



Murat Kurudirek

Prof. Dr. · Elektrik ve Enerji Bölümü Başkanlığı

Atatürk Üniversitesi > Teknik Bilimler Meslek Yüksekokulu Müdürlüğü > Elektrik ve Enerji Bölümü Başkanlığı

ORCID: [0000-0002-1626-7629](#) · Scopus Yazar ID: [35299447500](#) · Publons / ResearcherID: [A-6579-2010](#) · Google

Scholar ID: [-8xOn5oAAAAJ](#) · YÖKSİS Araştırmacı ID: [170724](#)

<https://akademik.atauni.edu.tr/cv/mkurudirek>

Genel Bakış

Dr. Kurudirek is a Professor of Physics in Vocational School of Technical Sciences at Ataturk University. Dr. Kurudirek completed his Ph. D in 2011 and his studies fall within the scope of Nuclear Science & Technology. He was awarded to a post doctoral research fellowship by TUBITAK in 2013 and with this fellowship he conducted research on neutron measurements in Georgia Institute of Technology, USA between 2013 and 2015. His primary research interest is based on radiation detection, shielding, dosimetry, development of novel radiation detector materials. He has been an author of over 70 publications most of which were published in SCI indexed journals. He has been awarded several internal awards by Ataturk University between 2010 and 2020. He was awarded as Professor Sevkett Erk Young Scientist by Turkish Physical Society in 2011. He took place in PLOS Biology Top Scientists List both in 2020 and 2021. He is currently a Marie-Sklodowska Curie Fellow sponsored by the European Commission under the Horizon 2020 program. With his Horizon 2020 funded project, which will be mentored by the world renown scientists from USA and UK, he will focus on developing novel nuclear detector materials based on nanotechnology.

Görev yeri: Prof. Dr. · Teknik Bilimler Meslek Yüksekokulu Müdürlüğü > Elektrik ve Enerji Bölümü Başkanlığı

Web of Science Araştırma Alanları: Physics · Physics, Atomic, Molecular & Chemical · Nuclear Science & Technology

Scopus Konu Alanları (ASJC): Atomic and Molecular Physics, and Optics · Nuclear Energy and Engineering

Eğitim ve Yetkinlikler

Eğitim Bilgileri

1. **Doktora** (2005 – 2011)

Atatürk Üniversitesi > Fen Bilimleri Enstitüsü Müdürlüğü > Fizik Ana Bilim Dalı Başkanlığı

Türkiye

Yaptığı Tezler

1. **Bazı çoklu element yapıdaki maddelerin foton etkileşimi, foton enerji soğurması, foton kuvvetlendirme faktörü ve hızlı nötron azaltma tesir kesitleri açısından incelenmesi** (2011)

Murat Kurudirek

Yaptığı Tez · Doktora · Danışman: Prof. Dr. Yüksel Özdemir · Devam ediyor · Atatürk Üniversitesi · Türkiye

Mesleki Deneyim

Akademik Ünvanlar/Görevler

- Prof. Dr.** (2020 – Devam ediyor)
Atatürk Üniversitesi
- Prof. Dr.** (2006 – Devam ediyor)
Atatürk Üniversitesi > Teknik Bilimler Meslek Yüksekokulu Müdürlüğü > Elektrik ve Enerji Bölümü Başkanlığı
- Doç. Dr.** (2014 – 2020)
Atatürk Üniversitesi > Fen Fakültesi Dekanlığı > Fizik Bölümü Başkanlığı
- Yrd. Doç. Dr.** (2011 – 2014)
Atatürk Üniversitesi > Fen Fakültesi Dekanlığı > Fizik Bölümü Başkanlığı
- Araştırma Görevlisi** (2006 – 2011)
Atatürk Üniversitesi > Fen Bilimleri Enstitüsü Müdürlüğü

Akademik İdari Deneyim

- Akademik İdari Deneyim** (2012 – 2014)
Murat Kurudirek
Akademik İdari Deneyim · Bölüm Başkan Yardımcısı · Atatürk Üniversitesi · Türkiye

