

## Assoc. Prof. Nergiz Yıldız Yorgun

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### International Researcher IDs

ORCID: 0000-0002-2515-1994

Publons / Web Of Science ResearcherID: AAA-4474-2019

Yoksis Researcher ID: 37832

### Education Information

Doctorate, Ege University, Nükleer Bilimler Enstitüsü, Nükleer Fizik, Turkey 2005 - 2010

### Research Areas

Physics, Nuclear physics, Radioactive decay and in-beam spectroscopy, Natural Sciences

### Academic Titles / Tasks

Associate Professor, Van Yüzüncü Yil University, Fen Fakültesi, Fizik Bölümü, 2020 - Continues

Assistant Professor, Van Yüzüncü Yil University, Fen Fakültesi, Fizik Bölümü, 2011 - 2020

Research Assistant, Van Yüzüncü Yil University, Fen Fakültesi, Fizik Bölümü, 2002 - 2011

### Academic and Administrative Experience

Van Yüzüncü Yil University, Fen Fakültesi, Fizik, 2016 - Continues

### Advising Theses

Yıldız N., Filyon Reaktörlerinde Nötron Zehiri İzotopların Tesir Kesiti Hesaplamaları, Postgraduate, R.KARTAL(Student), 2017

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

- I. **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)
- II. **Structural and photon/neutron attenuation features of PbNi/CNT nanocomposites: An experimental approach**

Yıldız Yorgun N., KAVAZ E., Ulaş B., Yılmaz Y., Kıvrak H.

Progress in Nuclear Energy, vol.157, 2023 (SCI-Expanded)

- III. **Comprehensive natural radioactivity and pollution risk assessments of aquatic media and sediment in Lake Van (Türkiye)**  
Selçuk Zorer Ö., Yıldız Yorgun N., Özdemir Ö. F., Ögün E., Aydın H., Atıcı A. A., Aydın F., Bora G., Şen F., Çavuş A., et al.  
MARINE POLLUTION BULLETIN THE INTERNATIONAL JOURNAL FOR MARINE ENVIRONMENTALISTS, SCIENTISTS, ENGINEERS, ADMINISTRATORS, POLITICIANS AND LAWYERS, vol.186, no.114449, pp.1-15, 2023 (SCI-Expanded)
- IV. **Measurement of the Concentration of Ra-226, Th-232, K-40 in The Soil In Settlements on the Coastline of Lake Van, Turkey**  
Yıldız Yorgun N., Oto B., Gur F., Tarakci M., Yildiz H. E., KAVAZ E.  
RADIATION PROTECTION DOSIMETRY, vol.198, no.20, pp.1575-1584, 2022 (SCI-Expanded)
- V. **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)
- VI. **Iron (III) oxide doped lithium borate glasses: structural and charged particles/photon shielding properties**  
KARA Ü., Susoy G., Issa S. A., Elshami W., Yorgun N., Abuzaid M., KAVAZ E., Tekin H.  
Journal of Non-Crystalline Solids, vol.546, 2020 (SCI-Expanded)
- VII. **Development and production of metal oxide doped glasses for gamma ray and fast neutron shielding**  
Aygün B., ŞAKAR E., CİNAN E., Yorgun N., Sayyed M., Agar O., KARABULUT A.  
RADIATION PHYSICS AND CHEMISTRY, vol.174, 2020 (SCI-Expanded)
- VIII. **Optical, structural and gamma ray shielding properties of dolomite doped lithium borate glasses for radiation shielding applications**  
KARA Ü., Issa S. A. M., Yorgun N., Kilicoglu O., Rashad M., Abuzaid M. M., KAVAZ E., Tekin H. O.  
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.539, 2020 (SCI-Expanded)
- IX. **Scanning electron microscopy (SEM), energy-dispersive X-ray (EDX) spectroscopy and nuclear radiation shielding properties of [alpha-Fe<sub>3</sub>+O(OH)]-doped lithium borate glasses**  
KARA Ü., Susoy G., Issa S. A. M., Elshami W., Yorgun N., Abuzaid M. M., KAVAZ E., Tekin H. O.  
APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.126, no.7, 2020 (SCI-Expanded)
- X. **Optical, structural and nuclear radiation shielding properties of Li<sub>2</sub>B<sub>4</sub>O<sub>7</sub> glasses: effect of boron mineral additive**  
KARA Ü., Kavaz E., Issa S. A. M., Rashad M., Susoy G., Mostafa A. M. A., Yorgun N., Tekin H. O.  
Applied Physics A: Materials Science and Processing, vol.126, no.4, 2020 (SCI-Expanded)
- XI. **Synergistic effect of serpentine mineral on Li<sub>2</sub>B<sub>4</sub>O<sub>7</sub> glasses: optical, structural and nuclear radiation shielding properties**  
KARA Ü., Issa S. A. M., Susoy G., Rashad M., Kavaz E., Yorgun N., Tekin H. O.  
APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.126, no.3, 2020 (SCI-Expanded)
- XII. **Borax effect on gamma and neutron shielding features of lithium borate glasses: an experimental and Monte Carlo studies**  
Yorgun N., KAVAZ E., Tekin H. O., SAYYED M., Özdemir Ö. F.  
MATERIALS RESEARCH EXPRESS, vol.6, no.11, 2019 (SCI-Expanded)
- XIII. **Structural and nuclear radiation shielding properties of bauxite ore doped lithium borate glasses: Experimental and Monte Carlo study**  
KAVAZ E., Tekin H. O., Yorgun N., Özdemir Ö. F., SAYYED M. I.  
RADIATION PHYSICS AND CHEMISTRY, vol.162, pp.187-193, 2019 (SCI-Expanded)
- XIV. **Gamma-ray shielding parameters of Li<sub>2</sub>B<sub>4</sub>O<sub>7</sub> glasses: undoped and doped with magnetite, siderite and Zinc-Borate minerals cases**  
Yorgun N.  
RADIOCHIMICA ACTA, vol.107, no.8, pp.755-765, 2019 (SCI-Expanded)
- XV. **Gamma photon protection properties of some cancer drugs for medical applications**

