



# ALI GÜROL

## PROF.

Fax Phone : [+90 442 231 4109](tel:+904422314109)

Address : Atatürk Üniversitesi Fen Fakültesi Fizik Bölümü  
Yakutiye / Erzurum

### International Researcher IDs

ScholarID: vRg03rIAAAAJ

ORCID: 0000-0001-9494-3533

Publons / Web Of Science ResearcherID: A-4870-2018

ScopusID: 6603596784

Yoksis Researcher ID: 2820

### Biography

Atatürk Üniversitesi Fen-Edebiyat Fakültesi Fizik Bölümü mezunu olan Ali GÜROL, Atatürk Üniversitesi Fen-Bilimleri Enstitüsü Fizik Anabilim Dalında Doktorasını Tamamladı. 2008 yılında Doçent olan Ali GÜROL, 2013 yılından beri Atatürk Üniversitesi Fen Fakültesi Fizik Bölümünde Profesör olarak çalışmaktadır.

SCI ve SCI-Expanded kapsamındaki dergilerde 31 adet yayını olan Dr. GÜROL'un, Ulusal ve Uluslararası sempozyumlarda sunulmuş 14 adet bildirisi ve Ulusal hakemli dergilerde yayınlanan 3 adet makalesi bulunmaktadır. Ayrıca 15 adet Ulusal projede Yürütücü ve Araştırmacı olarak çalışmıştır.

1 adet Doktora ve 4 adet Yüksek Lisans tezi tamamlatan Dr. Gürol, X-Işınları, Radyasyon Fiziği ve Compton Profile konularında uzmanlaşmıştır.

### Learning Knowledge

Postgraduate  
1997 - 2010

Ataturk University, Fen Bilimleri Enstitüsü, Fizik / Atom Ve Molekül Fiziği, Turkey

Doctorate  
2000 - 2004

Ataturk University, Fen Bilimleri Enstitüsü, Fizik / Atom Ve Molekül Fiziği, Turkey

Undergraduate  
1993 - 1997

Ataturk University, Fen-Edebiyat Fakültesi, Fizik, Turkey

### Foreign Languages

## Dissertations

Doctorate, Bazı ferromanyetik elementler ve bileşiklerde X-ışını flöresans tesir kesitlerine manyetik alanın etkisi, Atatürk Üniversitesi, Fen Bilimleri Enstitüsü, Fizik / Atom Ve Molekül Fiziği, 2004

Postgraduate, 59,5 keV'de  $72 \leq Z \leq 92$  aralığındaki bazı elementlerin L alt tabaka ve toplam L tabaka fotoelektrik tesir kesitlerinin ölçülmesi, Atatürk Üniversitesi, Fen Bilimleri Enstitüsü, Fizik / Atom Ve Molekül Fiziği, 2000

## Academic Titles / Tasks

Professor 2013 - Continues	Ataturk University, Fen Fakültesi, Fizik
Associate Professor 2008 - 2013	Ataturk University, Fen Fakültesi, Fizik
Assistant Professor 2004 - 2008	Ataturk University, Fen Fakültesi, Fizik
Research Assistant 1999 - 2004	Ataturk University, Fen Fakültesi, Fizik

## Supported Projects

- GÜROL A., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, Doğu Anadolu Gözlemevi, 2012 - Continues
- Yılmaz D., Gürol A., Gürses A., Maman A., Kalecik S., Project Supported by Higher Education Institutions, I-131 ve uranyum giderilmesinde modifiye bentonit kil tabanlı nanosorbentlerin hazırlanması ve nükleer spektroskopi uygulamalarının yapılması, 2022 - 2024
- GÜROL A., MOBTAKERİ S., HABASHYANI S., BALBAY B., GÜR E., YILMAZ D., Project Supported by Higher Education Institutions, Alüminyumun yansıtma veriminin artırılması, 2021 - 2022
- KURUCU Y., YILMAZ D., GÜROL A., Project Supported by Higher Education Institutions, Bazı İkili Alaşımların Compton Profile Ölçümleri ve Yük Transferlerinin Belirlenmesi, 2019 - 2021
- YILMAZ D., BOYDAŞ E., GÜROL A., ŞAHİN Y., BİLİCİ E., Project Supported by Higher Education Institutions, Kalitatif X-Işını Spektrometrik Analizleri için Çeşitli Spektral Şiddet Oranı Metotlarının İncelenmesi, 2017 - 2020
- BOYDAŞ E., YILMAZ D., GÜROL A., KURUCU Y., TATLISU R., Project Supported by Higher Education Institutions, WDXRF sistemi kullanılarak Numune Kalınlığına bağlı olarak Compton ve Koherent saçılma Piklerindeki Değişimlerin İncelenmesi, 2018 - 2019
- GÜROL A., KURUCU Y., YILMAZ D., ŞAKAR E., GÜRBULAK B., FİDAN M., Project Supported by Higher Education Institutions, Fizik Bölümünün Ar-Ge ve İnnovasyon Potansiyelinin Geliştirilmesi, 2018 - 2019
- DURAK R., GÜZELDİR B., GÜROL A., Project Supported by Higher Education Institutions, Fizik Bölümü Bilimsel Etkinliği ve Ar-Ge Potansiyelini Artırma Projesi, 2017 - 2019
- ŞAHİN Y., YILMAZ D., GÜROL A., AKKUŞ T., Project Supported by Higher Education Institutions, ATOM NUMARASI  $70 \leq Z \leq 92$  ARASINDA OLAN BAZI ELEMENT VE BİLEŞİKLERİN L X-IŞINLARININ AZİMUTHAL VE POLAR AÇISAL DAĞILIMLARININ İNCELENMESİ, 2016 - 2018
- YILMAZ D., GÜROL A., ŞAHİN Y., ŞAKAR E., AKKUŞ T., Project Supported by Higher Education Institutions, EDXRF