Akademi Dışı Deneyim

- Visiting Scientist** (2013 – 2015)
Murat Kurudirek
Akademi Dışı Deneyim · Georgia Institute of Technology

Proje & Tasarımlar

- ÇEŞİTLİ ENDÜSTRİYEL ATIKLARIN CAMLAŞTIRILMASI İLE ELDE EDİLEN CAM SİSTEMLERİNİN RADYASYON AZALTMA PARAMETRELERİ AÇISINDAN İNCELENMESİ** (2011 – 2013)
Murat Kurudirek
Proje · Ulusal · Rol: Yürütücü · Tamamlandı · Atatürk Üniversitesi · Türkiye

Yayınlar

Makaleler

- Fast luminescence and low-energy photon response of long Ga-containing ZnO nanorod arrays** (2027)
S.V. Kurudirek, **Murat Kurudirek**
RADIATION PHYSICS AND CHEMISTRY, Cilt 251 · DOI: [10.1016/j.radphyschem.2026.114491](https://doi.org/10.1016/j.radphyschem.2026.114491)
Tam Makale · Uluslararası
- Bi-Assisted Double-Sided ZnO Nanorod Architectures for Fast and Geometry-Enhanced X-Ray Scintillation** (2026)
SV Kurudirek, A Erickson, PJ Sellin, BJ Lawrie, TA Balandin, L Stand, CL Melcher, JD Azoulay, NE Hertel, **Murat Kurudirek**
ACS APPLIED OPTICAL MATERIALS, Cilt 4, Sayı 9, ss. 2746–2764 · DOI: [10.1021/acsaom.6c00409](https://doi.org/10.1021/acsaom.6c00409)
Tam Makale · Uluslararası

3. **Vertically Self-Oriented, Ultrafast 1D ZnO:Li Nanorods as Scintillators for Thermal Neutron Detection** (2025)
Murat Kurudirek, Sinem V. Kurudirek, Anna Erickson, Paul J. Sellin, Mackenzie Duce, Johan Gouws, Benjamin J. Lawrie, Charles L. Melcher, Nolan E. Hertel
ACS APPLIED NANO MATERIALS, Cilt 8, Sayı 43, ss. 20697-20712 · DOI: [10.1021/acsanm.5c03082](https://doi.org/10.1021/acsanm.5c03082)
Tam Makale · Uluslararası
4. **Synergistic effects of Al, Ga, and In doping on ZnO nanorod arrays grown via citrate-assisted hydrothermal technique for highly efficient and fast scintillator screens** (2025)
Murat Kurudirek, Sinem V. Kurudirek, Anna Erickson, Nolan Hertel, Benjamin J. Lawrie, Yauhen Tratsiak, Benjamin Klein, Charles L. Melcher, Christopher J. Summers, Paul J. Sellin
Discover Nano, Cilt 20, Sayı 1 · DOI: [10.1186/s11671-025-04227-5](https://doi.org/10.1186/s11671-025-04227-5)
Tam Makale · Uluslararası
5. **Solution processed high aspect ratio ultra-long vertically well-aligned ZnO nano scintillators for potential X-ray imaging applications** (2024)
Sinem V. Kurudirek, **Murat Kurudirek**, Anna Erickson, Nolan Hertel, Paul J. Sellin, Yauhen Tratsiak, Benjamin J. Lawrie, Charles L. Melcher, Christopher J. Summers
SCIENTIFIC REPORTS, Cilt 14, Sayı 1 · DOI: [10.1038/s41598-024-61895-6](https://doi.org/10.1038/s41598-024-61895-6)
Tam Makale · Uluslararası
6. **Vertically Well-Aligned ZnO Nanoscintillator Arrays with Improved Photoluminescence and Scintillation Properties** (2023)
Murat Kurudirek, Sinem V. Kurudirek, Nolan E. Hertel, Anna Erickson, Paul J. Sellin, Sharmistha Mukhopadhyay, AYKUT ASTAM, Christopher J. Summers
MATERIALS, Cilt 16, Sayı 20 · DOI: [10.3390/ma16206717](https://doi.org/10.3390/ma16206717)
Tam Makale · Uluslararası
7. **The differential scattering parameters of different types of materials in Compton energy region for nuclear applications** (2022)
Elif Boydaş, G. Tuna, **Murat Kurudirek**
EUROPEAN PHYSICAL JOURNAL PLUS, Cilt 137, Sayı 7 · DOI: [10.1140/epjp/s13360-022-02977-0](https://doi.org/10.1140/epjp/s13360-022-02977-0)
Tam Makale · Uluslararası
8. **A Monte Carlo investigation of some important radiation parameters and tissue equivalency for photons below 1 keV in human tissues** (2022)
Mustafa Mohammad Rafiei, Sara Parsaei, Parminder Kaur, K. J. Singh, Mehmet Buyukyildiz, **Murat Kurudirek**
BIOMEDICAL PHYSICS & ENGINEERING EXPRESS, Cilt 8, Sayı 2 · DOI: [10.1088/2057-1976/ac428f](https://doi.org/10.1088/2057-1976/ac428f)
Tam Makale · Uluslararası
9. **Study of low-energy photon interactions below 1 keV for some biological molecules of human body** (2022)
Mustafa Mohammad Rafiei, Sara Parsaei, Parminder Kaur, K. J. Singh, Mehmet Buyukyildiz, **Murat Kurudirek**
EUROPEAN PHYSICAL JOURNAL PLUS, Cilt 137, Sayı 2 · DOI: [10.1140/epjp/s13360-022-02445-9](https://doi.org/10.1140/epjp/s13360-022-02445-9)
Tam Makale · Uluslararası
10. **Structural investigations and nuclear radiation shielding ability of bismuth lithium antimony borate glasses** (2021)
Parminder Kaur, K.J. Singh, Sonika Thakur, **Murat Kurudirek**, Mustafa Mohammad Rafiei
Journal of Physics and Chemistry of Solids, Cilt 150 · DOI: [10.1016/j.jpcs.2020.109812](https://doi.org/10.1016/j.jpcs.2020.109812)
Tam Makale · Uluslararası

