



SEDANUR KALECİK

RES. ASST. PHD

Email : sedanurkalecik@atauni.edu.tr

Office Phone : [+90 0442 231 4167](tel:+9004422314167) Extension: 4167

International Researcher IDs

ScholarID: Jg7ZPT8AAAAJ

ORCID: 0000-0003-0977-3598

Yoksis Researcher ID: 336444

Education

Doctorate

2019 - 2025

Ataturk University, Fen Bilimleri Enstitüsü, Fizik Anabilim Dalı, Turkey

Postgraduate

2015 - 2018

Ondokuz Mayis University, Institute Of Science, Turkey

Undergraduate

2009 - 2013

Ondokuz Mayis University, Faculty Of Arts And Sciences, Department Of Physics,
Turkey

Dissertations

Doctorate, İNSAN DİŞLERİNDEKİ MİNE VE DENTİN TABAKALARININ VE DİŞ HEKİMLİĞİNDE KULLANILAN ÇEŞİTLİ RESTORATİF MATERYALLERİN RADYASYON SOĞURMA PARAMETRELERİNİN DENEYSEL OLARAK BELİRLENMESİ, Ataturk University, Fen Bilimleri Enstitüsü, Fizik Anabilim Dalı, 2025

Postgraduate, Investigation of the properties of C19H14BrN2O, C15H11BrFN02 and C21H14BrFN2O2 molecules by X-rays and some spectroscopic methods, Ondokuz Mayis University, Institute Of Science, Atom ve Molekül Fiziği, 2018

Academic Positions

Research Assistant PhD

2025 - Continues

Ataturk University, Fen Fakültesi, Fizik

Research Assistant

2021 - 2025

Ataturk University, Fen Fakültesi, Fizik

Funded Projects

1. KURUCU Y., ÖZDOĞAN A., KALECİK S., Project Supported by Higher Education Institutions, İNSAN DİŞLERİNDEKİ MİNE VE DENTİN TABAKALARININ VE DİŞ HEKİMLİĞİNDE KULLANILAN ÇEŞİTLİ RESTORATİF MATERYALLERİN RADYASYON SOĞURMA PARAMETRELERİNİN DENEYSEL OLARAK BELİRLENMESİ, 2022 - 2025
2. Yılmaz D., Gürol A., Gürses A., Maman A., Kalecik S., Project Supported by Higher Education Institutions, I-131 ve uranyum giderilmesinde modifiye bentonit kıl tabanlı nanosorbentlerin hazırlanması ve nükleer spektroskopi uygulamalarının yapılması, 2022 - 2024
3. Yavuz M., Kalecik S., Project Supported by Higher Education Institutions, The structure analysis of 5-Bromo-4-Floro-2-Hydroxy Benzaldehyde containing schiff base compounds by using crystallographic, spectroscopic and theoretical methods, 2017 - 2018

Awards

1. Kalecik S., Yayın Teşvik, Atatürk Üniversitesi Rektörlüğü, May 2024
2. Kalecik S., Yayın Teşvik, Atatürk Üniversitesi Rektörlüğü, January 2024
3. Abouhaswa A., Kalecik S., Kavaz E., Yayın Teşvik, Tübitak Ulakbim, March 2023
4. Kalecik S., Yayın Teşvik , Atatürk Üniversitesi Rektörlüğü, January 2023

Journal articles indexed in SCI, SSCI, and AHCI

1. **Gamma, charged particle and neutron shielding properties of polyethylene based thermoplastic compounds doped with titanate and zirconate additives**
Kurucu O. A., YILMAZ D., KALECİK S., Menceloglu Y. Z.
RADIATION PHYSICS AND CHEMISTRY, vol.229, 2025 (SCI-Expanded)
2. **Albedo factors at 661.62 keV for several lanthanide compounds**
YILMAZ D., Pathman A. F., KALECİK S., KURUCU Y., ÖZNÜLÜER ÖZER T.
RADIATION PHYSICS AND CHEMISTRY, vol.229, 2025 (SCI-Expanded)
3. **Exploring of the suitability of garnets for immobilizing nuclear waste and radiation shielding**
YILMAZ D., Kilic A. D., KALECİK S.
RADIATION PHYSICS AND CHEMISTRY, vol.228, 2025 (SCI-Expanded)
4. **Er₂O₃-Doped Lead Borate Glasses: Advanced Optical and Radiation Shielding Performance**
Abouhaswa A. S., PERİŞANOĞLU U., SALTIK S., EKİNCİ N., Nasr M. H., KALECİK S., KAVAZ PERİŞANOĞLU E.
JOURNAL OF INORGANIC AND ORGANOMETALLIC POLYMERS AND MATERIALS, 2025 (SCI-Expanded)
5. **SYNTHESIS, CHARACTERIZATION, FTIR AND UV-VIS OF A NOVEL COMPOUND (<i>E</i>)-3-(5-BROMO-3-FLUORO-2-HYDROXYBENZILIDE AMINO)BENZALDEHYDE**
KALECİK S., Guzel E., Gurbuz H. E., Kavraz F., Ağar E., Yavuz M.
JOURNAL OF STRUCTURAL CHEMISTRY, vol.66, no.1, pp.120-128, 2025 (SCI-Expanded)
6. **Influence of praseodymium oxide on the structural, mechanical and photon, charged particles, and neutron shielding properties of alumina borate glass**
Acikgoz A., Izguden I., Tasgin Y., YILMAZ D., Demircan G., KALECİK S., Aktas B.
CERAMICS INTERNATIONAL, vol.50, no.19, pp.34573-34584, 2024 (SCI-Expanded)
7. **Removal of ¹⁷⁷Lu from radioactive wastewater using Montmorillonite clay**
YILMAZ D., GÜRSES A., KALECİK S., MAMAN A., Sahin E., GÜNEŞ K.
APPLIED RADIATION AND ISOTOPES, vol.211, 2024 (SCI-Expanded)
8. **Experimental investigation of some photon interaction parameters of popular restorative dental materials with a non-destructive technique**
KALECİK S., YILMAZ D., GÜROL A., ÖZDOĞAN A., KURUCU Y.
PHYSICA SCRIPTA, vol.99, no.6, 2024 (SCI-Expanded)
9. **Investigation of the structural, mechanical, radiation and neutron shielding properties of the TeO₂-**