SİSTEMİ İLE ATOM NUMARASI 13Z79 ARASINDA OLAN BAZI ELEMENTLERİN ALBEDO PARAMETRELERİNİN BELİRLENMESİ, 2016 - 2018

11. GÜROL A., AKKUŞ T., YILMAZ D., ŞAKAR E., Project Supported by Higher Education Institutions, BAZI GAZLARIN ELEKTRON MOMENTUM DAĞILIMLARININ VE ONLARA BASINCIN ETKİSİNİN İNCELENMESİ, 2015 - 2017
12. GÜROL A., ŞAKAR E., Project Supported by Higher Education Institutions, CU/BE ALAŞIMLARININ ELEKTRON MOMENTUM DAĞILIMLARININ İNCELENMESİ, 2012 - 2014
13. GÜROL A., Project Supported by Higher Education Institutions, AL VE Sİ UN VE ONLARIN BAZI BİLEŞİKLERİNİN ELEKTRON MOMENTUM DAĞILIMLARININ İNCELENMESİ, 2011 - 2014
14. GÜROL A., Project Supported by Higher Education Institutions, MIKNATISLANMANIN FERROMANYETİK ELEMENTLERİN TEMEL ATOMİK PARAMETRELERİNE ETKİSİNİN ARAŞTIRILMASI, 2011 - 2013
15. GÜROL A., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, Doğu Anadolu Gözlemevi Projesi, 2011 - 2011

## Awards

1. Aydoğan Z., İncekara Ü., Gürol A., En İyi Sunum Ödülü, Sağlık Bakanlığı: Ulusal Su Ve Sağlık Kongresi, 26-30 Ekim, Antalya , October 2015

## Jury Memberships

Appointment to Academic Staff - Associate Professorship, Appointment to Academic Staff - Associate Professorship, Atatürk Üniversitesi, October, 2023

Appointment to Academic Staff - Associate Professorship, Appointment to Academic Staff - Associate Professorship, Recep Tayyip Erdoğan Üniversitesi, June, 2023

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, December, 2022

Doctorate, Doctorate, Atatürk Üniversitesi, December, 2022

Doctorate, Doctorate, Atatürk Üniversitesi, December, 2022

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, June, 2022

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, June, 2022

Post Graduate, Post Graduate, Erzincan Binali Yıldırım Üniversitesi, January, 2022

Post Graduate, Post Graduate, Erzincan Binali Yıldırım Üniversitesi, January, 2022

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, December, 2021

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, December, 2021

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, December, 2021

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, December, 2021

Doctoral Examination, Doctoral Examination, Atatürk Üniversitesi, December, 2021

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, December, 2021

Appointment to Academic Staff-Assistant Professorship, Appointment Academic Staff, Atatürk Üniversitesi, December, 2021

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, December, 2021

Appointment to Academic Staff-Professorship, Appointment Academic Staff, Bursa Teknik Üniversitesi, July, 2021

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, June, 2021

Doctorate, Doctorate, Atatürk Üniversitesi, June, 2021  
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, June, 2021  
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, June, 2021  
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, June, 2021  
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, June, 2021  
Doctoral Examination, Doctoral Examination, Atatürk Üniversitesi, May, 2021  
Doctoral Examination, Doctoral Examination, Atatürk Üniversitesi, May, 2021  
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, February, 2021  
Appointment to Academic Staff-Assistant Professorship, Appointment Academic Staff, Atatürk Üniversitesi, January, 2021  
Doctoral Examination, Doctoral Examination, Atatürk Üniversitesi, November, 2020  
Doctoral Examination, Doctoral Examination, Atatürk Üniversitesi, November, 2020  
Competition, Ortaokul Öğrencileri Araştırma Projeleri Yarışması Erzurum Bölge Sergisi, Ataturk University, October, 2020  
Associate Professor Exam, Associate Professor Exam, Ataturk University, June, 2020  
Doctoral Examination, Doctoral Examination, Atatürk Üniversitesi, February, 2020  
Doctoral Examination, Doctoral Examination, Atatürk Üniversitesi, January, 2020  
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, June, 2019  
Doctorate, Doctorate, Atatürk Üniversitesi, May, 2019  
Appointment to Academic Staff-Assistant Professorship, Appointment Academic Staff, Atatürk Üniversitesi, April, 2019  
Appointment to Academic Staff-Assistant Professorship, Appointment Academic Staff, Atatürk Üniversitesi, April, 2019  
Appointment to Academic Staff-Assistant Professorship, Appointment Academic Staff, Atatürk Üniversitesi, April, 2019  
Appointment to Academic Staff-Assistant Professorship, Appointment Academic Staff, Atatürk Üniversitesi, April, 2019  
Doctorate, Doctorate, Atatürk Üniversitesi, January, 2019  
Appointment to Academic Staff-Assistant Professorship, Dr. Melek Fidan, Atatürk Üniversitesi, October, 2018  
Appointment to Academic Staff-Assistant Professorship, Dr. Erhan Cengiz, Alanya Alaaddin Keykubat Üniversitesi, January, 2018  
Appointment to Academic Staff-Assistant Professorship, Appointment Academic Staff, Atatürk Üniversitesi, December, 2017  
Post Graduate, Post Graduate, Atatürk Üniversitesi, December, 2017  
Academic Staff Examination, Arş. Gör. Sınavı, Atatürk Üniversitesi, November, 2017  
Appointment to Academic Staff-Professorship, Koray Aydın, Pamukkale Üniversitesi, July, 2017  
Associate Professor Exam, Doçentlik Sınav Jürisi, Üniversiteler Arası Kurul, February, 2017  
Appointment to Academic Staff-Assistant Professorship, Appointment Academic Staff, Atatürk Üniversitesi, January, 2017  
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, December, 2016  
Post Graduate, Post Graduate, Atatürk Üniversitesi, December, 2015