11. **A detailed investigation of gamma-ray energy absorption and dose buildup factor for soft tissue and tissue equivalents using Monte Carlo simulation** (2020)
Mustafa Mohammad Rafiei, Hossein Tavakoli-Anbaran, **Murat Kurudirek**
RADIATION PHYSICS AND CHEMISTRY, Cilt 177 · DOI: [10.1016/j.radphyschem.2020.109118](https://doi.org/10.1016/j.radphyschem.2020.109118)
Tam Makale · Uluslararası
12. **A Monte Carlo study on the gamma-ray buildup factors for the linear sources embedded in a cylindrical shield** (2020)
M.M. Rafiei, S. Parsaei, **Murat Kurudirek**
Journal of Instrumentation, Cilt 15, Sayı 11 · DOI: [10.1088/1748-0221/15/11/t11004](https://doi.org/10.1088/1748-0221/15/11/t11004)
Tam Makale · Uluslararası
13. **Investigation of a competent non-toxic Bi2O3- Li2O-CeO2- MoO3- B2O3 glass system for nuclear radiation security applications** (2020)
Parminder Kaur, K. J. Singh, Sonika Thakur, **Murat Kurudirek**
JOURNAL OF NON-CRYSTALLINE SOLIDS, Cilt 545 · DOI: [10.1016/j.jnoncrysol.2020.120235](https://doi.org/10.1016/j.jnoncrysol.2020.120235)
Tam Makale · Uluslararası
14. **Investigation of some nuclear engineering materials in terms of gamma ray buildup factors at experimental energies used in nuclear physics experiments** (2020)
Murat Kurudirek, Yakup Kurucu
Radiation Effects and Defects in Solids, Cilt 175, ss. 640–656 · DOI: [10.1080/10420150.2020.1737694](https://doi.org/10.1080/10420150.2020.1737694)
Tam Makale · Uluslararası
15. **TiB2 Thin Film Coated Glass and High Speed Steel (HSS) in Applications of Radiation Shielding Technology** (2020)
MEHMET BÜYÜKYILDIZ, AHMET TURAN, TOLGA TAVŞANOĞLU, Erdem Şakar, **Murat Kurudirek**
JOURNAL of INNOVATIVE SCIENCE and ENGINEERING (JISE), Cilt 4, Sayı 2, ss. 84–95 · DOI: [10.38088/jise.731126](https://doi.org/10.38088/jise.731126)
Tam Makale · Ulusal
16. **Radiation shielding properties of bismuth borate glasses doped with different concentrations of cadmium oxides** (2020)
Y.S. Alajerami, D. Drabold, M.H.A. Mhareb, Katherine Leslee A. Cimat, Gang Chen, **Murat Kurudirek**
Ceramics International, Cilt 46, ss. 12718–12726 · DOI: [10.1016/j.ceramint.2020.02.039](https://doi.org/10.1016/j.ceramint.2020.02.039)
Tam Makale · Uluslararası
17. **Phy-X/ZexTRA: a software for robust calculation of effective atomic numbers for photon, electron, proton, alpha particle, and carbon ion interactions** (2020)
Özgür Fırat Özpolat, B. Alım, Erdem Şakar, M. Büyükyıldız, **Murat Kurudirek**
RADIATION AND ENVIRONMENTAL BIOPHYSICS, Cilt 59, Sayı 2, ss. 321–329 · DOI: [10.1007/s00411-019-00829-7](https://doi.org/10.1007/s00411-019-00829-7)
Tam Makale · Uluslararası
18. **Phy-X / PSD: Development of a user friendly online software for calculation of parameters relevant to radiation shielding and dosimetry** (2020)
Erdem Şakar, Özgür Fırat Özpolat, Bünyamin Alım, M.I. Sayyed, **Murat Kurudirek**
RADIATION PHYSICS AND CHEMISTRY, Cilt 166 · DOI: [10.1016/j.radphyschem.2019.108496](https://doi.org/10.1016/j.radphyschem.2019.108496)
Tam Makale · Uluslararası
19. **Study of environment friendly bismuth incorporated lithium borate glass system for structural, gamma-ray and fast neutron shielding properties** (2019)
Parminder Kaur, K. J. Singh, **Murat Kurudirek**, Sonika Thakur
Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, Cilt 223 · DOI: [10.1016/j.saa.2019.117309](https://doi.org/10.1016/j.saa.2019.117309)
Tam Makale · Uluslararası