- Yorgun N., KAVAZ E.  
RESULTS IN PHYSICS, vol.13, 2019 (SCI-Expanded)
- XVI. **Evaluation of gamma-ray attenuation properties of lithium borate glasses doped with barite, limonite and serpentine**  
Yorgun N., KAVAZ E., Oto B., AKDEMİR F.  
RADIOCHIMICA ACTA, vol.106, no.10, pp.865-872, 2018 (SCI-Expanded)
- XVII. **Gamma ray buildup factors of lithium borate glasses doped with minerals**  
KAVAZ E., Yorgun N.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.752, pp.61-67, 2018 (SCI-Expanded)
- XVIII. **Determining radiological hazards due to the natural radioactivity in building materials used in Van, Turkey**  
Yildiz-Yorgun N., GÜR FİLİZ F., Özdemir Ö. F., Oto B.  
Fresenius Environmental Bulletin, vol.27, no.6, pp.4448-4454, 2018 (SCI-Expanded)
- XIX. **Natural radioactivity-based radiological hazards in soils of the islands: a case study from Eastern Turkey**  
Oto B., Yıldız N., Şeremet M.  
RADIOCHIMICA ACTA, vol.105, no.9, pp.763-773, 2017 (SCI-Expanded)
- XX. **Neutron shielding qualities and gamma ray buildup factors of concretes containing limonite ore**  
Oto B., Yıldız N., Korkut T., KAVAZ E.  
Nuclear Engineering and Design, vol.293, pp.166-175, 2015 (SCI-Expanded)
- XXI. **Investigation of gamma radiation shielding properties of various ores**  
Oto B., Yıldız N., Akdemir F., KAVAZ E.  
PROGRESS IN NUCLEAR ENERGY, vol.85, pp.391-403, 2015 (SCI-Expanded)
- XXII. **Radionuclide determination and radioactivity evaluation of surface soil samples collected along the Ercek Lake basin in eastern Anatolia, Turkey**  
Yıldız N., Oto B., Turhan S., UGUR F. A., Goren E.  
JOURNAL OF GEOCHEMICAL EXPLORATION, vol.146, pp.34-39, 2014 (SCI-Expanded)
- XXIII. **Dating of the Sediment Accumulation Rate, Radioactive and Heavy Metal Pollution in the Van Lake**  
Yıldız N., Yener G.  
EKOLOJİ, vol.19, no.77, pp.80-87, 2010 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Gamma-ray Shielding Properties of Lithium Borate Glass Doped with Colemanit Mineral**  
Yıldız N.  
Bitlis Eren Üniversitesi Fen Bilimleri Dergisi, vol.8, no.3, pp.762-771, 2019 (Peer-Reviewed Journal)
- II. **39K ve 41K İzotoplarının 0-20 MeV Enerji Aralığında Nötron Reaksiyonları Tesir Kesiti Hesaplamaları**  
Yıldız N., Özdemir Ö. F.  
Yüzüncü Yıl Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.22, no.1, pp.33-40, 2017 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Determination Of Natural Radioactivity Levels Of Soil Samples In Lake Turna Surrounding In Van Province**  
Yıldız H., Yıldız N., GÜR FİLİZ F.  
3. ULUSLARARASI SOSYAL ve BEŞERİ BİLİMLER KONGRESİ, Van, Turkey, 20 - 22 September 2019, pp.24
- II. **Some Ternary Intermetallic Compounds as a Protective Material Against Gamma- rays**  
Yıldız N.

