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Education

Doctorate 2015 - 2022	Ankara Yildirim Beyazit University, Fen Bilimleri Enstitüsü, Energy Systems Engineering, Turkey
Doctorate 2013 - 2022	Gazi University, Fen Bilimleri Enstitüsü, Physics, Turkey
Undergraduate 2007 - 2016	Anadolu University, Faculty Of Busıness Admınıstratıon, Department Of Busıness, Turkey
Postgraduate 2010 - 2013	Gazi University, Fen Bilimleri Enstitüsü, Physics, Turkey
Undergraduate 2005 - 2010	Gazi University, Kırşehir Fen-Edebiyat Fakültesi, Fizik Pr., Turkey

Dissertations

Doctorate, Fabrication and optimization of homojunction photoanodes based Dye-Sensitized Solar Cells, Ankara Yildirim Beyazit University, Fen Bilimleri Enstitüsü, Energy Systems Engineering, 2022
Doctorate, Investigation of biological active 3-acetylpyridine and 4-acetylpyridine molecules by experimental and theoretical vibrational spectroscopy, Gazi University, Fen Bilimleri Enstitüsü, 2022
Postgraduate, α-acetylpyridine ketone'un ve argerollü bileşiğinin titreşimlerinin deneysel ve teorik olarak incelenmesi, Gazi University, Fen Bilimleri Enstitüsü, Fizik (Yl) (Tezli), 2013

Academic Positions

Lecturer PhD 2018 - Continues	Ankara Yildirim Beyazit University, Rektörlük Merkezi

Journal articles indexed in SCI, SSCI, and AHCI

1. **The impact of aryl amine donors on the performance of dye-sensitized solar cells based on quinoxaline D-π-A-π-A sensitizers**
   Al-Marhabi A. R., El-Shishtawy R. M., Al-Footy K. O., Atilgan E., ATILGAN A., YILDIZ A.
   Journal of Molecular Structure, vol.1333, 2025 (SCI-Expanded)
2. **Developing Hybrid TiO2–Multiwalled Carbon Nanotubes Photoanodes for Dye-Sensitized Solar Cells**
   YILDIZ Y., BİLEN K., ATILGAN A.
   Energy Technology, 2025 (SCI-Expanded)
3. **Flexible NH3 gas sensors based on ZnO nanostructures deposited on kevlar substrates via hydrothermal method**
   AYDAŞ B., ATILGAN A., Ajjaq A., ACAR S., ÖKTEM M. F., YILDIZ A.
   Ceramics International, vol.50, no.18, pp.32477-32489, 2024 (SCI-Expanded)
4. **UV photodetectors based on W-doped ZnO thin films**
   Jalal R., ÖZEL K., ATILGAN A., YILDIZ A.
   Nanotechnology, vol.35, no.26, 2024 (SCI-Expanded)
5. **Natural dyes extracted from Ligustrum vulgare, Juniperus sabina, and Papaver rhoeas for novel DSSC applications**
   Erdoğdu M., ATILGAN A., ERDOĞDU Y., YILDIZ A.
   Materials Letters, vol.358, 2024 (SCI-Expanded)
6. **Experimental investigation of spin coating acceleration effect on the DSSC performance**
   YILDIZ Y., BİLEN K., ATILGAN A.
   Materials Research Express, vol.11, no.3, 2024 (SCI-Expanded)
7. **Flavonoid from Hedera helix fruits: A promising new natural sensitizer for DSSCs**
   Erdogdu M., ATILGAN A., ERDOĞDU Y., YILDIZ A.
   Journal of Photochemistry and Photobiology A: Chemistry, vol.448, 2024 (SCI-Expanded)
8. **Multi-layered blocking layers for dye sensitized solar cells**
   Özel K., Atilgan A., Yildiz A.
   Journal of Photochemistry and Photobiology A: Chemistry, vol.448, 2024 (SCI-Expanded)
9. **Sensitive and Selective Electrochemical Determination of Thrombin as a Peptide Biomarker by a Multiwalled Carbon Nanotube (MWCNT)/Aptamer/Molecularly Imprinted Polymer (MIP)-Based Biosensor**
   Turk F., ATILGAN A., YILDIRIM TİRGİL N.
   Analytical Letters, vol.57, no.3, pp.383-396, 2024 (SCI-Expanded)
10. **An AZO dye with nitril anchoring to dye-sensitized solar cell performance: A theoretical and experimental investigation**
    Akdogan N., Alp M., ATILGAN A., DİŞLİ A., ERDOĞDU Y., YILDIZ A.
    Materials Letters, vol.351, 2023 (SCI-Expanded)
11. **Engineering the visible light absorption of one-dimensional photonic crystals based on multilayers of Al-doped ZnO (AZO) thin films**
    Atılgan A., Özel K., Sbeta M., Yıldız A.
    Materials Science in Semiconductor Processing, vol.166, 2023 (SCI-Expanded)
12. **Synthesis, crystal structure and spectroscopic studies of a new silver complex derived from [1-(3-pyridinyl) ethanone]**
    Çelik S., Atılgan A., Alp M., Yurdakul Ş., Demircioğlu Z., Özdemir N., Büyükgüngör O.
    JOURNAL OF MOLECULAR STRUCTURE, vol.1294, no.1, pp.136468-136481, 2023 (SCI-Expanded)
13. **Thin film luminescent solar concentrators fabricated for indoor applications**
    Arslan A., ÖZEL K., ATILGAN A., YILDIZ A.
    Physica B: Condensed Matter, vol.661, 2023 (SCI-Expanded)
14. **Ultraviolet photodiode fabricated from TiO2 nanorods/p-silicon heterojunction**
    Sekertekin B., ÖZEL K., ATILGAN A., YILDIZ A.
    Materials Letters, vol.323, 2022 (SCI-Expanded)
15. **Solar-blind ultraviolet photodetector based on Ti-doped Ga2O3/Si p–n heterojunction**