## Published journal articles indexed by SCI, SSCI, and AHCI

- Effective atomic numbers and number, energy and dose albedos of different colored thermoplastic materials**  
Yılmaz D., Kurucu Y., Gürol A.  
RADIATION EFFECTS AND DEFECTS IN SOLIDS, vol.178, no.3-4, pp.325-334, 2023 (SCI-Expanded)
- An investigation on compatibility of experimental effective atomic numbers of some Fe–Ni alloys with those predicted by MCNP**  
Kalecik S., Yılmaz D., Kurucu Y., Gürol A., Toker O., İçelli O.  
Radiation Physics and Chemistry, vol.202, 2023 (SCI-Expanded)
- Physical properties, experimental and theoretical gamma-ray shielding properties of some boron compounds**

- EKİNCİ N., El-Agawany F., GÜROL A., Rammah Y. S., Ahmed E. M., YILMAZ D., Aygun B., Somer M.  
RADIATION PHYSICS AND CHEMISTRY, vol.194, 2022 (SCI-Expanded)
4. **Two new edible insect species from Ghana and their chemical content evaluation**  
Aydoğan Z., İncekara Ü., Gürol A.  
INTERNATIONAL JOURNAL OF TROPICAL INSECT SCIENCE, vol.41, no.4, pp.3049-3054, 2021 (SCI-Expanded)
  5. **Study of the relationship between different intensity ratios and effective atomic number in diluted uranium samples**  
YILMAZ D., GÜROL A.  
RADIATION PHYSICS AND CHEMISTRY, vol.179, 2021 (SCI-Expanded)
  6. **Efficient removal of iodine-131 from radioactive waste by nanomaterials**  
Yılmaz D., Gürol A.  
INSTRUMENTATION SCIENCE & TECHNOLOGY, vol.49, no.1, pp.45-54, 2021 (SCI-Expanded)
  7. **Investigation of gamma ray attenuation features of bismuth oxide nano powder reinforced high-density polyethylene matrix composites**  
Abdalsalam A. H., Şakar E., Kaky K. M., Mhareb M., Sakar B., Sayyed M., Gürol A.  
RADIATION PHYSICS AND CHEMISTRY, vol.168, 2020 (SCI-Expanded)
  8. **Effect of heat treatment temperature to the crystal growth and optical performance of Mn3O4 doped alpha-Zn2SiO4 based glass-ceramics**  
Zaid M. H. M., MATORÍ K. A., Ab Aziz S. H., KAMARÍ H. M., FEN Y. W., YAAKOB Y., Sa'at N. K., GÜROL A., ŞAKAR E.  
RESULTS IN PHYSICS, vol.15, 2019 (SCI-Expanded)
  9. **Gamma and neutron radiation effect on Compton profile of the multi-walled carbon nanotubes**  
Şakar E., Akbaba U., Zukowski E., Gürol A.  
NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS, vol.437, pp.20-26, 2018 (SCI-Expanded)
  10. **Heavy metal accumulation in some aquatic insects (Coleoptera: Hydrophilidae) and tissues of Chondrostoma regium (Heckel, 1843) relevant to their concentration in water and sediments from Karasu River, Erzurum, Turkey**  
Aydoğan Z., Şişman T., İncekara Ü., Gürol A.  
ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH, vol.24, no.10, pp.9566-9574, 2017 (SCI-Expanded)
  11. **Experimental K X-ray intensity ratios of some heavy elements**  
ŞAKAR E., GÜROL A., Bastug A.  
RADIATION PHYSICS AND CHEMISTRY, vol.131, pp.105-107, 2017 (SCI-Expanded)
  12. **The investigation of heavy element accumulation in some Hydrophilidae (Coleoptera) species**  
Aydoğan Z., Gürol A., İncekara Ü.  
ENVIRONMENTAL MONITORING AND ASSESSMENT, vol.188, no.4, 2016 (SCI-Expanded)
  13. **Differential inelastic scattering cross-section of silicon and gallium arsenide semiconductor crystals**  
Kabil H., ŞAKAR E., Meral A., ŞAHİN M., GÜROL A.  
Asian Journal of Chemistry, vol.28, no.6, pp.1389-1392, 2016 (SCI-Expanded)
  14. **In situ determination of radioisotopes in certain spring waters and Spring Mud in Erzurum, Turkey**  
Akbaba U., ŞAKAR E., Sahin Y., GÜROL A.  
Asian Journal of Chemistry, vol.28, no.6, pp.1393-1396, 2016 (SCI-Expanded)
  15. **X-ray fluorescence analysis of archaeological artefacts from Bozcaada (Tenedos), Turkey**  
GÜROL A., Tavukcu A. Y., Sakar E., Tavukcu Z. A., Basaran C., BAŞTUĞ A.  
POST-MEDIEVAL ARCHAEOLOGY, vol.50, no.2, pp.412-419, 2016 (AHCI)
  16. **Studies on mass attenuation coefficient, effective atomic number and electron density of some thermoluminescent dosimetric compounds**  
ÖNDER P., TURŞUCU A., Demir D., GÜROL A.  
NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS, vol.292, pp.1-10, 2012 (SCI-Expanded)
  17. **Photon energy absorption parameters for composite mixtures with boron compounds**  
Baştu A., İelli O., GÜROL A., Şahin Y.