- III. **RADIATION ATTENUATION COEFFICIENTS OF THE SOME CANCER DRUGS FOR MEDICAL APPLICATIONS**  
Yıldız N., KAVAZ E.  
I. INTERNATIONAL İĞDIR CONGRESS ON MULTIDISCIPLINARY STUDIES, İğdır, Turkey, 6 - 07 November 2018, pp.255
- IV. **Excitation Function of Photo-Neutron Reactions for Selected Isotopes Used in Reactor Structural Materials**  
Özdemir Ö. F., Yıldız N.  
1st INTERNATIONAL ENGINEERING AND TECHNOLOGY SYMPOSIUM, Batman, Turkey, 3 - 05 May 2018, pp.61
- V. **Radioactivity concentrations and gamma dose rates in soil samples of metropolitan areas Van, Turkey**  
Yıldız N., GÜR FİLİZ F., Tarakçı M., Oto B., Özdemir Ö. F.  
Uluslararası ve Disiplinlerarası Çevre ve Edebiyat Sempozyumu, Manisa, Turkey, 1 - 03 November 2017, pp.34
- VI. **Van Gölü Hidrojeokimyası ve Su Kirliliği Değerlendirmesi**  
Aydın H., Öğün E., Aydın F., Selçuk Zorer Ö., Atıcı A. A., Çavuş A., Özdemir Ö. F., Bora G., Bozlar Pınaroğlu B., Şen F., et al.  
Ulusal Çevre, Deniz ve Kıyı Kirliliği Sempozyumu (UCEDKKS), Bursa, Turkey, 10 - 12 October 2017, vol.000, no.0
- VII. **Photo-Neutron Cross Section Calculations of Selected Steel Components**  
Özdemir Ö. F., Yıldız N.  
TPS 33rd International Physics Congress, Muğla, Turkey, 6 - 10 September 2017, pp.459
- VIII. **Excitation Functions of Neutron Poison Elements Evaluated Using Pre-Equilibrium and Equilibrium Models**  
Yıldız N., Kartal R., Özdemir Ö. F., Yıldız H.  
3rd International Conference on Theoretical and Experimental Studies in Nuclear Applications and Technology, Adana, Turkey, 10 - 12 May 2017, pp.98
- IX. **(n,?) Reaction Cross Section Calculations of Some Isotopes Used in Nuclear Applications**  
Özdemir Ö. F., Yıldız N., Yıldız H., Kartal R.  
3rd International Conference on Theoretical and Experimental Studies in Nuclear Applications and Technology, Adana, Turkey, 10 - 12 May 2017, pp.100
- X. **Nuclear Model Calculations of (n,?) Reaction Cross Sections for Some Isotopes in Heavy Concrete**  
Özdemir Ö. F., Yıldız N., Yıldız H., Kartal R.  
3rd International Conference on Theoretical and Experimental Studies in Nuclear Applications and Technology, Adana, Turkey, 10 - 12 May 2017, pp.99
- XI. **Cross Section Calculation of Neutron Poison Isotopes by Nuclear Reaction Models**  
Yıldız N., Kartal R., Özdemir Ö. F., Yıldız H.  
3rd International Conference on Theoretical and Experimental Studies in Nuclear Applications and Technology, Adana, Turkey, 10 - 12 May 2017, pp.99
- XII. **The (n,?) Cross Section Calculations at 2-20 MeV Energy Range of Some Structural Materials Used in Nuclear Reactors**  
Özdemir Ö. F., Yıldız N., Yıldız H., Kartal R.  
3rd International Conference on Theoretical and Experimental Studies in Nuclear Applications and Technology, Adana, Turkey, 10 - 12 May 2017, pp.101
- XIII. **Gamma Radiation Attenuation Properties of Some Ores**  
Oto B., Yıldız N., Çakır T.  
2nd INTERNATIONAL CONFERENCE ON ADVANCES IN NATURAL AND APPLIED SCIENCES, Antalya, Turkey, 18 - 21 April 2017, pp.294
- XIV. **Radionuclide characterization in soil samples of the islands of Akdamar, Çarpanak and Adır located on Lake Van, Turkey**  
Oto B., Yıldız N., Şeremet M.  
2nd INTERNATIONAL CONFERENCE ON ADVANCES IN NATURAL AND APPLIED SCIENCES, Antalya, Turkey, 18 -

