

# Prof. Abdulhalik KARABULUT

## Personal Information

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## Education Information

Doctorate, Ataturk University, Fen Fakültesi, Fizik Atom Ve Molekül Fiziği, Turkey 1992 - 1996

Postgraduate, Ataturk University, Fen Fakültesi, Fizik Atom Ve Molekül Fiziği, Turkey 1990 - 1992

Undergraduate, Ataturk University, Fen Fakültesi, Fizik Atom Ve Molekül Fiziği, Turkey 1985 - 1989

## Foreign Languages

English, B1 Intermediate

## Research Areas

Physics, Atomic and Molecular Physics, Atomic Spectra and Photon Interactions, Interdisciplinary Physics and Related Science and Technology Areas, Materials Science, General Physics, Mathematical Methods in Physics, Nuclear physics, Nuclear Engineering and Nuclear Energy Studies, Natural Sciences

## Academic Titles / Tasks

Professor, Ataturk University, Fen Fakültesi, Fizik, 2006 - Continues

Associate Professor, Ataturk University, Fen Fakültesi, Fizik, 2000 - Continues

Assistant Professor, Ataturk University, Fen Fakültesi, Fizik, 1997 - Continues

Medical Doctor, Ataturk University, Fen Fakültesi, Fizik, 1996 - Continues

## Academic and Administrative Experience

Rector, Agri Ibrahim Cecen University, 2017 - Continues

ÜAK Member, Agri Ibrahim Cecen University, 2017 - Continues

Dean, Ataturk University, Fen Fakültesi, Fizik, 2016 - 2017

ÜAK Member, Erzurum Technical University, 2011 - 2012

Vice Rector, Erzurum Technical University, 2011 - 2012

Dean, Agri Ibrahim Cecen University, Faculty Of Arts And Sciences, 2008 - 2010

ÜAK Member, Agri Ibrahim Cecen University, 2008 - 2010

Vice Rector, Agri Ibrahim Cecen University, 2008 - 2010

## Advising Theses

Karabulut A., The production of hybrid fiber heavyweight aggregate concrete for neutron radiation shielding, Doctorate, R.MEHRNEJAD(Student), 2015  
KARABULUT A., ÇEŞİTLİ LASTİK VE ALÇI MALZEMELERİN NÖTRON PARÇACIKLARINA KARŞI ZIRH MALZEMESİ OLARAK KULLANILABİLİRLİĞİNİN ARAŞTIRILMASI, Postgraduate, Z.ITIR(Student), 2012  
KARABULUT A., NÜKLEER UYGULAMALARDA RADYASYON GÜVENLİĞİ AMACIYLA YENİ KALKAN MALZEMELERİN DENEYSEL VE MONTE CARLO SİMÜLASYON KODLARI (CERN-FLUKA VE GEANT4) İLE BELİRLENMESİ VE FABRİKASYONU, Doctorate, B.AYGÜN(Student), 2010