Harmanci U., Gulluoglu M. T., Aslan F., ATILGAN A., YILDIZ A.
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16. **Ni-doped TiO2/TiO2 homojunction photoanodes for efficient dye-sensitized solar cells**
ATILGAN A., YILDIZ A.
International Journal of Energy Research, vol.46, no.10, pp.14558-14569, 2022 (SCI-Expanded)
17. **W-doped ZnO transparent conducting nanostructures synthesized by hydrothermal method**
ATILGAN A., Kurtulus A. Y., ÖKTEM M. F., YILDIZ A.
Journal of Materials Science: Materials in Electronics, vol.32, no.14, pp.19126-19135, 2021 (SCI-Expanded)
18. **Al–Ga co-doped ZnO/Si heterojunction diodes**
Köksal N. E., Sbeta M., Atılgan A., Yıldız A.
Physica B: Condensed Matter, vol.600, 2021 (SCI-Expanded)
19. **A route towards enhanced UV photo-response characteristics of SnO2/p-Si based heterostructures by hydrothermally grown nanorods**
Ozel K., Atılgan A., Köksal N. E., Yıldız A.
Journal of Alloys and Compounds, vol.849, 2020 (SCI-Expanded)
20. **β-Ga2O3 nanoflakes/p-Si heterojunction self-powered photodiodes**
Atılgan A., Yıldız A., Harmanci U., Gulluoglu M., Salimi K.
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21. **Facile fabrication of low-cost low-temperature carbon-based counter electrode with an outstanding fill factor of 73% for dye-sensitized solar cells**
ALTINKAYA C., ATLI A., ATILGAN A., Salimi K., YILDIZ A.
International Journal of Energy Research, vol.44, no.4, pp.3160-3170, 2020 (SCI-Expanded)
22. **Plasmonic mesoporous core-shell Ag-Au@TiO2 photoanodes for efficient light harvesting in dye sensitized solar cells**
Salimi K., ATILGAN A., AYDIN M. Y., Yildirim H., ÇELEBİ N., YILDIZ A.
Solar Energy, vol.193, pp.820-827, 2019 (SCI-Expanded)
23. **Extraction method dependent performance of bio-based dye-sensitized solar cells (DSSCs)**
Kocak Y., Atli A., Atilgan A., Yildiz A.
Materials Research Express, vol.6, no.9, 2019 (SCI-Expanded)
24. **St. Lucie cherry, yellow jasmine, and madder berries as novel natural sensitizers for dye-sensitized solar cells**
Atli A., Atilgan A., Altinkaya C., Ozel K., Yildiz A.
International Journal of Energy Research, vol.43, no.8, pp.3914-3922, 2019 (SCI-Expanded)
25. **Enhancement of efficiency of natural and organic dye sensitized solar cells using thin film TiO 2 photoanodes fabricated by spin-coating**
Yildiz Z., Atılgan A., Atlı A., Özel K., Altınkaya C., Yıldız A.
Journal of Photochemistry and Photobiology A: Chemistry, vol.368, pp.23-29, 2019 (SCI-Expanded)
26. **Multi-layered TiO2 photoanodes from different precursors of nanocrystals for dye-sensitized solar cells**
Atli A., Atilgan A., Yildiz A.
Solar Energy, vol.173, pp.752-758, 2018 (SCI-Expanded)
27. **Structural and optical properties of hexagonal ZnO nanostructures grown by ultrasonic spray CVD**
Narin P., Kutlu E., Atmaca G., Atilgan A., Yildiz A., Lisesivdin S. B.
Optik, vol.168, pp.86-91, 2018 (SCI-Expanded)
28. **DFT simulation, quantum chemical electronic structure, spectroscopic and structure-activity investigations of 4-acetylpyridine**
ATILGAN A., YURDAKUL Ş., ERDOĞDU Y., Güllüoğlu M.
Journal of Molecular Structure, vol.1161, pp.55-65, 2018 (SCI-Expanded)
29. **Influence of the spin acceleration time on the properties of ZnO:Ga thin films deposited by sol–gel method**
Sbeta M., Atilgan A., Atli A., Yildiz A.