21 April 2017, pp.455

- XV. **Van İlinde Kullanılan Yapı Malzemelerindeki Doğal Radyoaktiviteden Kaynaklanan Radyasyon Dozunun Değerlendirilmesi**  
GÜR FİLİZ F., Yıldız N., Oto B.  
XI. Ulusal Nükleer Bilimler ve Teknolojileri Kongresi,, Aydın, Turkey, 12 - 14 October 2016, pp.77
- XVI. **Radon exhalation rates from building materials using LR-115 nuclear track detectors**  
GÜR FİLİZ F., Taşköprü C., Oto B., Yıldız N.  
3 rd International Conferance on Po and Radioactive Pb Isotopes, Aydın, Turkey, 11 - 14 October 2015, pp.145
- XVII. **Investigation of natural radioactivity of some building materials used in Van**  
GÜR FİLİZ F., Yıldız N., Oto B.  
International Congress on Green Infrastructure and Sustainable Societies/Cities (GreInSus 2014), İzmir, Turkey, 8 - 10 May 2014, pp.46
- XVIII. **Profile Distributions of 210Pb and 210Po in Lake Van Sediments**  
Yıldız N., YENER G., Uğur Görgün A., İçhedef M., Örçen S., Meydan A. F.  
The Fiffth Conference Nuclear Science and Application, Ankara, Turkey, 14 - 17 October 2008, pp.55
- XIX. **The Profile Distribution of 137Cs in the Lake Van Sediments**  
Pişkin A., YENER G., Uğur Görgün A., GÜR FİLİZ F., Yıldız N.  
The Fifth Conference Nuclear Science and Its Applications, Ankara, Turkey, 14 - 17 October 2008, pp.45
- XX. **Dating in Lake Van Sediments Using 210Pb(210Po) Technique**  
Yıldız N., Yener G., Uğur Görgün A., İçhedef M., Örçen S., Meydan A. F.  
4th International Symposium on In Situ Nuclear Metrology As A Tool For Radioecology, Rabat, Morocco, 13 - 16 October 2008, pp.59
- XXI. **EVALUATION OF RADIATION DOSE OF TURKISH GRANITES IN TERMS OF HUMAN HEALTH**  
GÜR FİLİZ F., Yıldız N.  
Uluslararası Müzik Dans ve Sağlık Kongresi, Van, Turkey, 11 October 0208 - 13 October 2018, pp.70

