

## Assoc. Prof. TUBA AKKUŞ

### Personal Information

**Office Phone:** [+90 446 224 3097](tel:+904462243097) Extension: 40079

**Email:** [takkus@erzincan.edu.tr](mailto:takkus@erzincan.edu.tr)

**Other Email:** [tuba.akku@gmail.com](mailto:tuba.akku@gmail.com)

**Web:** <https://avesis.ebyu.edu.tr/takkus>

### International Researcher IDs

ORCID: 0000-0003-3913-5562

Yoksis Researcher ID: 163493

### Education Information

Doctorate, Ataturk University, Fen Bilimleri, Fizik, Turkey 2010 - 2016

Postgraduate, Ataturk University, Fen Bilimleri, Fizik, Turkey 2007 - 2010

Undergraduate, Ataturk University, Fen Fakültesi, Fizik, Turkey 2003 - 2007

### Dissertations

Doctorate, U, Pb, Hf, Sm ve Sb elementlerinin bazı L alt tabaka x-ışınlarının açılal dağılımlarının deneysel tayini, Ataturk University, Fen Bilimleri Enstitüsü, Fizik Anabilim Dalı, 2016

Postgraduate, PALANDÖKEN DAĞI VE ÇEVRESİNİN ATMOSFERİK ÖZELLİKLERİNİN BELİRLENMESİ, Ataturk University, Fen Bilimleri Enstitüsü, Fizik Anabilim Dalı, 2010

### Research Areas

Physics, Atomic and Molecular Physics, Atomic Spectra and Photon Interactions, Natural Sciences

### Academic Titles / Tasks

Associate Professor, Erzincan Binali Yildirim University, Fen-Edebiyat Fakültesi, Fizik Bölümü, 2020 - Continues

Assistant Professor, Erzincan Binali Yildirim University, Fen-Edebiyat Fakültesi, Fizik Bölümü, 2018 - 2020

Assistant Professor, Erzincan Binali Yildirim University, Fen-Edebiyat Fakültesi, Fizik Bölümü, 2017 - 2018

Research Assistant PhD, Erzincan Binali Yildirim University, Fen-Edebiyat Fakültesi, Fizik Bölümü, 2016 - 2017

Research Assistant, Ataturk University, Fen Fakültesi, Fizik, 2012 - 2016

Research Assistant, Erzincan Binali Yildirim University, Fen-Edebiyat Fakültesi, Fizik Bölümü, 2010 - 2012

### Courses

#### Postgraduate

X-ışını Spektroskopisinde Temel Hesaplar, Postgraduate, 2020 - 2021, 2018 - 2019

X Işını Spektroskopisinde Temel Konular, Postgraduate, 2021 - 2022

X ve Gama-ışını Spektroskopisinde Dedektörler, Postgraduate, 2018 - 2019

## Undergraduate

Atom ve Molekül Fiziği, Undergraduate, 2021 - 2022, 2020 - 2021  
Genel Fizik, Undergraduate, 2020 - 2021  
Fizik I, Undergraduate, 2021 - 2022  
Fizik II, Undergraduate, 2020 - 2021  
Genel Fizik Lab., Undergraduate, 2019 - 2020  
Genel Fizik, Undergraduate, 2020 - 2021  
Fizik II, Undergraduate, 2019 - 2020  
Fizik II, Undergraduate, 2019 - 2020  
Atom ve Molekül Fiziği Lab, Undergraduate, 2020 - 2021  
Fizikte Spektroskopi, Undergraduate, 2019 - 2020  
Genel Fizik II, Undergraduate, 2019 - 2020  
Genel Fizik, Undergraduate, 2019 - 2020, 2017 - 2018  
Fizik I, Undergraduate, 2019 - 2020, 2018 - 2019  
Fizik II, Undergraduate, 2019 - 2020, 2017 - 2018  
Genel Fizik II, Undergraduate, 2018 - 2019  
Fizik I, Undergraduate, 2018 - 2019  
Fizik, Undergraduate, 2018 - 2019  
Fizik II, Undergraduate, 2017 - 2018  
Fizikte Temel Kavramlar, Undergraduate, 2018 - 2019  
Genel Fizik, Undergraduate, 2017 - 2018  
Genel Fizik I, Undergraduate, 2017 - 2018  
Genel Fizik Lab I, Undergraduate, 2017 - 2018