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

- I. **Development of novel composite materials containing rice bran wax and waste polyethylene for neutron shielding applications**  
Aygün B., Bilici I., Deniz C. U., Oz B., Sayyed M., KARABULUT A.  
Progress in Nuclear Energy, vol.174, 2024 (SCI-Expanded)
- II. **Investigation of the radioprotective properties of Zingerone, Ibuprofen, and Sulfasalazine against neutron radiation damage**  
Aygün B., Genişel M., Sayyed M., KARABULUT A.  
Radiation Physics and Chemistry, vol.210, 2023 (SCI-Expanded)
- III. **Li<sub>2</sub>B<sub>4</sub>O<sub>7</sub>-Bi<sub>2</sub>O<sub>3</sub>-ZrO<sub>4</sub>-CaWO<sub>4</sub> glass system for neutron protection in neutron applications**  
Aygün B., Yıldız Yorgun N., Sayyed M., KARABULUT A.  
Progress in Nuclear Energy, vol.162, 2023 (SCI-Expanded)
- IV. **Effect of the B<sub>4</sub>C content on microstructure, microhardness, corrosion, and neutron shielding properties of Al-B<sub>4</sub>C composites**  
Gaylan Y., Avar B., Panigrahi M., Aygün B., KARABULUT A.  
Ceramics International, vol.49, no.3, pp.5479-5488, 2023 (SCI-Expanded)
- V. **Investigation of radiation protective features of azadispiro derivatives and their genotoxic potential with Ames/Salmonella test system**  
Alaylar B., Aygün B., TURHAN K., KARADAYI M., CİNAN E., TURGUT Z., KARADAYI G., Abu Al-Sayyed M. I., GÜLLÜCE M., KARABULUT A.  
INTERNATIONAL JOURNAL OF RADIATION BIOLOGY, vol.99, no.2, pp.245-258, 2023 (SCI-Expanded)
- VI. **Determination of toxicity and radioprotective properties of bacterial and fungal eumelanin pigments**  
Bayram S., Aygün B., KARADAYI M., Alaylar B., GÜLLÜCE M., KARABULUT A.  
International Journal of Radiation Biology, vol.99, no.11, pp.1785-1793, 2023 (SCI-Expanded)
- VII. **Determination of biological radioprotective characteristics of some natural organic compounds for radiation shielding applications**  
AYGÜN B., ŞENTÜRK M., CİNAN E., Simsek Ö., Abu Al-Sayyed M. I., KARABULUT A.  
RADIOCHIMICA ACTA, vol.110, no.11, pp.925-936, 2022 (SCI-Expanded)
- VIII. **Investigation of some drug active substances able to protect against radiation damage with experimental and Monte Carlo calculations**  
Aygün B., Akncioğlu A., Sayyed M., Karabulut A.  
Radiation Physics And Chemistry, no.191, pp.1-7, 2022 (SCI-Expanded)
- IX. **Fabrication of novel neutron shielding materials: Polypropylene composites containing colemanite, tincal and ulexite**  
BİLİCİ İ., AYGÜN B., DENİZ C. U., Oz B., Sayyed M. I., KARABULUT A.  
PROGRESS IN NUCLEAR ENERGY, vol.141, 2021 (SCI-Expanded)
- X. **Synthesis, physical properties, and gamma-ray shielding capacity of different Ni-based super alloys**  
Ekinci N., El-Agawany F., Mahmoud K., Karabulut A., Aygün B., Yousef E., Rammah Y.  
Radiation Physics and Chemistry, vol.186, 2021 (SCI-Expanded)
- XI. **Characterization of gamma-ray and neutron radiation absorption properties of synthesized quinoline derivatives and their genotoxic potential**

Alaylar B., Aygün B., Turhan K., Karadayı G., Şakar E., Singh V., Sayyed M., Pelit E., Karabulut A., Güllüce M., et al.  
Radiation Physics and Chemistry, vol.184, 2021 (SCI-Expanded)