- ANNALS OF NUCLEAR ENERGY, vol.38, no.10, pp.2283-2290, 2011 (SCI-Expanded)
18. **ELEMENTAL ANALYSIS OF DIFFERENT RADISH (RAPHANUS SATIVUS L.) CULTIVARS BY USING WAVELENGTH-DISPERSIVE X-RAY FLUORESCENCE SPECTROMETRY (WDXRF)**  
KAYMAK H. Ç., GUVENC I., GÜROL A.  
BULGARIAN JOURNAL OF AGRICULTURAL SCIENCE, vol.16, no.6, pp.769-774, 2010 (SCI-Expanded)
19. **Effective atomic numbers of some composite mixtures including borax**  
Baştuğ A., GÜROL A., İÇELLİ O., Şahin Y.  
ANNALS OF NUCLEAR ENERGY, vol.37, no.7, pp.927-933, 2010 (SCI-Expanded)
20. **DETERMINATION OF MASS ATTENUATION COEFFICIENTS OF SOME SEMICONDUCTOR AND BIOLOGICAL SAMPLES**  
EKİNCİ N., GÜROL A., DURNA D., GÜRBULAK B.  
ANALYTICAL LETTERS, vol.43, no.13, pp.1999-2008, 2010 (SCI-Expanded)
21. **Correlation between endogenous elements and development of hollowing in the root of radish (Raphanus sativus L.) cultivars**  
KAYMAK H. Ç., GÜVENÇ İ., GÜROL A.  
ZEMDIRBYSTE-AGRICULTURE, vol.97, no.3, pp.97-104, 2010 (SCI-Expanded)
22. **Measurements of K X-ray fluorescence cross sections of Fe, Co, and Ni in an external magnetic field**  
GÜROL A., KARABULUT A., ERTUĞRUL M., Budak G.  
JOURNAL OF RADIOANALYTICAL AND NUCLEAR CHEMISTRY, vol.279, no.1, pp.171-178, 2009 (SCI-Expanded)
23. **Nondestructive analysis of the gold quarter liras**  
Çakır C., Gürol A., Demir L., Şahin Y.  
JOURNAL OF RADIOANALYTICAL AND NUCLEAR CHEMISTRY, vol.279, no.1, pp.345-348, 2009 (SCI-Expanded)
24. **Measurements of the K X-ray intensity ratios by using energy-dispersive X-ray fluorescence spectrometry**  
GÜROL A.  
APPLIED RADIATION AND ISOTOPES, vol.66, no.3, pp.372-376, 2008 (SCI-Expanded)
25. **Determination of inorganic element concentrations between two Laccophilus species (Dytiscidae : Coleoptera) by energy dispersive X-ray fluorescence (WDXRF) spectrometry**  
Erman O. K., GÜROL A.  
FRESENIUS ENVIRONMENTAL BULLETIN, vol.16, no.12B, pp.1627-1635, 2007 (SCI-Expanded)
26. **Measurements of L XRF fluorescence cross-sections and relative intensity ratios for some elements in the atomic range  $72 \leq Z \leq 92$**   
KARABULUT A., GÜROL A.  
NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS, vol.244, no.2, pp.303-306, 2006 (SCI-Expanded)
27. **Determination of inorganic element differences between male and female of a water beetle species, Agabus bipustulatus (Dytiscidae : Coleoptera) by WDXRF analyses**  
Erman O. K., Guerol A., Dumlupinar R.  
FRESENIUS ENVIRONMENTAL BULLETIN, vol.15, no.7, pp.697-703, 2006 (SCI-Expanded)
28. **The role of iron and zinc in chemotherapy-induced alopecia**  
BUYUKAVCI M., GÜROL A., KARABULUT A., Budak G., KARACAN M.  
JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER, vol.95, no.2, pp.255-261, 2005 (SCI-Expanded)
29. **K-shell absorption jump factors for the elements Ag, Cs, Ba and La derived from new mass attenuation coefficient measurements using EDXRF technique**  
POLAT R., BUDAK G., GÜROL A., KARABULUT A., ERTUĞRUL M.  
RADIATION MEASUREMENTS, vol.39, no.4, pp.409-415, 2005 (SCI-Expanded)
30. **K shell and L subshell and L shell photoeffect cross-sections in the atomic region  $40 \leq Z \leq 52$  and  $58 \leq Z \leq 68$  at 59.537keV**  
KARABULUT A., GÜROL A., BUDAK G., ERTUĞRUL M.  
NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH

MATERIALS AND ATOMS, vol.227, no.4, pp.485-489, 2005 (SCI-Expanded)

