

Assoc. Prof. Fatma Pinar CHOI

Personal Information

Office Phone: [+90 383 424 8424](tel:+903834248424) Extension: 8

Fax Phone: [+90 212 383 4234](tel:+902123834234)

Email: gokdemir@yildiz.edu.tr

Other Email: pinargokdemir1984@gmail.com

Web: <https://avesis.yildiz.edu.tr/gokdemir>

Address: Davutpaşa Caddesi, Yıldız Teknik Üniversitesi, Davutpaşa Kampüsü, Fen-Edebiyat Fakültesi, Fizik Bölümü, A - Blok
Fizik Bölümü Başkanlığı - E Blok-1033 34210 Esenler/İstanbul/Turkey

International Researcher IDs

ScholarID: 2afnpiAAAAAJ

ORCID: 0000-0003-3048-6534

Publons / Web Of Science ResearcherID: D-1368-2014

ScopusID: 55634266300

Yoksis Researcher ID: 173888

Education Information

2017 - Continues	Post Doctorate, Dankook University, South Korea
2016 - 2017	Post Doctorate, Seoul National University , Materials Engineering, Materials Engineering, South Korea
2009 - 2015	Doctorate, Yıldız Technical University, Graduate School Of Natural And Applied Sciences, Fizik, Turkey
2006 - 2009	Postgraduate, Yıldız Technical University, Graduate School Of Natural And Applied Sciences, Fizik, Turkey
2002 - 2006	Undergraduate, Yıldız Technical University, Faculty Of Arts & Science, Department Of Physics, Turkey

Foreign Languages

English, B2 Upper Intermediate

Dissertations

2015	Erbiyum katkılı/katkısız ince filmlerin elektrokromik özelliklerinin incelenmesi, Yıldız Technical University, Graduate School of Natural and Applied Sciences, Fizik, Doctorate
2009	PED yöntemi ile üretilen seryum dioksit ince filmlerin incelenmesi ve erbiyum katkısının etkileri, Yıldız Technical University, Graduate School of Natural and Applied Sciences, Fizik, Postgraduate

Research Areas

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

Academic Titles / Tasks

2006 - Continues	Research Assistant PhD, Yıldız Technical University, Faculty Of Arts & Science, Department Of Physics
2016 - 2017	Research Assistant PhD, Seoul National University , Engineering/Materials Engineering, Materials Engineering
2012 - 2013	Research Assistant, Yıldız Technical University, Rectorate, Bilim ve Teknoloji Uygulama ve Araştırma Merk.Müd.

Academic and Administrative Experience

2023 - Continues	Deputy Head of Department, Yıldız Technical University, Faculty Of Arts & Science, Department Of Physics
------------------	--

