

Prof. Yakup KURUCU

Personal Information

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Education Information

Doctorate, Ataturk University, Fen Bilimleri Enstitüsü, Fizik Anabilim Dalı, Turkey 1990 - 1994

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, 59.5keV Gama Fotonları İçin Atom Başına inkoherent Saçılma Diferansiyel Tesir Kesitinin Saçılma Açısı ve Atom Numarasına Göre Değişimi., Ataturk Üniversitesi, Fen Fakültesi, Fizik/Atom Ve Molekül Fiziği, 1994

Post Graduate, 59.5keV Gama Işınları Kullanılarak Al, Sn ve Ta'da Atom Başına Toplam Compton Saçılması Diferansiyel Tesir Kesitlerinin Farklı Açılarda Ölçülmesi., Ataturk Üniversitesi, Fen Fakültesi, Fizik/Atom Ve Molekül Fiziği, 1990

Research Areas

Natural Sciences

Academic Titles / Tasks

Professor, Ataturk University, Fen Fakültesi, Fizik, 2004 - Continues

Professional Experience

Head of Department, Ataturk University, Fen Fakültesi, Fizik, 2017 - Continues

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- **Investigation of some nuclear engineering materials in terms of gamma ray buildup factors at experimental energies used in nuclear physics experiments**
Kurudirek M., Kurucu Y.
Radiation Effects and Defects in Solids, 2020 (Journal Indexed in SCI Expanded)
- **Estimation of energy absorption buildup factors of some human tissues at energies relevant to brachytherapy and external beam radiotherapy**
KURUDİREK M., KURUCU Y.
International Journal of Radiation Biology, vol.95, pp.1685-1695, 2019 (Journal Indexed in SCI Expanded)
- **Comparisons of an external magnetic field effect and chemical effect on X-ray K beta/K alpha intensity ratio and line-shape of some Chromium compounds**
Porikli S., Kurucu Y.

JOURNAL OF RADIOANALYTICAL AND NUCLEAR CHEMISTRY, vol.289, pp.739-750, 2011 (Journal Indexed in SCI)

- **Determination of Chemical Effect on the K beta(1)/K alpha, K beta(2)/K alpha, K beta(2)/K beta(1) and K beta/K alpha X-Ray Intensity Ratios of 4d Transition Metals**
Porikli S., Han I., YALÇIN P., KURUCU Y.
SPECTROSCOPY LETTERS, vol.44, pp.38-46, 2011 (Journal Indexed in SCI)
- **Effects of the external magnetic field and chemical combination on K beta/K alpha X-ray intensity ratios of some nickel and cobalt compounds**
Porikli S., KURUCU Y.
APPLIED RADIATION AND ISOTOPES, vol.66, pp.1381-1386, 2008 (Journal Indexed in SCI)
- **Measurement of relative L X-ray intensity ratio following radioactive decay and photoionization**
YALÇIN P., Porikli S., KURUCU Y., ŞAHİN Y.
PHYSICS LETTERS B, vol.663, pp.186-190, 2008 (Journal Indexed in SCI)
- **Variation of K β /K α X-ray intensity ratio and lineshape with the effects of external magnetic field and chemical combination**
PORIKLI S., Demir D., KURUCU Y.
European Physical Journal D, vol.47, pp.315-323, 2008 (Journal Indexed in SCI)
- **Effect of an external magnetic field on the K alpha and K beta x-ray emission lines of the 3d transition metals**
Porikli S., KURUCU Y.
INSTRUMENTATION SCIENCE & TECHNOLOGY, vol.36, pp.341-354, 2008 (Journal Indexed in SCI)
- **The Efficiency Determination for Si Li Detector in the 3 723 keV Energy Range**
YALÇIN P., SÜLÜN A., BAŞTUĞ A., KURUCU Y., ŞAHİN Y.
Canadian Journal Of Analytical Sciences And Spectroscopy, vol.50, pp.108-115, 2005 (Journal Indexed in SCI)
- **Emission probabilities of K X- and gamma-rays following Cr-51 and Ga-67 decay**
YALÇIN P., Kurucu Y.
APPLIED RADIATION AND ISOTOPES, vol.62, pp.63-67, 2005 (Journal Indexed in SCI)
- **Incoherent scattering cross-sections for elements with 23 <= Z <= 51 at 59.5 keV photon energy**
Kurucu Y.
JOURNAL OF ELECTRON SPECTROSCOPY AND RELATED PHENOMENA, vol.142, pp.39-43, 2005 (Journal Indexed in SCI)
- **Measurement of angular dependencies of M X-ray differential cross sections and production cross sections using 5.96 keV photons**
ŞAHİN M., Demir L., Kurucu Y.
JOURNAL OF RADIOANALYTICAL AND NUCLEAR CHEMISTRY, vol.261, pp.415-419, 2004 (Journal Indexed in SCI)
- **Angular dependence of LI, L α , L β and Ly 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, pp.605-612, 2003 (Journal Indexed in SCI Expanded)
- **Determination of the coating thicknesses due to the scattered radiation in energy dispersive X-ray fluorescence spectrometry**
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- **Incoherent scattering of 241[Am] gamma photons**
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Spectrochimica Acta - Part B Atomic Spectroscopy, vol.57, pp.791-796, 2002 (Journal Indexed in SCI)
- **Incoherent scattering functions for some elements with 23 <= Z <= 81**
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- **Measurement of foil and cable thicknesses by a transmission method**
EKİNCİ N., ÖZ E., KURUCU Y., ŞAHİN Y.
Instrumentation Science and Technology, vol.29, pp.415-421, 2001 (Journal Indexed in SCI)