31. **Elemental composition of cement Kiln dust, raw material and cement from a coal-fired cement factory using energy dispersive X-ray fluorescence spectroscopy**  
POLAT R., GÜROL A., BUDAK G., KARABULUT A., ERTUĞRUL M.  
JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER, vol.83, no.3-4, pp.377-385, 2004 (SCI-Expanded)
32. **Determination of P, S, Cl, K, and Ca in human urinary stones by EDXRF**  
GÜROL A., Ergen E., KARABULUT A., POLAT R., Altinkaynak K., Budak G.  
INSTRUMENTATION SCIENCE & TECHNOLOGY, vol.32, no.1, pp.69-76, 2004 (SCI-Expanded)
33. **The qualitative and quantitative analysis of Sarikamis ore by energy dispersive X-ray fluorescence**  
EKİNCİ N., GÜROL A., POLAT R., BUDAK G., KARABULUT A.  
JOURNAL OF RADIOANALYTICAL AND NUCLEAR CHEMISTRY, vol.258, no.1, pp.163-165, 2003 (SCI-Expanded)
34. **L-subshell and total L-shell photoeffect cross-sections measurements for Pb, Au, W, and Ta at 59.5 keV**  
GÜROL A., KARABULUT A., POLAT R., BUDAK G., ŞAHİN Y., ERTUĞRUL M.  
RADIATION PHYSICS AND CHEMISTRY, vol.66, no.3, pp.197-205, 2003 (SCI-Expanded)
35. **Measurements of L subshell and L shell x-ray fluorescence cross-sections for U and Th**  
GÜROL A., POLAT R., KARABULUT A., BUDAK G.  
X-RAY SPECTROMETRY, vol.32, no.2, pp.161-165, 2003 (SCI-Expanded)
36. **Determination of ore concentrates by energy dispersive X-ray fluorescence spectrometry**  
POLAT R., GÜROL A., EKİNCİ N., ÇAKIR C., BASTUG A., Budak G., KARABULUT A.  
JOURNAL OF TRACE AND MICROPROBE TECHNIQUES, vol.21, no.1, pp.63-71, 2003 (SCI-Expanded)
37. **Measurements of L subshell and total L shell photoeffect cross-sections for some elements in  $72 \leq Z \leq 92$**   
KARABULUT A., GÜROL A., BUDAK G., POLAT R.  
EUROPEAN PHYSICAL JOURNAL D, vol.21, no.1, pp.57-61, 2002 (SCI-Expanded)
38. **K shell fluorescence yields for elements with  $33 \leq Z \leq 53$  using 59.5 keV photons**  
İmşek Ö., Ertugrul M., KARAGÖZ D., BUDAK G., Karabulut A., Yılmaz S., Doan O., Turgut Ü., Söüt Ö., POLAT R., et al.  
RADIATION PHYSICS AND CHEMISTRY, vol.65, no.1, pp.27-31, 2002 (SCI-Expanded)
39. **EDXRF analysis of murgul pyrite ore concentrates**  
KARABULUT A., BUDAK G., POLAT R., GÜROL A., Levent M., ŞAHİN Y.  
JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER, vol.72, no.5, pp.741-746, 2002 (SCI-Expanded)

## Articles Published in Other Journals

1. **Compton Scattering Measurements of Ar and O<sub>2</sub> Using 59.54 keV Gamma-rays**  
Şakar E., Gürol A.  
Türk Doğa ve Fen Dergisi, vol.9, no.1, pp.19-23, 2020 (Peer-Reviewed Journal)
2. **Measurement of Heavy Metals/Metalloids Levels with Using Dytiscidae (Coleoptera) Species, Collected from Six Different Cities of Turkey**  
Aydoğan Z., İncekara Ü., Gürol A., Darılmaz M. C.  
Iğdır Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.10, no.3, pp.1559-1565, 2020 (Peer-Reviewed Journal)
3. **Erzurum İlindeki Farklı Hydrophilidae (Coleoptera) Türlerini Kullanarak Ağır Element Kirliliğinin Değerlendirilmesi**  
Aydoğan Z., İncekara Ü., Gürol A.  
Anadolu Ege Tarımsal Araştırma Enstitüsü Dergisi, vol.29, pp.50-56, 2019 (Peer-Reviewed Journal)
4. **Heavy Element Accumulation in Aquatic Beetles of the Genus Enochrus (Coleoptera: Hydrophilidae) in Erzurum Province**  
Aydoğan Z., Gürol A., İncekara Ü.

- Journal of Environmental Pollution and Control, vol.1, no.1, pp.1-7, 2018 (Peer-Reviewed Journal)
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Sinop Uni J Nat Sci, vol.1, no.2, pp.2-8, 2016 (Peer-Reviewed Journal)
  12. **Heavy Element Accumulation in Some Hydrophilidae Coleoptera Collected From Rural Part of Erzurum Province Turkey**  
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  13. **Heavy Metal Concentration in Biotic and Abiotic Samples of Industrial Wastewater**  
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  14. **Element Content Analysis of Edible Insect of Ghana Curculionidae *Sitophilus zeamais* Using EDXRF Spectrometer**  
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## Books & Book Chapters