20. **Estimation of energy absorption buildup factors of some human tissues at energies relevant to brachytherapy and external beam radiotherapy** (2019)
Murat Kurudirek, Yakup Kurucu
INTERNATIONAL JOURNAL OF RADIATION BIOLOGY, Cilt 95, Sayı 12, ss. 1685–1695 · DOI: [10.1080/09553002.2019.1665217](https://doi.org/10.1080/09553002.2019.1665217)
Tam Makale · Uluslararası
21. **Physical, mechanical and gamma-ray shielding properties of highly transparent ZnO-MoO₃-TeO₂ glasses** (2019)
M. Celikbilek Ersundu, Ali Erçin Ersundu, N Gedikoğlu, Erdem Şakar, Mehmet Büyükyıldız, **Murat Kurudirek**
JOURNAL OF NON-CRYSTALLINE SOLIDS, Cilt 524 · DOI: [10.1016/j.jnoncrysol.2019.119648](https://doi.org/10.1016/j.jnoncrysol.2019.119648)
Tam Makale · Uluslararası
22. **Gamma-ray and neutron shielding behaviour of CaO-K₂O-P₂O₅ glass system modified with Bi₂O₃** (2019)
Parminder Kaur, K. J. Singh, **Murat Kurudirek**, Sonika Thakur
AIP Conference Proceedings, Cilt 2115
Tam Makale · Uluslararası
23. **Leaded brass alloys for gamma-ray shielding applications** (2019)
Erdem Şakar, Mehmet Buyukyildiz, Bunyamin Alim, Betül Ceviz Şakar, **Murat Kurudirek**
RADIATION PHYSICS AND CHEMISTRY, Cilt 159, ss. 64–69 · DOI: [10.1016/j.radphyschem.2019.02.042](https://doi.org/10.1016/j.radphyschem.2019.02.042)
Tam Makale · Uluslararası
24. **Synthesis and photoluminescence properties of Ga-doped ZnO nanorods by a low temperature solution method** (2018)
Sinem Vahide Kurudirek, **Murat Kurudirek**, Benjamin Db Klein, Christopher J Summers, Nolan E Hertel
NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT, Cilt 904, ss. 158–162 · DOI: [10.1016/j.nima.2018.07.038](https://doi.org/10.1016/j.nima.2018.07.038)
Tam Makale · Uluslararası
25. **Effect of Bi₂O₃ on gamma ray shielding and structural properties of borosilicate glasses recycled from high pressure sodium lamp glass** (2018)
Murat Kurudirek, Natsupon Chutithanapanon, Raewat Laopaiboon, Chadet Yenchai, Cherdasak Bootjomchai
JOURNAL OF ALLOYS AND COMPOUNDS, Cilt 745, ss. 355–364 · DOI: [10.1016/j.jallcom.2018.02.158](https://doi.org/10.1016/j.jallcom.2018.02.158)
Tam Makale · Uluslararası
26. **The heavy metal oxide glasses within the WO₃-MoO₃-TeO₂ system to investigate the shielding properties of radiation applications** (2018)
Ali Erçin ERSUNDU, M. Buyukyildiz, M. Celikbilek Ersundu, Erdem Şakar, **Murat Kurudirek**
PROGRESS IN NUCLEAR ENERGY, Cilt 104, ss. 280–287 · DOI: [10.1016/j.pnucene.2017.10.008](https://doi.org/10.1016/j.pnucene.2017.10.008)
Tam Makale · Uluslararası
27. **Radiological properties of healthy, carcinoma and equivalent breast tissues for photon and charged particle interactions** (2018)
Mehmet Büyükyıldız, **Murat Kurudirek**
INTERNATIONAL JOURNAL OF RADIATION BIOLOGY, Cilt 94, Sayı 1, ss. 70–78 · DOI: [10.1080/09553002.2018.1403057](https://doi.org/10.1080/09553002.2018.1403057)
Tam Makale · Uluslararası
28. **Heavy metal borate glasses: Potential use for radiation shielding** (2017)
Murat Kurudirek
JOURNAL OF ALLOYS AND COMPOUNDS, Cilt 727, ss. 1227–1236 · DOI: [10.1016/j.jallcom.2017.08.237](https://doi.org/10.1016/j.jallcom.2017.08.237)
Tam Makale · Uluslararası