## Supervised Theses

Akkuş T., Seyreltme tekniği kullanılarak farklı şiddet oranlarının ortalama atom numarası ile değişiminin incelenmesi, Postgraduate, M.FATİH(Student), 2023  
Akkuş T., Bazı Elementlerin Koherent / Compton Saçılma Diferansiyel Tesir Kesiti Oranlarının Saçılma Açısına Bağlı Olarak Hesaplanması, Postgraduate, M.ALKAN(Student), 2022  
Akkuş T., Farklı foton enerjilerinde bazı mocu alaşımlarının radyasyon soğurma parametrelerinin belirlenmesi, Postgraduate, S.BİLGİÇ(Student), 2020

## Jury Memberships

Post Graduate, Post Graduate, Erzincan Binali Yıldırım Üniversitesi, January, 2022  
Post Graduate, Post Graduate, Erzincan Binali Yıldırım Üniversitesi, January, 2022  
Doctoral Examination, Doctoral Examination, Atatürk Üniversitesi, March, 2021  
Doctorate, Doctorate, Atatürk Üniversitesi, February, 2021  
Doctorate, Doctorate, Atatürk Üniversitesi, June, 2020  
Post Graduate, Post Graduate, Erzincan Binali Yıldırım Üniversitesi, August, 2019

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

- An experimental work on radiation scattering features of some thermoluminescent dosimetry materials**  
YILMAZ D., AKKUŞ T.  
Radiation Physics and Chemistry, vol.216, 2024 (SCI-Expanded)

- II. **An experimental study on chemical shifts and X-ray intensity ratios**  
Uğurlu M., AKKUŞ T., Akbulut O., DEMİR L., YILMAZ D.  
Applied Radiation and Isotopes, vol.198, 2023 (SCI-Expanded)
- III. **Influence of the sample thickness upon the albedo factors using 59.54 and 662 keV photon energies**  
Yilmaz D., Akkuş T., Kalecik S.  
Instrumentation Science & Technology, no.3, pp.1-9, 2022 (SCI-Expanded)
- IV. **Determination of L X-ray fluorescence cross-sections in the atomic range of elements  $57 \leq Z \leq 69$  in an external magnetic field**  
Uğurlu M., AKKUŞ T., DEMİR L.  
Journal of Molecular Structure, vol.1244, 2021 (SCI-Expanded)
- V. **Albedo factors of some boron compounds at 59.54 keV**  
YILMAZ D., AKKUŞ T.  
APPLIED RADIATION AND ISOTOPES, vol.174, 2021 (SCI-Expanded)
- VI. **Determination of number, energy and dose albedos of samples with various mean atomic number for 59.54 keV gamma-rays**  
Akkuş T.  
Radiation Physics and Chemistry, vol.170, 2020 (SCI-Expanded)
- VII. **Measurement of coherent to Compton scattering differential cross-section ratios of cadmium at different momentum transfer factors**  
AKKUŞ T.  
CANADIAN JOURNAL OF PHYSICS, vol.98, no.1, pp.102-106, 2020 (SCI-Expanded)
- VIII. **The effect of enhancement factor on the angular dependence of L x-ray intensity ratios for Sm, Hf, Pb and U**  
AKKUŞ T., YILMAZ D., Ugurlu M.  
RADIATION PHYSICS AND CHEMISTRY, vol.166, 2020 (SCI-Expanded)
- IX. **The magnetic field effect of K X-ray fluorescence parameters of elements in the range  $39 \leq z \leq 48$**   
Uğurlu M., Akkuş T., DEMİR L.  
Canadian Journal of Physics, vol.98, no.2, pp.217-221, 2020 (SCI-Expanded)
- X. **Mean atomic number analysis by the coherent to backscattering intensity ratios at 59.54 and 661.62 photon energies**  
AKKUŞ T., YILMAZ D.  
APPLIED RADIATION AND ISOTOPES, vol.155, 2020 (SCI-Expanded)
- XI. **Dependence of albedo factors on mean atomic number for 662 keV gamma photons**  
AKKUŞ T., YILMAZ D.  
APPLIED RADIATION AND ISOTOPES, vol.154, 2019 (SCI-Expanded)
- XII. **Variation of coherent to Compton scattering differential cross-section ratios of some lanthanides with the external magnetic field at 59.54 keV**  
AKKUŞ T., Ugurlu M., DEMİR L.  
RESULTS IN PHYSICS, vol.13, 2019 (SCI-Expanded)
- XIII. **Effect of mechanical noise upon X-ray fluorescence analysis**  
YILMAZ D., PİRİMOĞLU DAL M., AKKUŞ T.  
INSTRUMENTATION SCIENCE & TECHNOLOGY, vol.47, no.6, pp.666-677, 2019 (SCI-Expanded)
- XIV. **Angular dependence of L X-rays of samarium, hafnium, and lead**  
AKKUŞ T., YILMAZ D., Sahin Y.  
SPECTROSCOPY LETTERS, vol.52, no.5, pp.261-266, 2019 (SCI-Expanded)
- XV. **Variation of scattering intensity ratios with mean atomic number using a dilution technique in EDXRF**  
AKKUŞ T., UZUNOĞLU Z., YILMAZ D.  
APPLIED RADIATION AND ISOTOPES, vol.145, pp.7-11, 2019 (SCI-Expanded)
- XVI. **The coherent to Compton scattering differential cross section ratios of some fifth period elements in the external magnetic field**