- XII. **Development of new heavy concretes containing chrome-ore for nuclear radiation shielding applications**  
Aygün B., Sakar E., Agar O., Sayyed M. I., Karabulut A., Singh V. P.  
PROGRESS IN NUCLEAR ENERGY, vol.133, 2021 (SCI-Expanded)
- XIII. **Development of SiO<sub>2</sub> based doped with LiF, Cr<sub>2</sub>O<sub>3</sub>, CoO<sub>4</sub> and B<sub>2</sub>O<sub>3</sub> glasses for gamma and fast neutron shielding**  
Aygün B., Şakar E., Karabulut A., Alim B., Sayyed M., Singh V. P., Yıldız Yorgun N., Özpolat Ö. F.  
RADIOCHIMICA ACTA, vol.109, no.2, pp.143-151, 2021 (SCI-Expanded)
- XIV. **Determination of radioprotective and genotoxic properties of sulfamide derivatives**  
Aygün B., Alaylar B., Akıncıoğlu A., Allm B., Kocaman E. T., Karadayı M., Abu Al-Sayyed M. I., Aksu S., Sakar E., Özpolat Ö. F., et al.  
RADIOCHIMICA ACTA, vol.109, no.12, pp.891-904, 2021 (SCI-Expanded)
- XV. **Experimental and Monte Carlo simulation study on potential new composite materials to moderate neutron-gamma radiation**  
Aygün B., Şakar E., Singh V. P., Sayyed M. I., Korkut T., Karabulut A.  
Progress in Nuclear Energy, vol.130, 2020 (SCI-Expanded)
- XVI. **Investigation of neutron and gamma radiation protective characteristics of synthesized quinoline derivatives**  
AYGÜN B., Alaylar B., TURHAN K., ŞAKAR E., KARADAYI M., Abu Al-Sayyed I., Pelit E., GÜLLÜCE M., KARABULUT A., TURGUT Z., et al.  
INTERNATIONAL JOURNAL OF RADIATION BIOLOGY, vol.96, no.11, pp.1423-1434, 2020 (SCI-Expanded)
- XVII. **Development and production of metal oxide doped glasses for gamma ray and fast neutron shielding**  
Aygün B., ŞAKAR E., CİNAN E., Yorgun N. Y., Sayyed M., Agar O., KARABULUT A.  
RADIATION PHYSICS AND CHEMISTRY, vol.174, 2020 (SCI-Expanded)
- XVIII. **New high temperature resistant heavy concretes for fast neutron and gamma radiation shielding**  
AYGÜN B., ŞAKAR E., KORKUT T., SAYYED M., KARABULUT A.  
RADIOCHIMICA ACTA, vol.107, no.4, pp.359-367, 2019 (SCI-Expanded)
- XIX. **Fabrication of Ni, Cr, W reinforced new high alloyed stainless steels for radiation shielding applications**  
Aygün B., ŞAKAR E., Korkut T., Sayyed M. I., KARABULUT A., Zaid M. H. M.  
RESULTS IN PHYSICS, vol.12, pp.1-6, 2019 (SCI-Expanded)
- XX. **Investigation of high-temperature-resistant rhenium-boron neutron shields by experimental studies and Monte Carlo simulations**  
KORKUT T., KORKUT H., AYGÜN B., BAYRAM Ö., KARABULUT A.  
NUCLEAR SCIENCE AND TECHNIQUES, vol.29, no.7, 2018 (SCI-Expanded)
- XXI. **Monte Carlo Design and Experiments on the Neutron Shielding Performances of B<sub>2</sub>O<sub>3</sub>-ZnO-Bi<sub>2</sub>O<sub>3</sub> Glass System**  
Kaewkhao J., Korkut T., Korkut H., Aygün B., Yasaka P., Tuscharoen S., Insiripong S., Karabulut A.  
Glass Physics and Chemistry, vol.43, no.6, pp.560-563, 2017 (SCI-Expanded)
- XXII. **Monte Carlo Design and Experiments on the Neutron Shielding Performances of B<sub>2</sub>O<sub>3</sub>-ZnO- Bi<sub>2</sub>O<sub>3</sub> Glass System**  
Kaewkhao J., Korkut T., Korkut H., Aygün B., Yasaka P., Tuscharoen S., Insiripong S., Karabulut A.  
Journal Of Materials Science, vol.43, pp.560-563, 2017 (SCI-Expanded)
- XXIII. **Determination and Fabrication of New Shield Super Alloys Materials for Nuclear Reactor Safety by Experiments and Cern-Fluka Monte Carlo Simulation Code, Geant4 and WinXCom**  
Bünyamin A., KORKUT T., KARABULUT A.  
Journal of Physics, vol.707, no.1, pp.1-7, 2016 (SCI-Expanded)
- XXIV. **Study of neutron attenuation properties of super alloys with added rhenium**  
KORKUT T., Aygün B., Bayram O., KARABULUT A.