29. **Effective atomic number and buildup factor calculations for metal nano particle doped polymer gel** (2017)
P. Sathiyaraj, E. J. J. Samuel, C. C. S. Valeriano, **Murat Kurudirek**
VACUUM, Cilt 143, ss. 138-149 · DOI: [10.1016/j.vacuum.2017.06.005](https://doi.org/10.1016/j.vacuum.2017.06.005)
Tam Makale · Uluslararası
30. **Determination of radiation shielding parameters of 304L stainless steel specimens from welding area for photons of various gamma ray sources** (2017)
M. Buyukyildiz, **Murat Kurudirek**, M. Ekici, Orhan İçelli, Yaşar Karabul
PROGRESS IN NUCLEAR ENERGY, Cilt 100, ss. 245-254 · DOI: [10.1016/j.pnucene.2017.06.014](https://doi.org/10.1016/j.pnucene.2017.06.014)
Tam Makale · Uluslararası
31. **Study of gamma radiation shielding properties of glasses** (2017)
Shams A. M. Issa, M. I. Sayyed, **Murat Kurudirek**
BULLETIN OF MATERIALS SCIENCE, Cilt 40, ss. 841-857 · DOI: [10.1007/s12034-017-1425-x](https://doi.org/10.1007/s12034-017-1425-x)
Tam Makale · Uluslararası
32. **Quantitative X-Ray Analysis for Cr-Fe Binary Ferroalloys by Using EDXRF-WDXRF Techniques** (2017)
M. Buyukyildiz, Elif Boydaş, **Murat Kurudirek**, E. Oz Orhan
INSTRUMENTS AND EXPERIMENTAL TECHNIQUES, Cilt 60, ss. 584-588 · DOI: [10.1134/s0020441217040121](https://doi.org/10.1134/s0020441217040121)
Tam Makale · Uluslararası
33. **Effective atomic number of Mn-Co-Fe₂O₃ ternary alloys using the Rayleigh to Compton scattering ratio** (2017)
M. Buyukyildiz, **Murat Kurudirek**
CANADIAN JOURNAL OF PHYSICS, Cilt 95, ss. 402-406 · DOI: [10.1139/cjp-2016-0756](https://doi.org/10.1139/cjp-2016-0756)
Tam Makale · Uluslararası
34. **Effective atomic number of soft tissue, water and air for interaction of various hadrons, leptons and isotopes of hydrogen** (2017)
Murat Kurudirek
INTERNATIONAL JOURNAL OF RADIATION BIOLOGY, Cilt 93, ss. 1299-1305 · DOI: [10.1080/09553002.2018.1388546](https://doi.org/10.1080/09553002.2018.1388546)
Tam Makale · Uluslararası
35. **A STUDY OF THE EFFECTIVE ATOMIC NUMBER OF SixPb_{0.7-x}(Fe₂O₃)(0.3) TERNARY ALLOYS FOR PHOTONS** (2016)
Mehmet Buyukyildiz, **Murat Kurudirek**
NUCLEAR TECHNOLOGY & RADIATION PROTECTION, Cilt 31, ss. 327-334 · DOI: [10.2298/ntrp1604327b](https://doi.org/10.2298/ntrp1604327b)
Tam Makale · Uluslararası
36. **A study of effective atomic number and electron density of gel dosimeters and human tissues for scattering of gamma rays: momentum transfer, energy and scattering angle dependence** (2016)
Murat Kurudirek
RADIATION AND ENVIRONMENTAL BIOPHYSICS, Cilt 55, ss. 501-507 · DOI: [10.1007/s00411-016-0668-z](https://doi.org/10.1007/s00411-016-0668-z)
Tam Makale · Uluslararası
37. **Estimation of effective atomic number in the Rayleigh to Compton scattering ratio using different methods** (2016)
Murat Kurudirek, M. Buyukyildiz
NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT, Cilt 820, ss. 80-84 · DOI: [10.1016/j.nima.2016.03.029](https://doi.org/10.1016/j.nima.2016.03.029)
Tam Makale · Uluslararası