Ugurlu M., Akkus T., Demir L.

Indian Journal of Physics, 2019 (SCI-Expanded)

- XVII. **X- and gamma-ray irradiation effects on vanadium pentoxide thin films**  
YILMAZ D., GÜZELDİR B., AKKUŞ T., ÖZNÜLÜER T.  
SPECTROSCOPY LETTERS, vol.51, no.6, pp.297-301, 2018 (SCI-Expanded)
- XVIII. **L-shell differential cross-section and alignment of uranium at 59.54-keV photon energy**  
AKKUŞ T., Alim B., YILMAZ D., Sahin Y.  
APPLIED RADIATION AND ISOTOPES, vol.130, pp.60-65, 2017 (SCI-Expanded)
- XIX. **Effects of graphite on the synthesis of 1-D single crystal In<sub>2</sub>O<sub>3</sub> nanostructures at high temperature**  
Tuzluca F. N., YEŞİLBAĞ Y. Ö., AKKUŞ T., ERTUĞRUL M.  
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.66, pp.62-68, 2017 (SCI-Expanded)
- XX. **Determination of coherent to Compton scattering differential cross section ratios of some inorganic materials with EDXRF**  
yılmaz d., şimşek ü., AKKUŞ T., şahin y.  
CANADIAN JOURNAL OF PHYSICS, vol.95, no.4, pp.407-411, 2017 (SCI-Expanded)
- XXI. **The K-beta/K-alpha intensity ratios of some elements at different azimuthal scattering angles at 59.54 keV**  
Akkus T., Sahin Y., Yılmaz D., Tuzluca F. N.  
CANADIAN JOURNAL OF PHYSICS, vol.95, no.3, pp.220-224, 2017 (SCI-Expanded)
- XXII. **Azimuthal and polar angle dependence of L X-ray differential cross-sections of Yb at 59.54 keV photon energy**  
Akkuş T., ŞAHİN Y., YILMAZ D.  
Nuclear Instruments and Methods in Physics Research, Section B: Beam Interactions with Materials and Atoms, vol.366, pp.145-149, 2016 (SCI-Expanded)
- XXIII. **Polar and azimuthal angular dependence of coherent to incoherent scattering differential cross-section ratios of Au at 59.54keV**  
Akkuş T., PİRİMOĞLU DAL M., Şahin Y.  
Radiation Physics and Chemistry, vol.117, pp.167-171, 2015 (SCI-Expanded)
- XXIV. **Investigation of the effective atomic numbers of dosimetric materials for electrons, protons and alpha particles using a direct method in the energy region 10 keV–1 GeV: a comparative study**  
KURUDİREK M., Aksakal O., Akkuş T.  
Radiation and Environmental Biophysics, vol.54, no.4, pp.481-492, 2015 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Angular Distribution of L Alpha and L Beta X-Rays of Antimony at 59.54 keV**  
Akkuş T., Alkan M., Şahin Y.  
Journal of Anatolian Physics and Astronomy , vol.1, no.1, pp.1-6, 2021 (Peer-Reviewed Journal)
- II. **Analysis of Magnetic Field Effects on K $\alpha$  And K $\beta$  XRF Spectra of Selenide Compounds**  
DURDAĞI S., Çümen H., Hatipoğulları M. M., AKKUŞ T.  
ALKÜ Fen Bilimleri Dergisi, pp.52-58, 2018 (Peer-Reviewed Journal)
- III. **An experimental study on the angular dependence of coherent to Compton scattering differential cross-section ratios of calcium**  
AKKUŞ T.  
TURKISH JOURNAL OF PHYSICS, vol.42, no.4, pp.368-377, 2018 (ESCI)