- JOURNAL OF RADIOANALYTICAL AND NUCLEAR CHEMISTRY, vol.306, no.1, pp.119-122, 2015 (SCI-Expanded)
- XXV. **Production and Neutron Irradiation Tests on a New Epoxy/Molybdenum Composite**  
Aygun B., KORKUT T., Karabulut A., GENÇEL O., KARABULUT A.  
INTERNATIONAL JOURNAL OF POLYMER ANALYSIS AND CHARACTERIZATION, vol.20, no.4, pp.323-329, 2015 (SCI-Expanded)
- XXVI. **Neutron Equivalent Dose Rate Measurements of Gypsum-Waste Tire Rubber Layered Structures**  
Korkut T., UMAC Z. I., AYGUN B., KARABULUT A., Yapici S., ŞAHİN R.  
INTERNATIONAL JOURNAL OF POLYMER ANALYSIS AND CHARACTERIZATION, vol.18, no.6, pp.423-429, 2013 (SCI-Expanded)
- XXVII. **Investigation of neutron shielding properties depending on number of boron atoms for colemanite, ulexite and tincal ores by experiments and FLUKA Monte Carlo simulations**  
Korkut T., KARABULUT A., BUDAK G., Aygun B., GENÇEL O., HANÇERLİOĞULLARI A.  
APPLIED RADIATION AND ISOTOPES, vol.70, no.1, pp.341-345, 2012 (SCI-Expanded)
- XXVIII. **Gamma-irradiated calcium succinate monohydrate single crystal investigation with EPR technique**  
Yarbasi Z., KARABULUT B., KARABULUT A.  
SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.83, no.1, pp.337-339, 2011 (SCI-Expanded)
- XXIX. **EPR and optical studies of vanadium doped potassium dihydrogen citrate (C<sub>6</sub>H<sub>7</sub>KO<sub>7</sub>) single crystal**  
Yarbasi Z., KARABULUT A., KARABULUT B.  
SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.79, no.5, pp.1304-1307, 2011 (SCI-Expanded)
- XXX. **EPR Studies of Copper-Doped Potassium Dihydrogen Citrate (C<sub>6</sub>H<sub>7</sub>KO<sub>7</sub>) Single Crystal**  
Yarbasi Z., KARABULUT A., KARABULUT B.  
APPLIED MAGNETIC RESONANCE, vol.41, no.1, pp.51-57, 2011 (SCI-Expanded)
- XXXI. **Determination of radiation attenuation coefficients of heavyweight- and normal-weight concretes containing colemanite and barite for 0.663 MeV gamma-rays**  
Demir F., BUDAK G., ŞAHİN R., KARABULUT A., OLTULU M., UN A.  
ANNALS OF NUCLEAR ENERGY, vol.38, no.6, pp.1274-1278, 2011 (SCI-Expanded)
- XXXII. **Determination of elemental concentration of seed coats of different fruits by using WDXRF spectroscopy technique**  
Korkut T., Korkut H., Karabulut A., Budak G.  
Journal of Radioanalytical and Nuclear Chemistry, vol.287, no.2, pp.501-504, 2011 (SCI-Expanded)
- XXXIII. **A new radiation shielding material Amethyst ore**  
Korkut T., KORKUT H., KARABULUT A., BUDAK G.  
ANNALS OF NUCLEAR ENERGY, vol.38, no.1, pp.56-59, 2011 (SCI-Expanded)
- XXXIV. **Neutron dose transmission measurements for several new concrete samples including colemanite**  
Korkut T., Un A., Demir F., Karabulut A., Budak G., ŞAHİN R., OLTULU M.  
ANNALS OF NUCLEAR ENERGY, vol.37, no.7, pp.996-998, 2010 (SCI-Expanded)
- XXXV. **Radiation transmission of heavyweight and normal-weight concretes containing colemanite for 6 MV and 18 MV X-rays using linear accelerator**  
Demir F., Budak G., Şahin R., Karabulut A., Oltulu M., Şerifoğlu K., Un A.  
Annals of Nuclear Energy, vol.37, pp.339-344, 2010 (SCI-Expanded)
- XXXVI. **EPR and UV studies of VO<sub>2</sub><sup>+</sup> ions in potassium D-gluconate monohydrate single crystals**  
Yarbasi Z., Karabulut B., KARABULUT A.  
PHYSICA B-CONDENSED MATTER, vol.404, no.20, pp.3694-3697, 2009 (SCI-Expanded)
- XXXVII. **An EPR and optical absorption study of Cu<sup>2+</sup> doped in disodium malonate trihydrate single crystal**  
Yarbasi Z., Karabulut B., KARABULUT A.  
SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.72, no.2, pp.366-368, 2009 (SCI-Expanded)
- XXXVIII. **Determination of Elemental Variations in Tea Leaves (Camellia sinensis L) in Different Harvest Time by WDXRF Spectrometry**