38. **Effective atomic number, energy loss and radiation damage studies in some materials commonly used in nuclear applications for heavy charged particles such as H, C, Mg, Fe, Te, Pb and U** (2016)
Murat Kurudirek
RADIATION PHYSICS AND CHEMISTRY, Cilt 122, ss. 15–23 · DOI: [10.1016/j.radphyschem.2016.01.012](https://doi.org/10.1016/j.radphyschem.2016.01.012)
Tam Makale · Uluslararası
39. **Water and tissue equivalence properties of biological materials for photons, electrons, protons and alpha particles in the energy region 10keV-1GeV: a comparative study** (2016)
Murat Kurudirek
INTERNATIONAL JOURNAL OF RADIATION BIOLOGY, Cilt 92, Sayı 9, ss. 508–520 · DOI: [10.1080/09553002.2016.1206225](https://doi.org/10.1080/09553002.2016.1206225)
Tam Makale · Uluslararası
40. **Investigation of gamma radiation shielding properties of some zinc tellurite glasses** (2016)
Shams Issa, Mohamad Sayyed, **Murat Kurudirek**
Journal of Physical Science, Cilt 27, ss. 97–119 · DOI: [10.21315/jps2016.27.3.7](https://doi.org/10.21315/jps2016.27.3.7)
Tam Makale · Uluslararası
41. **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** (2015)
Murat Kurudirek, Oguz AKSAKAL, Tuba Akkus
RADIATION AND ENVIRONMENTAL BIOPHYSICS, Cilt 54, Sayı 4, ss. 481–492 · DOI: [10.1007/s00411-015-0606-5](https://doi.org/10.1007/s00411-015-0606-5)
Tam Makale · Uluslararası
42. **Modern utilization of an accurate method for detecting essential elements in whole blood using low energy photons** (2015)
M. E. Medhat, W E SHAN, **Murat Kurudirek**
X-Ray Spectrometry, Cilt 44, Sayı 6, ss. 418–425 · DOI: [10.1002/xrs.2604](https://doi.org/10.1002/xrs.2604)
Tam Makale · Uluslararası
43. **Studies on heavy charged particle interaction, water equivalence and Monte Carlo simulation in some gel dosimeters, water, human tissues and water phantoms** (2015)
Murat Kurudirek
NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT, Cilt 795, ss. 239–252 · DOI: [10.1016/j.nima.2015.06.001](https://doi.org/10.1016/j.nima.2015.06.001)
Tam Makale · Uluslararası
44. **Calculation of effective atomic number and electron density of essential biomolecules for electron, proton, alpha particle and multi-energetic photon interactions** (2015)
Murat Kurudirek, Tayfur Onaran
RADIATION PHYSICS AND CHEMISTRY, Cilt 112, ss. 125–138 · DOI: [10.1016/j.radphyschem.2015.03.034](https://doi.org/10.1016/j.radphyschem.2015.03.034)
Tam Makale · Uluslararası
45. **Collisional, radiative and total electron interaction in compound semiconductor detectors and solid state nuclear track detectors: Effective atomic number and electron density** (2015)
Murat Kurudirek, Sinem V. Kurudirek
APPLIED RADIATION AND ISOTOPES, Cilt 99, ss. 54–58 · DOI: [10.1016/j.apradiso.2015.02.011](https://doi.org/10.1016/j.apradiso.2015.02.011)
Tam Makale · Uluslararası