B₂O₃-Li₂O-MoO₃-CuO glass system

FİDAN M., Acikgoz A., YILMAZ D., Demircan G., KALECİK S., Aktas B., Isgor S.

JOURNAL OF ALLOYS AND COMPOUNDS, vol.976, 2024 (SCI-Expanded)

10. An experimental analysis of the effects of SrO on the mechanical, structural, optical, and nuclear radiation shielding properties of barium borate glasses
Kavgaci M., Yaykasli H., Eskalen H., Kavaz Perişanoğlu E., Kalecik S., Yilmaz R., Tunç H.
OPTICAL MATERIALS, vol.149, 2024 (SCI-Expanded)
11. An alternative approach for determining the effective atomic number of some compounds: Monte Carlo study
Ozsahin M. T., KALECİK S., TOKER Ö. S., KURUCU Y., İÇELİ O.
RADIATION PHYSICS AND CHEMISTRY, vol.215, 2024 (SCI-Expanded)
12. Exploring the radiation shielding properties of B₂O₃-PbO-TeO₂-CeO₂-WO₃ glasses: A comprehensive study on structural, mechanical, gamma, and neutron attenuation characteristics
Solak B. B., Aktas B., YILMAZ D., KALECİK S., Yalcin S., Acikgoz A., Demircan G.
MATERIALS CHEMISTRY AND PHYSICS, vol.312, 2024 (SCI-Expanded)
13. An experimental study for the identification of some bacterial strains for uranium bioremediation by gamma spectrometry
YILMAZ D., DİKBAŞ N., KALECİK S., Ucar S., Alim S.
RADIATION PHYSICS AND CHEMISTRY, vol.212, 2023 (SCI-Expanded)
14. Assessment of structural, physical properties as well as radiation safety competence of lithium borate glass-ceramics: Experimental and theoretical evaluation
EKİNÇİ N., Alsaif N. A. M., Aygün B., SARITAŞ S., KALECİK S., Rammah Y.
Physica Scripta, vol.98, no.4, 2023 (SCI-Expanded)
15. Radiation shielding parameters and Micro-Raman spectral analysis of some pyroclastic rocks
YILMAZ D., Kilic A. D., KALECİK S.
RADIATION PHYSICS AND CHEMISTRY, vol.203, 2023 (SCI-Expanded)
16. Two new Schiff bases of (E)-2,4-di-tert-butyl-6-((4-fluorophenylimino)methyl)phenol (I) and (E)-2,4-di-tert-butyl-6-((3-iodo-4-methylphenylimino)methyl)phenol (II): structural, spectroscopic and quantum chemical calculations
Guzel E., Macit M., Erguzeloglu E., KALECİK S., Kelesoglu Z., Yavuz M.
MOLECULAR CRYSTALS AND LIQUID CRYSTALS, vol.763, no.1, pp.96-113, 2023 (SCI-Expanded)
17. An investigation on compatibility of experimental effective atomic numbers of some Fe-Ni alloys with those predicted by MCNP
KALECİK S., YILMAZ D., KURUCU Y., GÜROL A., TOKER O., İÇELİ O.
RADIATION PHYSICS AND CHEMISTRY, vol.202, 2023 (SCI-Expanded)
18. Newly designed borate glass system for optical and radiation shielding applications: Multiple effects of CdS on structural, magnetic, optical, mechanical and photon shielding features
Abouhaswa A. S., Kalecik S., Kavaz Perişanoğlu E.
CERAMICS INTERNATIONAL, no.18, pp.27120-27129, 2022 (SCI-Expanded)
19. Influence of the sample thickness upon the albedo factors using 59.54 and 662 keV photon energies
Yılmaz D., Akkuş T., Kalecik S.
INSTRUMENTATION SCIENCE & TECHNOLOGY, no.4, pp.447-455, 2022 (SCI-Expanded)

Articles Published in Other Journals

1. Albedo Numbers of Ag₇₂Cu₂₈ Alloy Etched by Hydrofluoric Acid
Kalecik S., Pathman A. F., Yilmaz D., Kurucu Y.
International Journal of Scientific and Engineering Research, vol.13, no.12, pp.23-26, 2022 (Peer-Reviewed Journal)
2. Chemical Activity and Spectroscopic Studies of (E)-4-bromo-5-fluoro-2-(((4-(phenylamino)

phenyl)imino)methyl)phenol Compound

KALECİK S., GÜZEL E., DOĞAN O. E., AĞAR E., YAVUZ M.