- ERCİŞLİ S., DEMİR F., Budak G., KARABULUT A.  
ASIAN JOURNAL OF CHEMISTRY, vol.21, no.2, pp.1313-1317, 2009 (SCI-Expanded)
- XXXIX. **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)
- XL. **Determination of Effect of X-ray Tube Emission Current (IE) on Intensities of X-rays for Two Different Sample Preparation Method Using Correction Factor in WDXRF Spectrometer**  
Demir F., Budak G., KARABULUT A.  
INSTRUMENTATION SCIENCE & TECHNOLOGY, vol.37, no.4, pp.437-445, 2009 (SCI-Expanded)
- XLI. **Effect on particle size to emitted X-ray intensity in pellet cement sample analyzed with WDXRF spectrometer**  
Demir F., Simsek Ö., Budak G., KARABULUT A.  
INSTRUMENTATION SCIENCE & TECHNOLOGY, vol.36, no.4, pp.410-419, 2008 (SCI-Expanded)
- XLII. **F-4 Effect of X-ray Tube Power On Intensities of  $K\alpha$  X-Rays of Trace Elements from Samples Obtained by Using Different Sample Preparation Methods in WDXRF Spectrometer**  
DEMİR F., HAN İ., budak G., DEMİR L., GÜROL A., KARABULUT A.  
Powder Diffraction, vol.22, pp.187, 2007 (SCI-Expanded)
- XLIII. **Determination of replacement of some inorganic elements in pulvinus of bean (*Phaseolus vulgaris* cv. Gina 2004) at chilling temperature by the WDXRF spectroscopic technique**  
Dumlupinar R., DEMİR F., Budak G., Karabulut A., KADI N., KARAKURT H., Erdal S.  
JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER, vol.103, no.2, pp.331-339, 2007 (SCI-Expanded)
- XLIV. **Trace element changes during hibernation of *Drosophila melanogaster* by WDXRF analyses at chilling temperature**  
Dumlupinar R., DEMİR F., SİSMAN T., BUDAK G., KARABULUT A., ERMAN O. K., BAYDAS E.  
Journal of Quantitative Spectroscopy and Radiative Transfer, vol.102, no.3, pp.492-498, 2006 (SCI-Expanded)
- XLV. **Analysis of some elements in three *Chrysolina* (Coleoptera, Chrysomelidae) species by EDXRF spectrometry**  
Budak G., Aslan I., Karabulut A., Tirasoglu E.  
Journal of Quantitative Spectroscopy and Radiative Transfer, vol.101, no.2, pp.195-200, 2006 (SCI-Expanded)
- XLVI. **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)
- XLVII. **Determination of K, Ca, Fe and Ni in *Leptinotarsa decemlineata* (Say) by EDXRF spectroscopy**  
Aslan I., Budak G., Karabulut A., Tirasoglu E.  
JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER, vol.97, no.1, pp.75-80, 2006 (SCI-Expanded)
- XLVIII. **Determination of elements in some lichens growing in Giresun and Ordu province (Turkey) using energy dispersive X-ray fluorescence spectrometry**  
Aslan A., Budak G., Tirasoglu E., Karabulut A.  
JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER, vol.97, no.1, pp.10-19, 2006 (SCI-Expanded)
- XLIX. **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)
- L. **Determination of trace elements in three *Chrysomela* (Coleoptera, Chrysomelidae) species by EDXRF analyses**  
Karabulut A., Aslan I., Dumlupinar R., Tirasoglu E., Budak G.

JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER, vol.94, pp.373-378, 2005 (SCI-Expanded)

- LI. **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)
- LII. **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)
- LIII. **The amounts Fe, Ba, Sr, K, Ca and Ti in some lichens growing in Erzurum province (Turkey)**  
Aslan A., Budak G., Karabulut A.  
JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER, vol.88, no.4, pp.423-431, 2004 (SCI-Expanded)
- LIV. **Inelastic and elastic scattering differential cross-sections of 59.5 keV photons for Cu and Zn targets**  
Simsek O., Ertugrul M., Budak G., Karabulut A.  
X-RAY SPECTROMETRY, vol.33, no.5, pp.349-353, 2004 (SCI-Expanded)
- LV. **Elemental composition of cement Kiln dust, raw material and cement from a coal-fired cement factory using energy dispersive X-ray fluorescence spectroscopy**  
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- LVI. **Determination of P, S, Cl, K, and Ca in human urinary stones by EDXRF**  
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INSTRUMENTATION SCIENCE & TECHNOLOGY, vol.32, no.1, pp.69-76, 2004 (SCI-Expanded)
- LVII. **Analysis of elements in some lichens by radioisotope X-ray fluorescence spectrometry**  
Aslan A., Budak G., Tirasoglu E., Karabulut A., Karagoz Y., Apaydin G., Ertugral B., Cevik U.  
FRESENIUS ENVIRONMENTAL BULLETIN, vol.13, no.8, pp.740-747, 2004 (SCI-Expanded)
- LVIII. **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)
- LIX. **Angular dependence of L<sub>I</sub>, L<sub>α</sub>, L<sub>β</sub> and L<sub>γ</sub> X-ray differential and fluorescence cross-sections for Er, Ta, W, Au, Hg and Tl**  
DEMİR L., ŞAHİN M. H., KURUCU Y., KARABULUT A., ŞAHİN Y.  
Radiation Physics and Chemistry, vol.67, no.5, pp.605-612, 2003 (SCI-Expanded)
- LX. **Elemental analysis of Akcaabat tobacco and its ash by EDXRF spectrometry**  
Cevik U., Ergen E., Budak G., Karabulut A., Tirasoglu E., Apaydin G., Kopya A.  
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- LXI. **Determination of K-shell absorption jump factor for some elements using EDXRF Technique**  
BUDAK G., KARABULUT A., ERTUĞRUL M.  
Radiation Measurements, vol.37, no.2, pp.103-107, 2003 (SCI-Expanded)
- LXII. **L-subshell and total L-shell photoeffect cross-sections measurements for Pb, Au, W, and Ta at 59.5 keV**  
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- LXIII. **Measurements of L subshell and L shell x-ray fluorescence cross-sections for U and Th**  
GÜROL A., POLAT R., KARABULUT A., BUDAK G.  
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- LXIV. **Analysis of trace elements in different three region coals in Erzurum (Turkey): a study using EDXRF**  
Cakir C., Budak G., Karabulut A., Sahin Y.  
JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER, vol.76, no.1, pp.101-106, 2003 (SCI-

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- LXV. **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.  
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- LXVI. **Inelastic scattering of 59.5 keV photons at small momentum transfers by Ti, Fe and Ni elements**  
ŞİMŞEK Ö., ERTUĞRUL M., KARABULUT A., Budak G.  
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- LXVII. **Energy dispersive X-ray fluorescence spectrometry in the detection of İkizdere ore concentrates**  
EKİNCİ N., Budak G., KARABULUT A.  
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- LXVIII. **Measurements of L subshell and total L shell photoeffect cross-sections for some elements in  $72 \leq Z \leq 92$**   
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EUROPEAN PHYSICAL JOURNAL D, vol.21, no.1, pp.57-61, 2002 (SCI-Expanded)
- LXIX. **K shell fluorescence yields for elements with  $33 \leq Z \leq 53$  using 59.5 keV photons**  
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