Turkish Physical Society, Member, 1996 - Continues

Scientific Refereeing

Journal of Nanostructures, Other Indexed Journal, August 2021

MATERIALS LETTERS, SCI Journal, August 2021

MATERIALWISSENSCHAFT UND WERKSTOFFTECHNIK, Journal Indexed in SCI-E, December 2020

NUMERICAL METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS, Journal Indexed in SCI-E, December 2020

ACCREDITATION AND QUALITY ASSURANCE, Journal Indexed in SCI-E, December 2020

JOURNAL OF COMPOSITE MATERIALS, SCI Journal, June 2020

OPTICS AND LASER TECHNOLOGY, SCI Journal, June 2019

Optics and Laser Technology, SCI Journal, January 2019

Turkish Journal of Physics, Other Indexed Journal, November 2018

Turkish Journal of Physics, SCI Journal, January 2018

Newton Programme Project, Katip Çelebi-Newton Fund, Other Project, TÜBİTAK, Turkey, November 2017

The 3rd International Conference on Electric Power and Energy Conversion Systems, SCI Journal, June 2013

TURKISH JOURNAL OF ELECTRICAL ENGINEERING & COMPUTER SCIENCES, SCI Journal, December 2010

Tasks In Event Organizations

Yeşilkaya S. S., International Conference on Nuclear Technology, Radiation Safety and Advanced Technological Researchers (ICNRA 2021), Scientific Congress, İstanbul, Turkey, Aralık 2021

Yeşilkaya S. S., POLYMER & NANOCOMPOSITES SYMPOSIUM, Scientific Congress, İstanbul, Turkey, Şubat 2018

Yeşilkaya S. S., Baydoğan N., Mohamed A., Shafie A., POLYMER & NANOCOMPOSITES SYMPOSIUM, Scientific Congress, İstanbul, Turkey, Şubat 2018

Yeşilkaya S. S., Turkish Physical Society 17th Physics Congress, Scientific Congress, Antalya, Turkey, Ekim 1998

Metrics

Publication: 49

Citation (WoS): 112

Citation (Scopus): 133

H-Index (WoS): 4

H-Index (Scopus): 5

Invited Talks

International Conference on Nuclear Technology, Radiation Safety and Advanced Technological Researchers (ICNRA 2021), Conference, Istanbul Technical University, Turkey, December 2021