

Assoc. Prof. Zuhall Er

Personal Information

Email: erzuh@itu.edu.tr

International Researcher IDs

ORCID: 0000-0002-9737-1435

ScopusID: 56971294200

Yoksis Researcher ID: 150647

Education Information

Doctorate, Istanbul Technical University, Enerji Enstitüsü, Nükleer Araştırmalar Anabilim Dalı, Turkey 1997 - 2005

Postgraduate, Istanbul Technical University, Enerji Enstitüsü, Nükleer Uygulamalar Anabilim Dalı, Turkey 1993 - 1996

Dissertations

Doctorate, Dar su yolları için radyasyon izleme tekniğı ile atık debi analizinin yeni bir incelemesi, İstanbul Teknik Üniversitesi, Enerji Enstitüsü, Nükleer Araştırmalar Anabilim Dalı, 2004

Postgraduate, Çeşitli madensuyu ve sodaların radyoaktivite seviyelerinin tayini, İstanbul Teknik Üniversitesi, Enerji Enstitüsü, Nükleer Uygulamalar Anabilim Dalı, 1997

Research Areas

Technical Sciences, Marine Sciences and Technology, Basic Sciences, Physics

Academic Titles / Tasks

Associate Professor, Istanbul Technical University, Denizcilik, 2018 - Continues

Assistant Professor, Istanbul Technical University, Denizcilik, Deniz Ulaştırma İşletme Mühendisliği, 2018 - 2019

Assistant Professor, Istanbul Technical University, Denizcilik, Deniz Ulaştırma İşletme Mühendisliği, 2010 - 2018

Academic and Administrative Experience

İstanbul Teknik Üniversitesi, Fen-Edebiyat Fakültesi, Fizik Bölümü, 2012 - 2015

İstanbul Teknik Üniversitesi, Denizcilik Fakültesi, Deniz Ulaştırma İşletme Mühendisliği Bölümü, 2004 - 2008

Courses

FIZ106E PHYSİCSII, Undergraduate, 2016 - 2017, 2015 - 2016

Graduation Thesis FIZ492E, Undergraduate, 2016 - 2017

SOLAR ENERGY PHYSİCS AND TECHNOLOGY I, Undergraduate, 2016 - 2017, 2015 - 2016

ADVANCED PHYSİCS PROJECT FIZ 421E, Undergraduate, 2016 - 2017

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Gamma-neutron shielding parameters of (S3Sb2)x(S2Ge)100–x chalcogenide glasses nanocomposite**
ŞENGÜL A., Akhtar M. S., AKKURT İ., Malidarre R. B., Er Z., Ekmekci I.
Radiation Physics and Chemistry, vol.204, 2023 (SCI-Expanded)
- II. **Stress-induced changes in phonon frequencies of ZrSiO4: Infrared spectroscopy-based pressure sensor**
Mansoor M., Mansoor M., Mansoor M., Er Z., Czelej K., Uergen M.
SOLID STATE COMMUNICATIONS, vol.357, 2022 (SCI-Expanded)
- III. **Ab-initio calculation of point defect equilibria during heat treatment: Nitrogen, hydrogen, and silicon doped diamond**
Mansoor M., Mansoor M., Mansoor M., Aksoy A., Seyhan S. N., Yildirim B., Tahiri A., Solak N., Kazmanli K., Er Z., et al.
DIAMOND AND RELATED MATERIALS, vol.126, 2022 (SCI-Expanded)
- IV. **Performance monitoring of different types of photovoltaic cells**
Turna I. B., Er Z.
EMERGING MATERIALS RESEARCH, vol.11, no.1, pp.60-66, 2022 (SCI-Expanded)
- V. **Short analysis for the growth of solar electricity usage**
Er Z., Chenaf T., Demir C. E.
INTERNATIONAL JOURNAL OF ENVIRONMENTAL SCIENCE AND TECHNOLOGY, vol.16, no.9, pp.5325-5330, 2019 (SCI-Expanded)
- VI. **Performance analysis of a hybrid wind/photovoltaic power generation system for water pumping**
Jadallah A. A., Er Z., Abdulqader Z. A.
INTERNATIONAL JOURNAL OF ENVIRONMENTAL SCIENCE AND TECHNOLOGY, vol.16, no.9, pp.5295-5304, 2019 (SCI-Expanded)
- VII. **The Cloudless Effect Evaluation for Hourly Irradiance in Turkey**
Er Z., Derici O., Turna I. B., Karatas B., Eroglu M., Alyanak E.
ACTA PHYSICA POLONICA A, vol.134, no.1, pp.391-393, 2018 (SCI-Expanded)
- VIII. **Solar radiation evaluation by t statistical analysis method for south and north region of Turkey**
Er Z., Turna I. B.
ARABIAN JOURNAL OF GEOSCIENCES, vol.11, no.11, 2018 (SCI-Expanded)
- IX. **A Modal Study on the Estimation of Daily Global Solar Radiation from Sunshine Duration**
ER Z., ROUABAH Z., TURNA I. B.
Acta Physica Polonica A, vol.132, pp.1070-1075, 2017 (SCI-Expanded)
- X. **Experimental Study of Degradation Modes and Their Effects on Reliability of Photovoltaic Modules after 12 Years of Field Operation in the Steppe Region**
Saadsaoud M., Ahmed A. H., Er Z., Rouabah Z.
ACTA PHYSICA POLONICA A, vol.132, no.3, pp.930-935, 2017 (SCI-Expanded)
- XI. **Prevailing Parameter Evaluation with Heat Transfer Analysis of Absorber Plate in the Flat Solar Collector**
ER Z.
Acta Physica Polonica A, vol.132, pp.1025-1029, 2017 (SCI-Expanded)
- XII. **Hybridization of Solar/Wind Energy System for Power Generation in Rural Areas**
Jadallah A. A., MAHMOOD D. Y., Er Z., ABDULQAEDR Z. A.
ACTA PHYSICA POLONICA A, vol.130, no.1, pp.434-437, 2016 (SCI-Expanded)
- XIII. **A Study of Evaluation of Solar Energy Simulation and Modeling Systems**
Er Z.
ACTA PHYSICA POLONICA A, vol.130, no.1, pp.72-77, 2016 (SCI-Expanded)
- XIV. **Future Expectation of the Photovoltaics Role in Compensating Energy Demand**
Er Z., TURNA I. B.
ACTA PHYSICA POLONICA A, vol.129, no.4, pp.865-868, 2016 (SCI-Expanded)