- **Measurement of sample thickness by an intensity ratio method**
EKİNCİ N., ÖZ E., KURUCU Y., ŞAHİN Y.
Instrumentation Science and Technology, vol.29, pp.145-151, 2001 (Journal Indexed in SCI)
- **Measurement of the incoherent scattering functions**
YALÇIN P., KURUCU Y., İÇELLİ O., ERZENE OĞLU S. Z. , ŞAHİN Y.
Radiation Physics and Chemistry, vol.58, pp.325-329, 2000 (Journal Indexed in SCI)
- **Experimental studies on atomic form factors at 2 216Å 1 photon momentum transfer**
ERZENE OĞLU S. Z. , İÇELLİ O., YALÇIN P., KURUCU Y., ŞAHİN M.
JOURNAL OF TRACE AND MICROPROBE TECHNIQUES, vol.18, pp.361-367, 2000 (Journal Indexed in SCI Expanded)
- **Experimental studies on atomic form factors at 2.216 angstrom(-1) photon momentum transfer**
Erzeneoglu S., İcelli O., Yalcin P., Kurucu Y., Sahin M.
JOURNAL OF TRACE AND MICROPROBE TECHNIQUES, vol.18, pp.361-367, 2000 (Journal Indexed in SCI)
- **Incoherent scattering functions of 59.5 keV gamma rays by Ti, Ni, Zr, In, Au and Pb**
Kurucu Y., Demir L., Sahin Y.
PHYSICA SCRIPTA, vol.59, pp.118-121, 1999 (Journal Indexed in SCI)
- **Incoherent differential scattering cross-sections of 59.5 keV photons in In, Au and Pb**
KURUCU Y., DURAK R., ERZENE OĞLU S. Z. , ŞAHİN Y.
Journal of Trace and Microprobe Techniques, vol.16, pp.293-300, 1998 (Journal Indexed in SCI Expanded)
- **Measurement of the Compton and Coherent Scattering Differential Cross-Sections**
KURUCU Y., ERZENE OĞLU S., DURAK R., Şahin Y.
Turkish Journal of Physics, vol.22, pp.783-788, 1998 (Journal Indexed in SCI Expanded)
- **Incoherent scattering of 59.5 keV gamma rays by Fe, Zn and Nb**
Erzeneoglu S. Z. , Kurucu Y., Sahin Y.
PHYSICA SCRIPTA, vol.57, pp.503-505, 1998 (Journal Indexed in SCI)
- **Incoherent differential scattering cross-sections of 59.5 keV photons in In, An and Pb**
Kurucu Y., Durak R., Erzeneoglu S., Sahin Y.
JOURNAL OF TRACE AND MICROPROBE TECHNIQUES, vol.16, pp.293-300, 1998 (Journal Indexed in SCI)
- **Coherent scattering of 59.5 keV γ-rays by Ti, Ni, Zr and in through angles from 36° to 135°**
ERZENE OĞLU S. Z. , DURAK R., KURUCU Y., ŞAHİN Y.
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- **Measurement of photon-induced K X-ray production cross-sections for some elements with $40 \leq Z \leq 70$ at 122 keV**
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- **Scattering of 59.5 keV γ-rays by Ti, Ni and Zr**
KURUCU Y., ERZENE OĞLU S. Z. , DURAK R., ŞAHİN Y.
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- **Scattering contribution of fluorescent radiation to XRF intensity in Ge(Li) detectors**
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- **Natural background in Ge(Li) spectrometers**
DURAK R., ERZENE OĞLU S., KURUCU Y., Şahin Y.
Instrumentation Science and Technology, vol.25, pp.335-343, 1997 (Journal Indexed in SCI)
- **Coherent scattering of 59.5 keV photons by Au and Pb**
ERZENE OĞLU S. Z. , KURUCU Y., DURAK R., ŞAHİN Y.
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- **Measurement of M shell X-ray production cross sections and fluorescence yields for the elements in the atomic range $70 \leq Z \leq 92$ at 5.96 keV**
ERTUĞRUL M., TIRAŞOĞLU E., KURUCU Y., ERZENE OĞLU S. Z. , DURAK R., ŞAHİN Y.
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- **Measurements of atomic form factors at 4.283-A-1 photon-momentum transfer**

ERZENEÖĞLU S. Z. , KURUCU Y., DURAK R., AHIN Y.