46. **Radiation shielding and effective atomic number studies in different types of shielding concretes, lead base and non-lead base glass systems for total electron interaction: A comparative study** (2014)
Murat Kurudirek
Nuclear Engineering and Design, Cilt 280, ss. 440–448 · DOI: [10.1016/j.nucengdes.2014.09.020](https://doi.org/10.1016/j.nucengdes.2014.09.020)
Tam Makale · Uluslararası
47. **Effective atomic numbers, water and tissue equivalence properties of human tissues, tissue equivalents and dosimetric materials for total electron interaction in the energy region 10 keV-1 GeV** (2014)
Murat Kurudirek
APPLIED RADIATION AND ISOTOPES, Cilt 94, ss. 1–7 · DOI: [10.1016/j.apradiso.2014.07.002](https://doi.org/10.1016/j.apradiso.2014.07.002)
Tam Makale · Uluslararası
48. **Effective atomic numbers of different types of materials for proton interaction in the energy region 1 keV-10 GeV** (2014)
Murat Kurudirek
NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS, Cilt 336, ss. 130–134 · DOI: [10.1016/j.nimb.2014.07.008](https://doi.org/10.1016/j.nimb.2014.07.008)
Tam Makale · Uluslararası
49. **Effective atomic numbers and electron densities of some human tissues and dosimetric materials for mean energies of various radiation sources relevant to radiotherapy and medical applications** (2014)
Murat Kurudirek
RADIATION PHYSICS AND CHEMISTRY, Cilt 102, ss. 139–146 · DOI: [10.1016/j.radphyschem.2014.04.033](https://doi.org/10.1016/j.radphyschem.2014.04.033)
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