- XV. **A Study of Importance of Solar Calculations for "Two Colored Rainbow System" in Istanbul**
Er Z.
ACTA PHYSICA POLONICA A, vol.128, 2015 (SCI-Expanded)
- XVI. **Utilization of The Collector Two Colored Rainbow System in Istanbul**
Er Z.
ACTA PHYSICA POLONICA A, vol.0, 2015 (SCI-Expanded)

Articles Published in Other Journals

- I. **Amorphous and monocrystalline PV degradation investigations by the seaward PV200 solar PV tester**
ER Z., Turna Demirel I. B.
Turkish Journal of Electromechanics & Energy, 2023 (Peer-Reviewed Journal)
- II. **Solar Radiation Forecasts and a Tiny House PV Off-Grid System**
Er Z.
Avrupa Bilim ve Teknoloji Dergisi, vol.7, no.47, pp.7-12, 2023 (Peer-Reviewed Journal)
- III. **Evaluation of Electric Ships' Markets, and Considered New Design Marine Cabin Combined with Solar Power**
Er Z., Ateş D.
Journal of Maritime Transport and Logistics, vol.4, no.1, pp.1-10, 2023 (Peer-Reviewed Journal)
- IV. **Can stress-induced changes in phonon frequencies of ZrSiO₄ make it a potential IR spectroscopy-based pressure sensor?**
Mansoor M., Mansoor M., Mansoor M., Czelej K., ER Z., Ürgen M.
arxiv & cond-mat & arXiv:2201.12798, 2022 (Peer-Reviewed Journal)
- V. **Ab-initio study of paramagnetic defects in Mn and Cr doped transparent polycrystalline Al₂O₃ ceramics**
Mansoor M., Mansoor M., Mansoor M., ŞAHİN F., ER Z.
Synthesis and Sintering, vol.1, pp.135-142, 2021 (Peer-Reviewed Journal)
- VI. **Dual axis solar angle tracking system without any sensor**
ER Z., BALCI E.
ULAKBİM Dergi Park Journal of Energy Systems, 2018 (Scopus)
- VII. **A Study of Ship Discharge State Analysis in the Narrow Water Way: The Contribution of Mathematical Modeling**
ER Z., TUĞRUL A. B.
ULAKBİM European Journal of Science and Technology (EJOSAT) -Avrupa Bilim ve Teknoloji Dergisi, no.12, pp.6-8, 2018 (Peer-Reviewed Journal)
- VIII. **Standards and Testing Experiments for a Photovoltaic Module**
Er Z., ROUBAH Z., KIZILKAN G., ORKEN A. T.
EUROPEAN JOURNAL OF SCIENCE AND TECHNOLOGY, pp.12-15, 2018 (Scopus)
- IX. **Safety and Security Aspects for the Effective Shipment of Radioactive Materials with Maritime Transportation**
ER Z.
International Journal on Marine Navigation and Safety Sea Transportation (TransNav), vol.2, no.3, pp.303-309, 2008 (Peer-Reviewed Journal)
- X. **Proposal of an environmental sensitivity in shipbuilding and ship repair industry**
ER Z.
Journal of Maritime Research, vol.5, pp.11-22, 2008 (Peer-Reviewed Journal)
- XI. **Radyasyon İzleme Tekniği ile Dar Deniz Yolları için Bırakımlı Hal İncelemesi ve İrdelemesi**
ER Z., TUĞRUL A. B.
itüdergisi, 2005 (Peer-Reviewed Journal)