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Reduced trap-density and boosted performance of CH₃NH₃PbI₃ solar cells by 1-Pentanethiol enhanced anti-solvent washing route**
Gokdemir 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)
- II. **Physically-Deposited Hole Transporters in Perovskite PV: NiOx Improved with Li/Mg Doping**
AKALIN S. A., EROL M., Uzunbayir B., OĞUZLAR S., YILDIRIM S., Gokdemir Choi F. P., GÜNEŞ S., Yilmazer Menda U. D., Mendes M. J. Advanced Materials Technologies, vol.9, no.7, 2024 (SCI-Expanded)
- III. **Indium and hafnium chloride modified titanium oxide thin films**
AYARCI KURUOĞLU N., CHOI F. P., ÖZDEMİR O. Optik, vol.283, 2023 (SCI-Expanded)
- IV. **Triphenylamine-based organic small-molecule interlayer materials for inverted perovskite solar cells**
Doyranli C., CHOI F. P., Alishah H. M., KOYUNCU S., GÜNEŞ S., SAN N. ORGANIC ELECTRONICS, vol.108, 2022 (SCI-Expanded)
- V. **Cerium and zinc co-doped nickel oxide hole transport layers for gamma-butyrolactone based ambient air fabrication of CH₃NH₃PbI₃ perovskite solar cells**
Gokdemir Choi F. P., Moeini Alishah H., GÜNEŞ S. Applied Surface Science, vol.563, 2021 (SCI-Expanded)
- VI. **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., KURUOĞLU F., EROL A., GÜNEŞ S. Electrochimica Acta, vol.388, 2021 (SCI-Expanded)
- VII. **Investigation of various commercial PEDOT:PSS (poly(3,4-ethylenedioxythiophene)polystyrene sulfonate) as a hole transport layer in lead iodide-based inverted planar perovskite solar cells**
Alishah H. M., CHOI F. P., GÜNEŞ S. JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.32, pp.21450-21461, 2021 (SCI-Expanded)
- VIII. **Fast and feasible fabrication of zinc- and lithium-doped cobalt oxide layers as an emerging hole injection candidate for perovskite solar cells**
Choi F. P. Journal of Materials Science: Materials in Electronics, vol.32, no.6, pp.8136-8148, 2021 (SCI-Expanded)
- IX. **First demonstration of lithium, cobalt and magnesium introduced nickel oxide hole transporters for inverted methylammonium lead triiodide based perovskite solar cells**
Gokdemir Choi F. P., Moeini Alishah H., Bozar S., Kahveci C., Cantürk Rodop M., Güneş S. Solar Energy, vol.215, pp.434-442, 2021 (SCI-Expanded)
- X. **Effect of Bathocuproine Concentration on the Photovoltaic Performance of NiOx-Based Perovskite**

Solar Cells

Alishah H. M., CHOI F. P., Menda U. D., Kahveci C., Rodop M. C., Mendes M. J., GÜNEŞ S.

Journal of the Mexican Chemical Society, vol.65, no.2, pp.149-160, 2021 (SCI-Expanded)

- XI. **A novel interface layer for inverted perovskite solar cells fabricated in ambient air under high humidity conditions**
Gokdemir Choi F. P., Moeini Alishah H., Bozar S., Doyranli C., Koyuncu S., San N., Kahveci C., Cantürk Rodop M., Arvas M. B., Gençten M., et al.
Solar Energy, vol.209, pp.400-407, 2020 (SCI-Expanded)
- XII. **Lead Acetate Based Hybrid Perovskite Through Hot Casting for Planar Heterojunction Solar Cells**
Shin G. S., Choi W., Na S., Gokdemir F. P., Moon T.
ELECTRONIC MATERIALS LETTERS, vol.14, no.2, pp.155-160, 2018 (SCI-Expanded)
- XIII. **Sequentially Vapor-Grown Hybrid Perovskite for Planar Heterojunction Solar Cells**
Choi W., Kang D., NA S., Park C., Gokdemir F. P., MOON T.
NANOSCALE RESEARCH LETTERS, vol.13, 2018 (SCI-Expanded)
- XIV. **Anomalous Capacitance Behavior of Sol-Gel Deposited V2O5 Film on Crystalline Silicon**
BULGURCUOĞLU A. E., GOKDEMİR F. P., ÖZDEMİR O., Kutlu K.
JOURNAL OF NANOELECTRONICS AND OPTOELECTRONICS, vol.12, no.2, pp.146-151, 2017 (SCI-Expanded)
- XV. **Structural, optical and electrochromic properties of cerium dioxide thin films prepared by sol-gel dip coating method**
GOKDEMİR F. P., Saatci A. E., ÖZDEMİR O., KESKİN B., Kutlu K.
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.38, pp.300-305, 2015 (SCI-Expanded)
- XVI. **Comparison of Structural and Electrochemical Properties of V2O5 Thin Films Prepared by Organic/Inorganic Precursors**
Gokdemir F. P., ÖZDEMİR O., Kutlu K.
ELECTROCHIMICA ACTA, vol.121, pp.240-244, 2014 (SCI-Expanded)
- XVII. **Structural Modification of Sol-Gel Synthesized V2O5 and TiO2 Thin Films with/without Erbium Doping**
Gokdemir F. P., Saatci A. E., ÖZDEMİR O., Kutlu K.
ADVANCES IN MATERIALS SCIENCE AND ENGINEERING, 2014 (SCI-Expanded)
- XVIII. **The influence of Er³⁺ doping on the structural and optical properties of CeO₂ thin films grown by PED**
Tatar B., Gokdemir F. P., Pehlivan E., Ürgen M. K.
APPLIED SURFACE SCIENCE, vol.285, pp.409-416, 2013 (SCI-Expanded)
- XIX. **Correlation of DC and AC electrical properties of Al/p-Si structure by I-V-T and C(G/omega)-V-T measurements**
ÖZDEMİR O., Tatar B., YILMAZER D., GOKDEMİR P., KUTLU K.
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.12, pp.133-141, 2009 (SCI-Expanded)
- XX. **Electrical and photovoltaic properties of Cr/Si Schottky diodes**
Tatar B., BULGURCUOĞLU A. E., Gokdemir P., Aydoğan P., Yilmazer D., ÖZDEMİR O., Kutlu K.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.34, no.12, pp.5208-5212, 2009 (SCI-Expanded)
- XXI. **Conduction mechanism analysis in beta-FeSi₂/n-Si heterojunction through J-V-T measurement**
ÖZDEMİR O., Tatar B., Yilmazer D., Gokdemir P., Kutlu K.
SEMICONDUCTOR SCIENCE AND TECHNOLOGY, vol.23, no.9, 2008 (SCI-Expanded)