1. **MÜHENDİSLER VE FEN BİLİMCİLER İÇİN FİZİK 1. CİLT SORULARI VE ÇÖZÜMLERİ**  
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2. **Fen ve Mühendisler için Fizik I. Cilt Soruları ve Çözümleri**  
ŞAHİN Y., YILDIRIM M., GÜRBULAK B., GÜROL A., YILMAZ D., BOYDAŞ E., DUMAN S., TURGUT G.  
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3. **11. Bölüm**  
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4. **8. Bölüm**  
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in: Mühendisler ve Fen bilimcileri İçin Fizik I. Cilt Soru ve Çözümleri, Muhammet Yıldırım, Yusuf ŞAHİN, Editor, Atatürk Üniversitesi Yayınları No:1233, Erzurum, pp.121-132, 2019
5. **Statik ve Denge**  
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7. **Momentum, İtme ve Çarpışmalar**  
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1. **Effective Atomic Numbers of Some Thermoplastic Materials For 59.54 KeV Gamma Rays**  
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2. **Removal Efficiency of I-131 BY Charcoal and Bentonite Clay**  
Kalecik S., Yılmaz D., Gürol A.  
1st INTERNATIONAL SYMPOSIUM ON RECENT ADVANCES IN FUNDAMENTAL AND APPLIED SCIENCES (ISFAS 2021), Erzurum, Turkey, 10 - 12 September 2021
3. **Experimental and Theoretical Analysis of the Electron Momentum Distributions of Cu<sub>0.6</sub>Zn<sub>0.4</sub> and Cu<sub>0.58</sub>Zn<sub>0.4</sub>Pb<sub>0.02</sub> Alloys**  
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4. **DETERMINATION OF HEAVY METALS/METALLOIDS IN SOME DYTISCIDAESPECIES (COLEOPTERA) FROM THREE DIFFERENT CITIES OF TURKEY**  
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8. **THE DISSOLUTION OF ARSENIC AND BORON ELEMENTS IN SECONDARYMINERALS OBTAINED IN**

## **BASALT OF AGRI MOUNTAIN IN ULTRA PUREWATER**

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13. **Heavy metal contamination of irrigated areas and accumulation by some Dytiscidae species (Coleoptera)**  
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20. **Investigation of Albedo factors of some elements for 59.54 keV**  
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4. Uluslararası Kentsel ve Çevresel Sorunlar ve Politikalar Kongresi, 20 - 22 October 2016, pp.634-637
25. **Biological water quality assessment of Karasu River Erzurum Turkey Use of insects fish and abiotic sample**  
AYDOĞAN Z., İNCEKARA Ü., GÜROL A.  
4. Uluslararası Kentsel ve Çevresel Sorunlar ve Politikalar Kongresi, 20 - 22 September 2016
26. **USE OF BIOINDICATORS FOR MONITORING THE HEAVY ELEMENT STATUS OF KARASU RIVER ERZURUM TURKEY**  
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28. **Heavy Element Accumulation in Some Hydrophilidae Coleoptera Collected From Rural Part of Erzurum Province Turkey**  
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31. **Measurement of the Contribution of the Chemical Effect on the Compton Scattering**  
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International Conference on Advances in Natural and Applied Sciences, 21 - 23 April 2016
32. **Compton Profile Measurements of N<sub>2</sub> at Different Pressures**  
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33. **Afşin Elbistan Termik Santral Emisyonlarının Biyotik ve Abiyotik Ögelerde Ağır Element Birikimlerinin Araştırılması**  
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34. **BAZI SUCUL BÖCEK TÜRLERİNDE COLEOPTERA HYDROPHİLİDAE AĞIR ELEMENT BİRİKİMLERİNİN ARAŞTIRILMASI**  
AYDOĞAN Z., İNCEKARA Ü., GÜROL A.

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35. **AŞKALE ÇİMENTO FABRİKASI CİVARINDAN ALINANBİYOTİK VE ABİYOTİK ÖRNEKLERDE AĞIR ELEMENTBİRİKİMLERİNİN ARAŞTIRILMASI**  
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Su ve Sağlık Kongresi, Antalya, Turkey, 26 - 30 September 2015
36. **AFŞİN ELBİSTANTERMİK SANTRALEMİSYONLARININ BİYOTİK VE ABİYOTİKÖĞELERDE AĞIR ELEMENTBİRİKİMLERİNİNARAŞTIRILMASI**  
AYDOĞAN Z., BEKTAŞ m., İNCEKARA Ü., GÜROL A.  
su ve sağlık kongresi, Antalya, Turkey, 26 - 30 September 2015
37. **Afşin Elbistan termik santral civarı bazı biyotik ve abiyotik öğelerinde ağır elementbirikimlerinin araştırılması**  
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38. **Afşin Elbistan termik santrali civarı bazı biyotik ve abiyotik öğelerinde ağır element birikimlerinin araştırılması**  
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40. **USAGE OF SOME AQUATIC INSECTS IN DETERMINATION OF POTENTIAL HEAVY ELEMENT POLLUTION**  
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41. **Bazı Sucul Organizmalarda Ağır Element Birikimlerinin Araştırılması**  
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22. Ulusal Biyoloji Kongresi, Turkey, 23 - 27 June 2014, pp.926
42. **The Curious Bonding in Cuprite**  
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Sagamore Conference XVI, 20 - 23 August 2012
43. **Measurement of K and L X-ray Intensity Ratios for Nd and Ho Elements in an External Magnetic Field.**  
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Azerbaijan Journal of Physics Fizika, Vol. XVI, Number 2, June 2010., 25 - 28 June 2010
44. **Determination of inorganic element differences between male and female of a water beetle species Laccophilus Hyalinus Dytiscidae Coleoptera by WDXRF Analyses**  
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45. **L subshell fluorescence cross-sections and relative intensity ratios of some elements in the atomic range  $72 \leq Z \leq 92$**   
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5th European Furnace Symposium, Blagoevgrad, Bulgaria, 01 September 2002, vol.58, pp.1473-1480
46. **ÇILDIR BÖLGESİNDEN ALINAN JEOLojİK ÖRNEĞİN EDXRF İLE NİTEL VE NİCEL ANALİZİ**  
GÜROL A., POLAT R., KARABULUT A., BUDAK G.  
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47. **EDXRF TEKNİĞİ KULLANILARAK AŞKALE ÇİMENTO FABRİKASININ UÇAN KÜL ANALİZLERİ**  
POLAT R., GÜROL A., BUDAK G., KARABULUT A.  
TÜRK FİZİK DERNEĞİ 18. FİZİK KONGRESİ, Adana, Turkey, 25 - 28 October 1999