Journal of Sol-Gel Science and Technology, vol.86, no.2, pp.513-520, 2018 (SCI-Expanded)

30. **An Understanding of the Band Gap Shrinkage in Sn-Doped ZnO for Dye-Sensitized Solar Cells**
YILDIZ A., Ozturk E., Atilgan A., Sbeta M., Atli A., Serin T.
Journal of Electronic Materials, vol.46, no.12, pp.6739-6744, 2017 (SCI-Expanded)
31. **Effects of Co and Cu dopants on the structural, optical, and electrical properties of ZnO nanocrystals**
Kara I., Atilgan A., Serin T., Yildiz A.
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32. **Electron transport in Al-Cu co-doped ZnO thin films**
Serin T., Atilgan A., Kara I., Yildiz A.
Journal of Applied Physics, vol.121, no.9, 2017 (SCI-Expanded)

Articles Published in Other Journals

1. **Boron-Doped Thin Films Fabricated by the Spin Coating Method: The Effect of Doping Concentrations**
Atılgan A., ÖZEL K.
Gazi University Journal of Science Part A: Engineering and Innovation, vol.11, no.1, pp.57-67, 2024 (Peer-Reviewed Journal)

Books

1. **Tarama problu litografi teknikleri**
ATILGAN A., YILDIZ A.
in: Nanoüretim Teknikleri, DOĞAN GÜZEL FATMA, ÜNVEROĞLU ABDİOĞLU BEGÜM, Editor, Nobel Akademik Yayıncılık, Ankara, pp.169-190, 2024

Papers Presented at Peer-Reviewed Scientific Conferences

1. **PERFORMANCE COMPARISON OF LUMINESCENT SOLAR CONCENTRATORS DESIGNED WITH POLYCRYSTALLINE AND MONOCRYSTALLINE SILICON SOLAR CELLS**
ÖZEL K., ATILGAN A., YILDIZ A.
INTERNATIONAL EUROASIA Congress on Scientific Researches and Recent Trends XII, Ankara, Turkey, 29 - 30 December 2023, pp.1161-1167, (Full Text)
2. **EVALUATION OF THE PERFORMANCE OF DYE-SENSITIZED SOLAR CELLS UNDER INDOOR ILLUMINATION CONDITIONS**
ATILGAN A., ÖZEL K., YILDIZ A.
INTERNATIONAL EUROASIA Congress on Scientific Researches and Recent Trends XII, Ankara, Turkey, 29 - 30 December 2023, pp.651-656, (Full Text)
3. **Production and Characterization of Bulk Acrylic Based Luminescent Solar Concentrators**
ÖZEL K., ATILGAN A., YILDIZ A.
7. INTERNATIONAL GÖBEKLİTEPE SCIENTIFIC RESEARCH CONGRESS, Şanlıurfa, Turkey, 11 - 12 November 2023, pp.340-350, (Full Text)
4. **Cornus mas L. as a bio-based sensitizer for DSSCs**
KOÇAK Y., ATLI A., ATILGAN A., YILDIZ A.
5th International Conference on Engineering Sciences, 19 September 2019, (Full Text)
5. **ß-Ga2O3/Si Heterojunction Photodiode with ZnO ARC layer in the UV Detection**
KÖKSAL N. E., Harmanci U., ATILGAN A., YILDIZ A.
11th International Conference on Electrical and Electronics Engineering, ELECO 2019, Bursa, Turkey, 28 - 30