## Papers Published in Refereed Scientific Meetings

- I. **THE CONCENTRATION EFFECT TO K-SHELL FLUORESCENCE CROSS SECTIONS OF TiXCo<sub>1-X</sub> ALLOYS**

UĞURLU M., AKKUŞ T.

35th International Physics Congress , 2019, Muğla, Turkey, 4 - 08 September 2019, pp.278

- II. **DETERMINATION OF L3 SUBSHELL FLUORESCENCE YIELDS AND LEVEL WIDTHS FOR W AND U IN THE EXTERNAL MAGNETIC FIELD**  
YILMAZ D., AKKUŞ T., UZUNOĞLU Z.  
MAS INTERNATIONAL CONFERENCE ON MATHEMATICS-ENGINEERING-NATURAL&MEDICAL SCIENCES-V, Erzurum, Turkey, 2 - 05 May 2019, pp.136-140
- III. **L X-RAY DIFFERENTIAL CROSS-SECTION OF LEAD AT SEVERAL SCATTERING ANGLES AT 59.54 KEV**  
BİLGİÇ S., AKKUŞ T., YALÇIN P.  
II. ULUSLARARASI MULTİDİSİPLİNER ÇALIŞMALAR KONGRESİ, 18 - 20 January 2019
- IV. **X-RAY FLUORESCENCE ANALYSIS OF SOME ELEMENTS WITH PEAK TO COMPTON INTENSITY RATIOS AT 59.54 KEV**  
BİLGİÇ S., AKKUŞ T., UĞURLU M.  
ZEUGMA II. ULUSLARARASI MULTİDİSİPLİNER ÇALIŞMALAR KONGRESİ, Gaziantep, Turkey, 18 - 20 January 2019, pp.267-270
- V. **K-SHELL X-RAY INTENSITY RATIOS OF FERROMAGNETIC METALS AT 22.69 keV ENERGY**  
AKKUŞ T., UĞURLU M., BİLGİÇ S.  
IV. ULUSLARARASI MESLEKİ VE TEKNİK BİLİMLER KONGRESİ, Erzurum, Turkey, 7 - 09 December 2018, pp.170
- VI. **Analysis of Magnetic Field Effects on K $\alpha$  and K $\beta$  XRF Spectra of Selenide Compounds**  
Çümen H., ATABAY M. M., AKKUŞ T., DURDAĞI S.  
XI. International Conference on Nuclear Structure Properties, Trabzon, Turkey, 12 September - 14 October 2018, pp.10
- VII. **X-Ray Spectrometric Analysis by Various Spectral Ratio Methods**  
AKKUŞ T.  
Turkish Physical Society 34rd International Physics Congress, Muğla, Turkey, 5 - 09 September 2018, pp.257
- VIII. **Al, Sn, Lu ve Pt Elementlerinin Albedo Parametrelerinin Belirlenmesi**  
ŞAHİN Y., AKKUŞ T., BOYDAŞ E., YILMAZ D.  
International Scientific Researches Congress, Mardin, Turkey, 10 - 13 May 2018, pp.1
- IX. **L X-ray Relative Intensity Ratios of Uranium, Lead, Hafnium and Samarium**  
AKKUŞ T., DURDAĞI S., YILMAZ D., ŞAHİN Y.  
34th International Physics Congress of the Turkish-Physical-Society (TPS), Konacik, Turkey, 5 - 09 September 2018, vol.2042
- X. **The effect of the concentration of alloying element on The Total Mass Attenuation Coefficients, Atomic and Electronic Cross-Sections, Effective Atomic and Electron Numbers of Ni<sub>x</sub>Cr<sub>1-x</sub> alloys at 661,661 keV Energy**  
AKKUŞ T., ALIM B., UĞURLU M., DEMİR L.  
2nd International Conference on Advanced Engineering Technologies (ICADET 2017), 21 - 23 September 2017
- XI. **The effect of the concentration of alloying element on the total mass attenuation coefficients, atomic and electronic cross sections, effective atomic numbers of Ni<sub>x</sub>Cr<sub>1-x</sub> alloys at 661.661 keV energy**  
AKKUŞ T., alim b., uğurlu m., demir l.  
2nd International conference on advanced engineering technologies, Bayburt, Turkey, 21 - 23 September 2017, pp.389
- XII. **Magnetic field effect on coherent to incoherent scattering differential cross section ratios of micro structure 3d ferromagnetic transition elements at 59.54 keV**  
UĞURLU M., ALIM b., AKKUŞ T., DEMİR L.  
Turkish Physical Society 33rd International Physics Congress, Muğla, Turkey, 6 - 10 September 2017, pp.249
- XIII. **PbO numune için temel sayma şiddetine numune kalınlığının etkisinin incelenmesi**  
ŞAHİN Y., UZUNOĞLU Z., YILMAZ D., AKKUŞ T., BOYDAŞ E.  
Adım Fizik Günleri VI, Balıkesir, Turkey, 19 - 21 July 2017, pp.19
- XIV. **Investigation of Albedo factors of some elements for 59.54 keV**  
Yılmaz D., Boydaş E., AKKUŞ T., Şahin Y., Gürol A., Alim B.