## Other Publications

1. **Physics Laboratory I**  
Gürol A., Yılmaz D., Kavaz E., Fidan M., Cinan E., Güney Y., Kalecik S., Tok E.  
Experiment, pp.1-56, 2023
2. **Mekanik Laboratuvarı Deneyleri/Astronomi ve Uzay Bilimleri Bölümü için**  
Gürol A.  
Experiment, pp.1-70, 2022
3. **Electric ve Magnetism Laboratory Experiments**  
Gürol A., Cinan E., Güney Y., Daş E.  
Experiment, pp.1-52, 2019

## Academic and Administrative Experience

2023 - Continues	<b>Rectorate Commissioner</b>	Ataturk University, Fen Fakültesi, Fizik
2022 - Continues	<b>Faculty Board Member</b>	Ataturk University, Fen Fakültesi, Fizik
2022 - Continues	<b>Faculty Management Board Member</b>	Ataturk University, Fen Fakültesi, Fizik
2022 - Continues	<b>Erasmus Program Institutional Coordinator</b>	Ataturk University, Fen Fakültesi, Fizik
2021 - Continues	<b>Head of Department</b>	Ataturk University, Fen Fakültesi, Fizik
2021 - Continues	<b>Chairperson of Unit Strategic Planning Commission</b>	Ataturk University, Fen Fakültesi, Fizik
2021 - Continues	<b>Chairperson of Unit Strategic Planning Commission</b>	Ataturk University, Fen Fakültesi, Fizik
2018 - Continues	<b>Erasmus Program Department Coordinator</b>	Ataturk University, Fen Fakültesi, Fizik
2021 - 2024	<b>Vice Dean</b>	Ataturk University, Fen Fakültesi, Fizik
2018 - 2022	<b>Erasmus Program Institutional Coordinator</b>	Ataturk University, Fen Fakültesi, Fizik
2017 - 2022	<b>Erasmus Program Department Coordinator</b>	Ataturk University, Fen Bilimleri Enstitüsü, Fizik Anabilim Dalı
2019 - 2021	<b>Head of Department</b>	Ataturk University, Fen Fakültesi, Fizik
2018 - 2021	<b>Head of Department</b>	Ataturk University, Fen Fakültesi, Fizik
2017 - 2021	<b>Deputy Head of Department</b>	Ataturk University, Fen Fakültesi, Fizik

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2015 - 2018	<b>Head of Department</b>	Ataturk University, Fen Fakültesi, Fizik
	<b>Farabi Program</b>	
2008 - 2012	<b>Institutional Coordinator</b>	Ataturk University, Fen Fakültesi, Fizik

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## Courses

Fundamentals and modern optics, Postgraduate, 2024 - 2025, 2023 - 2024  
Fizik Laboratuvarı II, Undergraduate, 2023 - 2024, 2020 - 2021  
Physics Lab I, Undergraduate, 2024 - 2025  
Computer programming: Matlab II, Undergraduate, 2023 - 2024, 2022 - 2023  
Optics waves and Laboratory , Undergraduate, 2023 - 2024, 2022 - 2023  
Optics, Undergraduate, 2022 - 2023  
Advanced Quantum Physics II, Doctorate, 2022 - 2023  
Advance Optics and Waves, Postgraduate, 2023 - 2024  
Physics Laboratory I, Undergraduate, 2023 - 2024  
Software: Matlab I, Undergraduate, 2023 - 2024, 2022 - 2023  
Vibration and Waves, Undergraduate, 2023 - 2024, 2022 - 2023  
Applications of Atomic and Molecular Physics at Astrophysics, Postgraduate, 2021 - 2022, 2019 - 2020  
Optics and Their Applications, Undergraduate, 2021 - 2022  
Physics Lab-I, Undergraduate, 2022 - 2023  
Vibrations and Waves, Undergraduate, 2021 - 2022, 2019 - 2020  
Fundamentals of Astronomical Spectroscopy, Doctorate, 2021 - 2022, 2020 - 2021  
Termodinamik ve İstatistik Fizik, Undergraduate, 2020 - 2021  
Compture Programming:Matlab, Undergraduate, 2021 - 2022  
X-Rays and its Applications, Undergraduate, 2020 - 2021  
Vibration and Waves, Undergraduate, 2021 - 2022  
Vibration and Waves Laboratory, Undergraduate, 2021 - 2022  
Physics Labrotary-I, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020  
Optics, Waves and Laboratory , Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020  
Mechanics-II, Undergraduate, 2020 - 2021  
Physics II, Undergraduate, 2019 - 2020  
Spectrocopy, Undergraduate, 2019 - 2020  
Physics II, Undergraduate, 2019 - 2020  
Physics Laboratory, Undergraduate, 2019 - 2020  
Physics I, Undergraduate, 2019 - 2020, 2018 - 2019  
Advanced Quantum Physics I, Postgraduate, 2019 - 2020  
Physics I, Undergraduate, 2019 - 2020  
Optik, Undergraduate, 2016 - 2017  
Fizik I, Undergraduate, 2016 - 2017