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6. **Fabrication of ß-GaiO3/Si Solar-Blind UV Photodiode via Sol-Gel Method**
   KÖKSAL N. E., ATILGAN A., Harmanci U., YILDIZ A.
   11th International Conference on Electrical and Electronics Engineering, ELECO 2019, Bursa, Turkey, 28 - 30 November 2019, pp.406-408, (Full Text)
7. **Fabrication of Compact Cabon Electrode for Carbon-based Perovskite Solar Cells**
   ALTINKAYA C., ATILGAN A., SALİMİ K., YILDIZ A.
   INTERNATIONAL CONFERENCE ON CHEMICAL PHYSICS AND MATERIALS SCIENCE, İstanbul, Turkey, 8 - 10 July 2019, pp.60-64, (Full Text)
8. **NOVEL PLASMONIC TiO2 PHOTOANODES FOR LIGHT HARVESTING IN DYE SENSITIZED SOLAR CELLS**
   Yıldırım H., ATILGAN A., AYDIN M. Y., ATLI A., ALTINKAYA C., ÇELEBİ N., YILDIZ A., SALİMİ K.
   VII.ULUSAL ANORGANİK KİMYA KONGRESİ, 19 - 22 June 2019, (Summary Text)
9. **Fabrication of Hole-conductor-free Mesoscopic Perovskite Solar Cells**
   ATILGAN A., ALTINKAYA C., salimi k., YILDIZ A.
   CPC–XII: 12th Chemical Physics Congress, 12 - 13 October 2018, (Summary Text)
10. **The effect of Cu and Co-doped ZnO blocking layers on theperformance of DSSCs**
    ATILGAN A., ATLI A., YILDIZ A.
    WITAM – 2018, 21 - 23 September 2018, (Full Text)
11. **Improvement of the performance of DSSCs by tuning ZnO:Al compact layer**
    ATLI A., ATILGAN A., YILDIZ A.
    WITAM – 2018, 21 - 23 September 2018, (Full Text)
12. **The Effect of CH3NH3PbI3 Perovskite on Dye–sensitized Solar Cells Performance**
    ALTINKAYA C., ATILGAN A., salimi k., YILDIZ A.
    CPC–XII: 12th Chemical Physics Congress, 12 - 13 October 2018, (Summary Text)
13. **Plasmonic Mesoporous Ag@TiO2 and Ag@Au@TiO2 Nanocomposites for Efficient Light Harvesting in Dye Sensitized Solar Cells**
    AYDIN M. Y., ATILGAN A., ATLI A., Elagoz E., BİLGİÇ G., ÇELEBİ N., YILDIZ A., SALİMİ K.
    Photovoltaic Conference, 4 - 06 July 2018, (Summary Text)
14. **EXTRACTION OF OPTICAL PARAMETERS IN Sn DOPED ZnO THIN FILMS USINGTRANSMITTANCE DATA**
    Atılgan A., Kara İ., SERİN S. T., YILDIZ A.
    INTERNATIONAL ENERGY & ENGINEERING CONFERENCE 2016, 13 - 14 October 2016

Patent

Yıldız A., Atılgan A., CIGS/PEROVSKİT MONOLİTİK TANDEM ESNEK GÜNEŞ HÜCRESİ, Patent, CHAPTER H Electricity, The Invention Registration Number: 6678145 , Standard Registration, 2024

Research Areas

Renewable energy, Renewable Energy Systems, Alternative Energy Resources, Solar energy, Physics