Karadeniz Fen Bilimleri Dergisi, vol.12, no.2, pp.821-840, 2022 (Peer-Reviewed Journal)

3. **(E)-2-{{(4-Anilinophenyl)imino)methyl}-4-bromo-5-fluorophenol**

Kalecik S., Yavuz M., Kavraz F., Eserci H., Ağar E.

IUCrData, vol.2, 2017 (Peer-Reviewed Journal)

4. **2-{(<i>E</i>)-[(2-Methyl-3-nitrophenyl)imino)methyl]-4-nitrophenol}**

Tanak H., Togurman F., Kalecik S., Dege N., Yavuz M.

ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE, 2013 (ESCI)

Papers Presented at Peer-Reviewed Scientific Conferences

1. **Albedo Numbers of Cu69Zn37 Alloys Etched by Hydrofluoric Acid**

Pathman A. F., Kalecik S., Yilmaz D.

Turkish Physical Society 38th International Physics Congress, Muğla, Turkey, 31 August - 04 September 2022, vol.04, no.6, pp.113-116, (Full Text)

2. **Effective Atomic Numbers of Some Thermoplastic Materials For 59.54 KeV Gamma Rays**

Kalecik S., Yilmaz D., Gürol A., Kurucu Y.

1st INTERNATIONAL CONGRESS ON NATURAL SCIENCES (ICNAS 2021), Erzurum, Turkey, 10 - 12 September 2021, (Summary Text)

3. **Removal Efficiency of I-131 BY Charcoal and Bentonite Clay**

Kalecik S., Yilmaz D., Gürol A.

1st INTERNATIONAL SYMPOSIUM ON RECENT ADVANCES IN FUNDAMENTAL AND APPLIED SCIENCES (ISFAS 2021), Erzurum, Turkey, 10 - 12 September 2021, (Summary Text)

4. **Investigation of Multi-Electron Systems via the Hartree-Fock Method**

Kalecik S.

Turkish Physical Society 36th International Physics Congress, İstanbul, Turkey, 1 - 05 September 2020, (Summary Text)

Other Publications

1. **Physics Laboratory I**

Gürol A., Yilmaz D., Kavaz E., Fidan M., Cinan E., Güney Y., Kalecik S., Tok E.

Experiment, pp.1-56, 2023

Courses

Undergraduate

Elektronik Laboratuvarı II, Undergraduate, 2024 - 2025

Roles in Event Organizations

Kalecik S., Güney Y., Er H., TURGUT E., MERHAN MUĞLU G., AR-GE LABORATUVAR ÇALIŞMALARI'NDA İNSAN SAĞLIĞI VE İŞ GÜVENLİĞİ, Workshop Organization, Erzurum, Turkey, Şubat 2024

Kalecik S., GÜNEY Y., BİLİMSEL ÇALIŞMALARDAKİ BİYOLOJİK VE FİZİKSEL RİSKLER, Workshop Organization, Erzurum, Turkey, Şubat 2024

Kalecik S., Saritaş S., Kılıç D., Ünver Y., Nişancı B., Toraman E., Ömeroğlu M. A., Orak T., Taş S., Levet A., et al., 1st International Symposium On Recent Advances In Fundamental And Applied Sciences (Isfas-2021), Scientific Congress,

Erzurum, Turkey, Eylül 2021
Kalecik S., Sarıtaş S., Ünver Y., Nişancı B., Bayrakçeken Nişancı F., Karaman M., Ömeroğlu M. A., Orak T., Albayrak Ş., Saraç Y., et al., 1st INTERNATIONAL CONGRESS ON NATURAL SCIENCES (ICNAS-2021) , Scientific Congress, Erzurum, Turkey, Eylül 2021

Metrics

Publication: 28

Citation (WoS): 26

Citation (Scopus): 200

H-Index (WoS): 3

H-Index (Scopus): 5

Congress and Symposium Activities

1st INTERNATIONAL SYMPOSIUM ON RECENT ADVANCES IN FUNDAMENTAL AND APPLIED SCIENCES (ISFAS-2021),
Attendee, Erzurum, Turkey, 2021

1st INTERNATIONAL CONGRESS ON NATURAL SCIENCES (ICNAS-2021), Attendee, Erzurum, Turkey, 2021
Turkish Physical Society 36th International Physics Congress , Attendee, İstanbul, Turkey, 2020

Research Areas

Atomic and Molecular Physics, Atomic Spectra and Photon Interactions, Nuclear physics