Articles Published in Other Journals

- I. **Chemical synthesis of non-stoichiometric NiO_x nanoparticles using different nickel salts and application as an additive or interface layer in photovoltaic devices**
Choi F. P.
TURKISH JOURNAL OF PHYSICS, vol.45, pp.13-15, 2021 (ESCI)

- II. **Formation of TiO₂ thin films by a modified sol-gel route and characterization of structural, optical and electrochromic properties**
Gökdemir F. P., Yüzbasioglu V. E., Keskin B., Özdemir O., Kutlu K.
Advanced Materials Letters, vol.5, pp.367-371, 2014 (Scopus)
- III. **Energy-band diagram of PCDTBT, PCBM and blend by cyclic voltammetry and UV-visible measurements**
Kavak P., Choi F. P., Bulgurcuoğlu A. E., Menda U. D., Özdemir O., Kutlu K.
AIP Conference Proceedings, vol.1569, pp.283-287, 2013 (Scopus)
- IV. **Current-Voltage Analysis of PCBM:PCDTBT Blend To Find Out Charge Transport Path**
Bulgurcuoğlu A. E., Kavak P., Choi F. P., Menda U. D., Özdemir O., Kutlu K.
AIP Conference proceedings, vol.1569, pp.414-418, 2013 (Conference Book)
- V. **Electroluminescence property of organic light emitting diode (OLED)**
Gökdemir F. P., Özdemir O., Bulgurcuoğlu A. E., Kutlu K., Menda U. D., Kavak P., Can N.
AIP Conference Proceedings, vol.1569, pp.364-371, 2013 (Scopus)
- VI. **Influence of Water Expulsion on Structural Properties of V2O5 nH(2)O Sol-Gel Films**
Kavak P., Choi F. P., Bulgurcuoğlu A. E., Menda U. D., Özdemir O., Kutlu K.
AIP Conference Proceedings, vol.1476, pp.279-284, 2012 (Conference Book)
- VII. **Ionic conduction in different hydrated V2O5 films**
Kavak P., Choi F. P., Bulgurcuoğlu A. E., Menda U. D., Özdemir O., Kutlu K.
AIP Conference Proceedings, vol.1476, pp.289-295, 2012 (Scopus)
- VIII. **Nano-Crystal V2O5 nH(2)O Sol-Gel Films Made by Dip Coating**
Kavak P., Choi F. P., Menda U. D., Bulgurcuoğlu A. E., Özdemir O., Kutlu K.
AIP Conference Proceedings, vol.1476, pp.233-240, 2012 (Conference Book)