Books & Book Chapters

I. Chapter 6 - Metal and alloy composites for neutron shielding

AKKURT İ., ER Z.

in: Micro and Nanostructured Composite Materials for Neutron Shielding Applications, Sajith Thottathil Abdulrahman, Sabu Thomas and Zakiah Ahmad, Editor, Elsevier, pp.139-175, 2020

II. Metal and alloy composites for neutron shielding

AKKURT İ., ER Z.

in: Micro and Nanostructured composite materials for neutron shielding applications, iskender akkurt-Zuhal Er, Editor, Elsevier, pp.139-177, 2020

Refereed Congress / Symposium Publications in Proceedings

I. Evaluation for elimination of methylene-orange from aqueous media by using membrane

Tugrul A. B., Altinsoy N., Demir E., Erenturk S. A., Karatepe N., Hacıyakupoglu S., Buyuk B., Baydogan N., Baytas A. F.
6th International Advances in Applied Physics and Materials Science Congress and Exhibition, APMAS 2016, İstanbul, Turkey, 1 - 03 June 2016, vol.1809

Supported Projects

Er Z., Turna İ. B., Project Supported by Higher Education Institutions, Güneş radyasyonu tahmini ve PV panellerin bozulma modlarının bir uygulama çalışması, 2019 - 2022

Er Z., Project Supported by Higher Education Institutions, Comparative Study for Monthly Average of Daily Global Radiation in Istanbul, Turkey, 2016 - 2018

Er Z., Project Supported by Higher Education Institutions, Solar Enerjili Sistemler için Simülasyon ve Hesaplama, 2015 - 2018

Er Z., Project Supported by Higher Education Institutions, A PROPOSAL FOR CASCADED THE VRP WITH NPDESs-VGP AND ISO 14001:2004 REQUIREMENTS FOR MARITIME APPLICATIONS, 2010 - 2018

Activities in Scientific Journals

INTERNATIONAL CONFERENCE ON ADVANCED MATERIALS SCIENCE & ENGINEERING AND HIGH TECH DEVICE APPLICATIONS PROCEEDINGS BOOK, Publication Committee Member, 2022 - Continues

INTERNATIONAL CONFERENCE ON ADVANCED MATERIALS SCIENCE & ENGINEERING AND HIGH TECH DEVICE APPLICATIONS PROCEEDINGS BOOK, Editor, 2022 - Continues

INTERNATIONAL CONFERENCE ON ADVANCED MATERIALS SCIENCE & ENGINEERING AND HIGH TECH DEVICE APPLICATIONS PROCEEDINGS BOOK, Scientific Committee Membership, 2022 - Continues

International Journal of Nuclear and Radiation Science and Technology (IJNURASAT) , Committee Member, 2016 - Continues

Scientific Refereeing

Turkish Journal of Electromechanics & Energy, Other Indexed Journal, January 2023

Mediterranean Geosciences Union Annual Meeting, Other Indexed Journal, December 2022

NUCLEAR ENGINEERING AND TECHNOLOGY, SCI Journal, October 2022

Journal of Material Science: Materials in Electronics, SCI Journal, September 2022

ENERGY SOURCES, SCI Journal, July 2022

JOURNAL OF INDUSTRIAL TEXTILES, SCI Journal, July 2022

Emerging Materials Research, SCI Journal, June 2022
INTERNATIONAL JOURNAL OF ENVIRONMENTAL SCIENCE AND TECHNOLOGY, SCI Journal, April 2022
ARABIAN JOURNAL OF GEOSCIENCES, SCI Journal, December 2020
EMERGING MATERIALS RESEARCH, SCI Journal, December 2020
INTERNATIONAL JOURNAL OF ENVIRONMENTAL SCIENCE AND TECHNOLOGY, SCI Journal, December 2020
Turkish Journal of Electromechanics and Energy, Other Indexed Journal, December 2020
EMERGING MATERIALS RESEARCH, SCI Journal, November 2020
JOURNAL OF INDUSTRIAL TEXTILES, SCI Journal, October 2020
EMERGING MATERIALS RESEARCH, SCI Journal, October 2020
EMERGING MATERIALS RESEARCH, SCI Journal, September 2020
International Journal of Environmental Science and Technology, Other Indexed Journal, July 2020
OPEN CHEMISTRY, SCI Journal, November 2019
ENVIRONMENTAL ENGINEERING AND MANAGEMENT JOURNAL, National Scientific Refreed Journal, April 2011

Tasks In Event Organizations

Er Z., 7th International Conference on Computational and Experimental Science and Engineering (ICCESEN), Scientific Congress, Turkey, Ekim 2020
Er Z., International Conference on Advanced Materials Science & engineering and high tech device applications, Scientific Congress, Turkey, Ekim 2020

Metrics

Publication: 104
Citation (WoS): 42
Citation (Scopus): 210
H-Index (WoS): 4
H-Index (Scopus): 8

Non Academic Experience

AMC