Physical Review A, vol.51, pp.4628-4630, 1995 (Journal Indexed in SCI)

- **Incoherent scattering of 59.5 keV gamma-rays by light, medium and heavy elements**

KURUCU Y., ERZENEÖĞLU S. Z. , ŞAHİN Y., Durak R.

Il Nuovo Cimento D, vol.16, pp.555-559, 1994 (Journal Indexed in SCI)

- **Peak area determination and energy dependence of gamma- and X-ray peak tailing**

ŞAHİN Y., DURAK R., KURUCU Y., ERZENEÖĞLU S. Z.

Journal of Radioanalytical and Nuclear Chemistry Articles, vol.177, pp.403-413, 1994 (Journal Indexed in SCI)

Books & Book Chapters

- **Atom Fiziği**

KURUCU Y.

Pegem A Yayıncılık, Ankara, 2005

Refereed Congress / Symposium Publications in Proceedings

- **INVESTIGATION OF THE USABILITIES AS NUCLEAR SHIELDING MATERIAL OF ALUCHROM AND CHROMALOY RESISTANCE ALLOYS**

DEMİR L., KURUCU Y., ALIM B.

II. INTERNATIONAL TURKISH WORLD ENGINEERING AND SCIENCE CONGRESS (ITWESC 2019), Antalya, Turkey, 7 - 10 November 2019, vol.1, pp.95-107

- **ALUCHROM VE CHROMALOY DİRENÇ ALAŞIMLARININ NÜKLEER ZİRH MALZEMESİ OLARAK KULLANILABİLİRLİKLERİNİN ARAŞTIRILMASI**

DEMİR L., KURUCU Y., ALIM B.

II. Uluslararası Türk Dünyası Mühendislik ve Fen Bilimleri Kongresi, 7 - 10 November 2019

- **Measurements of Lx-ray production cross-section and ...**

CİNAN E., EKİNCİ N., ŞAKAR E., KURUCU Y., ÖZDEMİR Y.

3rd international conference materials science and technology., 17 - 19 September 2018

- **Photon interaction parameters of InGaN thin films.**

KAVAZ E., EKİNCİ N., kundakçı M., KURUCU Y., GÜRBULAK B.

2nd international congress on semiconductor materials and devices, 28 - 30 August 2018

- **Effect of the temperature variation of Lx-ray...**

CİNAN E., EKİNCİ N., ŞAKAR E., KURUCU Y., ÖZDEMİR Y.

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- **Measurements L X-ray Production Cross-Sections and Intensity Ratios for Tm₂O₃ Compound Depending on the Temperature**

CİNAN E., LEVET A., EKİNCİ N., ŞAKAR E., KURUCU Y., ÖZDEMİR Y.

3rd International Conference on Material Science and Technology in Cappadocia (IMSTEC'18), Nevşehir, Turkey, 17 - 19 September 2018, pp.353-359

- **EFFECT OF THE TEMPERATURE VARIATION ON L X-RAY INTENSITY RATIOS AND L X-RAY PRODUCTION CROSS-SECTIONS OF PR₆O₁₁ COMPOUND**

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3rd International Conference on Material Science and Technology in Cappadocia (IMSTEC'18), Nevşehir, Turkey, 17 - 19 September 2018, pp.657-661

- **The importance of Er and boron compounds for radiation shielding in nuclear power plants.**

CİNAN E., KAVAZ E., KURUCU Y., EKİNCİ N., ÖZDEMİR Y.

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- **The importance of erbium and boron compounds for radiation shielding in nuclear power plants**

LEVET A., KÖÇ BAKACAK P., CİNAN E., KAVAZ E., KURUCU Y., EKİNCİ N., ÖZDEMİR Y.