## Advising Theses

Gürol A., Alüminyumun (Al) yansıtma veriminin artırılması, Postgraduate, B.BALBAY(Student), 2023  
Gürol A., Alb2 tipi bazı bileşiklerin elektron momentum dağılımlarının belirlenmesi, Doctorate, A.DARKHOSH(Student), 2020  
Gürol A., Bazı gazların compton profillerine basınç etkisi, Doctorate, E.ŞAKAR(Student), 2017  
GÜROL A., Alüminyum ve Berilyum'un compton profile ölçümleri, Postgraduate, M.ZOZİK(Student), 2015  
GÜROL A., Demir, kobalt ve nikelin atomik parametrelerine mıknatıslanmanın etkisi, Postgraduate, S.DİLEKÇİ(Student),

2013

GÜROL A., Seçilmiş yıldız kümelerinde değişen yıldızlar, Postgraduate, E.ŞAKAR(Student), 2012

YEŞİLYAPRAK C., GÜROL A., Bazı yıldızların atom ve molekül tayflarının incelenmesi, Postgraduate, B.AKÇA(Student), 2010

## Memberships / Tasks in Scientific Organizations

Turkish Physical Society, Member, 2000 - Continues, Turkey

## Scientific Refereeing

Project Supported by Higher Education Institutions, University Supported Other Projects, Ege University, Turkey, January 2024

SPECTROSCOPY LETTERS, Journal Indexed in SCI-E, February 2023

Sigma Journal of Engineering and Natural Science, Other Indexed Journal, December 2021

Project Supported by Higher Education Institutions, BAP Research Project, Kocaeli University, Turkey, December 2021

Project Supported by Higher Education Institutions, BAP Research Project, Alanya Alaaddin Keykubat University, Turkey, October 2021

Project Supported by Higher Education Institutions, BAP Research Project, Adana Alparslan Türkeş Science And Technology University, Turkey, November 2020

Project Supported by Higher Education Institutions, BAP Research Project, Adana Alparslan Türkeş Science And Technology University, Turkey, June 2020

Project Supported by Higher Education Institutions, BAP Research Project, Adana Alparslan Türkeş Science And Technology University, Turkey, November 2019

Project Supported by Higher Education Institutions, BAP Research Project, Eskisehir Osmangazi University, Turkey, April 2019

Project Supported by Higher Education Institutions, BAP Research Project, Eskisehir Osmangazi University, Turkey, April 2019

Project Supported by Higher Education Institutions, BAP Research Project, Recep Tayyip Erdogan University, Turkey, February 2019

Project Supported by Higher Education Institutions, BAP Other, Karadeniz Technical University, Turkey, June 2018

## Tasks In Event Organizations

Şişman T., Bayrakçeken Yurtcan A., Tuysuz E., Akbulut S., Gürol A., Özdönmez A., ER H., 1st International Symposium on Recent Advances in Fundamental and Applied Sciences , Scientific Congress, Erzurum, Turkey, Eylül 2021

Bayrakçeken Yurtcan A., TUYSUZ E., TORAMAN E., AKBULUT S., GÜROL A., ÖZAKIN O., ÖZDÖNMEZ A., ER H., 1st International Congress on Natural Sciences, Scientific Congress, Erzurum, Turkey, Eylül 2021

Gürol A., International Online Conferences on Engineering and Natural Sciences, Scientific Congress, Gümüşhane, Turkey, Temmuz 2021

Gürol A., Yalçın Ş., Büyükgüngör O., Akbulut Özen S., Özen M., Bilimsel Araştırmalarda Xışını Analiz Teknikleri-19, Workshop Organization, Şanlıurfa, Turkey, Eylül 2019

Gürol A., Prof. Dr. Yusuf ŞAHİN Hatıra Toplantısı, Scientific Congress, Turkey, Aralık 2018

## Metrics

Publication: 111

Citation (WoS): 354

Citation (Scopus): 382

H-Index (WoS): 10

H-Index (Scopus): 11

## Congress and Symposium Activities

SAGAMORE CONFERENCE- XIV, Attendee, Sapporo, Japan, 2012

## Research Areas

Physics, Atomic and Molecular Physics, Atomic Spectra and Photon Interactions, Interdisciplinary Physics and Related Science and Technology Areas, Biophysics and Medical Physics, Electronics, radio and microwave technologies, Nuclear physics, Radioactive decay and in-beam spectroscopy, Natural Sciences

## Representation and Promotion Activities

Institutional Promotion, Cumhurbaşkanlığı İnsan Kaynakları Ofisinin (CBİKO) , Turkey, Erzurum, 2022 - 2022

## Non Academic Experience

Milli Eğitim