Supported Projects

2022 - 2025	Bitkisel Ekstraktların (Özlerin) Perovskit Güneş Pillerinin Performansına ve Kararlılıklarına Etkileri, TUBITAK Project
2022 - 2025	Mikroalgler Kullanılarak Perovskit Güneş Pillerinin Verim Ve Kararlılık Performanslarının İyileştirilmesi, TUBITAK Project
2021 - 2023	Perovskite Tabanlı Güneş Pillerinde Organosülfür Gruplarının Tuzak Ve Yük İletim Mekanizmalarına Etkisinin İncelenmesi, Project Supported by Higher Education Institutions
2021 - 2023	Donör Akseptör Tipi Boşluk Taşıyıcı Organik Moleküllerin Sentezi ve Perovskit Güneş Hücrelerinde Uygulanması, Project Supported by Higher Education Institutions
2021 - 2023	Katkılanmış PEDOT:PSS Tabakaların Tersine Çevrilmiş Perovskit Güneş Pillerinde Kullanılması, Project Supported by Higher Education Institutions
2021 - 2023	Production of Functional Metal Oxide Thin Films via Sol-Gel Methods and Optimization of Their Electrochromic Properties, Project Supported by Higher Education Institutions
2019 - 2021	Sol-jel ve nano-parçacık tabanlı inorganik boşluk iletici tabakaların geliştirilmesi ve planar yapıli hibrit perovskit güneş pillerine uygulanması, Project Supported by Higher Education Institutions
2013 - 2018	Sol-jel yöntemi ile üretilen ZnO ince filmlerin elektriksel ve yapısal özelliklerinin incelenmesi, Project Supported by Higher Education Institutions
2013 - 2018	Sol gel yöntemi ile üretilen titanyum dioksit ince filmlerin dielektrik özelliklerinin incelenmesi, Project Supported by Higher Education Institutions
2012 - 2015	a-Si:H/c-Si Eklemin HIT Türü Güneş Piliindeki Rolü, Project Supported by Higher Education Institutions
2012 - 2015	Erbiyum Katkılı/Katkısız İnce Filmlerin Elektrokromik Özelliklerinin İncelenmesi, Project Supported by Higher Education Institutions
2011 - 2015	Yüksek Dielektrik Sabitli Alternatif Yalıtkan Filmlerin Metal/Yalıtkan/Yarıiletken (MIS) yapısında incelenmesi, Project Supported by Higher Education Institutions

2009 - 2012	CeO ₂ Filmlerin Sentezi ve Optik Özelliklerinin İncelenmesi., Project Supported by Higher Education Institutions
2008 - 2010	PECVD yöntemiyle büyütülmüş bor nitrür filmlerin elektriksel ve optiksel özelliklerinin incelenmesi ve tavlamanın film yapısına etkileri., Project Supported by Higher Education Institutions
2007 - 2009	Fotovoltaik uygulamalar için β -FeSi ₂ /Si heteroeklemlerin incelenmesi., Project Supported by Higher Education Institutions
2007 - 2009	Metal-yarıiletken yapıların elektriksel özelliklerinin incelenmesi., Project Supported by Higher Education Institutions
2007 - 2009	Fotovoltaik uygulamalar için β -FeSi ₂ /Si heteroeklemlerin incelenmesi., Project Supported by Higher Education Institutions

Metrics

Publication: 66

Citation (WoS): 194

Citation (Scopus): 283

H-Index (WoS): 8

H-Index (Scopus): 11

Non Academic Experience

2022 - 2022	Universidade Nova de Lisboa Campus da Caparica Faculdade de Ciências e Tecnologia
2019 - 2019	Universidade Nova de Lisboa Campus da Caparica Faculdade de Ciências e Tecnologia
2017 - 2017	Dankook University Department of Materials Science and Engineering
2016 - 2017	Seoul Nationaly University
2015 - 2015	Johannes Kepler University, Linz Institute for Organic Solar Cells