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- **Determination of gamma ray shielding parameters for some lead compounds**

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- **Magnetic Field Effect on Coherent to Incoherent Scattering Differential Cross-Section Ratios of Micro-structure 3d Ferromagnetic Transition Elements at 59.54 keV**
ALIM B., UĞURLU M., KURUCU Y., DEMİR L.
Turkish Physical Society 33rd International Physics Congress (TPS33), Bodrum/Muğla, Muğla, Turkey, 6 - 10 September 2017
- **Determination of Photon Absorption Parameters of Ti-Ni Based Shape Memory Alloys at 59.54 keV**
ALIM B., UĞURLU M., KURUCU Y., DEMİR L.
Turkish Physical Society 33rd International Physics Congress (TPS33), Bodrum/Muğla, Muğla, Turkey, 6 - 10 September 2017
- **Magnetic Field Effect on K-shell X-ray Intensity Ratios of Soft Magnetic Fe-Ni alloys**
ALIM B., UĞURLU M., KURUCU Y., DEMİR L.
Turkish Physical Society 33rd International Physics Congress (TPS33), Bodrum/Muğla, Muğla, Turkey, 6 - 10 September 2017
- **The effect of External Magnetic Field on Incoherent Differential Scattering Cross-Sections for elements with $20 \leq Z \leq 68$ at 59,54 keV**
ALIM B., UĞURLU M., KURUCU Y., DEMİR L.
Turkish Physical Society 33rd International Physics Congress (TPS33), Bodrum/Muğla, Muğla, Turkey, 6 - 10 September 2017
- **The effect of external magnetic field on incoherent scattering cross-sections ..**
ALIM B., KURUCU Y., DEMİR L.
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- **The effect of external magnetic field on incoherent differential scattering cross-sections for elements with $20 \leq Z \leq 68$ at 59,54 keV photon energy.**
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Turkish Physical Society 33rd International Physics Congress (TPS33), Turkey, 6 - 10 September 2017
- **The Effect of External Magnetic Field on Incoherent differential Scattering Cross-Sections for Elements with $20 \leq Z \leq 68$ at 59,54 keV Photon Energy**
ALIM B., UĞURLU M., KURUCU Y., DEMİR L.
Turkish Physical Society 33rd International Physics Congress (TPS 33), 6 - 10 September 2017

Supported Projects

YILMAZ D., KURUCU Y., GÜZELDİR B., Project Supported by Higher Education Institutions, Fizik Bölümü lisansüstü laboratuvarlarının temel ihtiyaçlarının karşılanması için çalışmalar Farklı bor bileşikleri ile katkılanmış Bi₂O₃TeO₂ ve Bi₂O₃SeO₂ cam kompozitlerin üretilmesi ve radyasyon zırlama özelliklerinin incelenmesi Çeşitli enerjilerde gama radyasyonuna maruz bırakılmış CdTe ve ZnTe ince filmlerin karakterizasyonu, 2020 - Continues

KURUCU Y., ÇAĞLAR İ., Project Supported by Higher Education Institutions, Bazı İkili Alaşımların Compton Profile Ölçümleri ve Yük Transferlerinin Belirlenmesi, 2019 - Continues

KURUCU Y., GÜZELDİR B., AYDOĞAN Ş., BİBER M., ÇALDIRAN Z., BALTAKESMEZ A., Project Supported by Higher Education Institutions, Fizik Bölümü Nanooygit laboratuvarının ARGE potansiyelinin iyileştirilmesi için çalışmalar Beyaz polimer ışık yayan diyot WPLED ve Yüzey Plazmon Etkisi Gösteren Metal Nanoparçacıkların P3HTPCBM Aktif Tabakaya Katkılanmasıyla Elde Edilen Hibrit Organik Güneş Pillerinin Fabrikasyonu, 2019 - Continues

DEMİR L., ALIM B., KURUCU Y., ŞANLIM., ÖZPOLAT Ö. F. , UĞURLU M., URTEKİN E., Project Supported by Higher Education Institutions, Geçiş Metal Alaşımlarında Compton saçılmasına ve Kb/Ka X-ışını şiddet oranlarına kimyasal etkinin araştırılması, 2019 - Continues

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

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METAL ALAŞIMLARININ K TABAKASI VALENS ELEKTRON YAPILARININ ARAŞTIRILMASI, 2015 - 2017
KURUCU Y., ALIM B., DEMİR L., Project Supported by Higher Education Institutions, DIŞ MANYETİK ALANDA
İNKOHERENT SAÇILMA TESİR KESİTİ ÖLÇÜMLERİ, 2015 - 2017
KURUCU Y., TUBITAK Project, EDXRF ve WDXRF sistemleri ile K ve L tabakasına ait pik enerji değişimleri, pik genişliği(FWHM) ve şiddet oranı değerleri üzerine kimyasal etkilerin incelenmesi ve EDXRF sisteminde farklı manyetik alan değerlerinin bağ yapısı üzerine etkilerinin incelenmesi., 2006 - 2009

Activities in Scientific Journals

Erzincan Üniversitesi Fen Bilimleri Dergisi, Publication Committee Member, 2016 - Continues

Citations

Total Citations (WOS):213

h-index (WOS):9