2nd International Conference on Advances in Natural and Applied Sciences, Antalya, Turkey, 18 - 21 April 2017, pp.54

**XV. Determination of Thickness of Vanadium Pentoxide Thin Film with EDXRF**

Yılmaz D., Güzeldir B., AKKUŞ T., Alım B.

2nd International Conference on Advances in Natural and Applied Sciences, Antalya, Turkey, 18 - 21 April 2017, pp.335

**XVI. Angular dependence of coherent to incoherent scattering differential cross-section ratios for Au**  
AKKUŞ T., Alım B., Yılmaz D., Şahin Y.

2nd International Conference on Advances in Natural and Applied Sciences, Antalya, Turkey, 18 - 21 April 2017, pp.71

**XVII. Azimuthal angular dependence of K-beta/K-alpha intensity ratios of some elements**

AKKUŞ T., Alım B., Yılmaz D., Şahin Y.

2nd International Conference on Advances in Natural and Applied Sciences, Antalya, Turkey, 18 - 21 April 2017, pp.334

**XVIII. Buildup Factors and Kerma for Al<sub>2</sub>O<sub>3</sub> and SiO<sub>2</sub> in the Energy Range 0.015-15 MeV**

YILMAZ D., Alım B., AKKUŞ T., GÜZELDİR B.

International Conference on Advances in Natural and Applied Sciences (ICANAS), Antalya, Turkey, 18 - 21 April 2017, vol.1833

**XIX. A Potential 4+ Class IR Telescope in East Anatolia, Turkey**

Yeşilyaprak C., AKKUŞ T.

Telescopes from Afar, 28 February - 04 March 2011

**XX. Palandöken Dağı'nın Atmosferik Özellikleri ve Astronomik Görüş Özellikleri**

yeşilyaprak c., AKKUŞ T.

17. Ulusal Astronomi Kongresi, Adana, Turkey, 31 August - 05 September 2010

**XXI. Palandöken Dağının Atmosferik Özellikleri**

Yeşilyaprak C., Akkuş T.

16. Ulusal Astronomi Kongresi, Çanakkale, Turkey, 8 - 12 September 2008

## Metrics

Publication: 48

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