## Supported Projects

Öğün E., Bozlar Pınaroğlu B., SOLMAZ H., ELP M., Özdemir Ö. F., Selçuk Zorer Ö., Şen F., Aydın F., Bora G., Gültekin A., et al.,  
Project Supported by Higher Education Institutions, Van Gölünün Mikrobiyolojik, Kimyasal ve Radyoaktif Kirlilik Düzeyinin Araştırılması, 2014 - 2017  
Oto B., Yıldız N., Project Supported by Higher Education Institutions, Van Gölünde Bulunan Akdamar, Çarpanak ve Adır Adalarındaki Toprak Numunelerinde Doğal Radyoaktivite Seviyesinin Belirlenmesi ve Gama Doz Hızının Hesaplanması, 2013 - 2016  
Yıldız Yorgun N., Oto B., Project Supported by Higher Education Institutions, Van Gölü Kıyısında Bulunan Yerleşim Alanlarının Radyoaktivite Düzeyinin Belirlenmesi ve Gama Doz Hızlarının Hesaplanması, 2012 - 2015  
Yıldız N., TUBITAK Project, Orta Gediz Havzasında (Turgutlu-Salihli Arası) Toprak Erozyonu Hızının Radyoaktif Kurşun Dağılımından Belirlenmesi, 2007 - 2009

## Activities in Scientific Journals

Radiation Science and Technology, Committee Member, 2018 - Continues

## Scientific Refereeing

OPTICAL AND QUANTUM ELECTRONICS, Journal Indexed in SCI-E, September 2023  
OPTICAL AND QUANTUM ELECTRONICS, Journal Indexed in SCI-E, September 2023  
SILICON, Journal Indexed in SCI-E, September 2023

HELIYON, Journal Indexed in SCI-E, August 2023  
PHYSICA SCRIPTA, Journal Indexed in SCI-E, August 2023  
SILICON, Journal Indexed in SCI-E, August 2023  
SILICON, Journal Indexed in SCI-E, August 2023  
PHYSICA SCRIPTA, SCI Journal, April 2023  
HELIYON, SCI Journal, April 2023  
SILICON, SCI Journal, March 2023  
JOURNAL OF MATERIALS RESEARCH AND TECHNOLOGY, SCI Journal, November 2022  
HELIYON, Journal Indexed in SCI-E, March 2022  
MATERIALS RESEARCH BULLETIN, SCI Journal, December 2021  
JOURNAL OF PHYSICS B-ATOMIC MOLECULAR AND OPTICAL PHYSICS, SCI Journal, October 2021  
HELIYON, Journal Indexed in SCI-E, October 2021  
PHYSICA SCRIPTA, SCI Journal, September 2021  
PHYSICA SCRIPTA, SCI Journal, May 2021  
PHYSICA SCRIPTA, SCI Journal, April 2021  
EUROPEAN PHYSICAL JOURNAL PLUS, SCI Journal, February 2021  
PHYSICA SCRIPTA, SCI Journal, November 2020  
ÇANAKKALE ONSEKİZ MART ÜNİVERSİTESİ FEN BİLİMLERİ ENSTİTÜSÜ DERGİSİ, National Scientific Refreed Journal, November 2020  
PHYSICA SCRIPTA, SCI Journal, August 2020  
Radiation Science and Technology, SCI Journal, February 2020  
African Journal of Engineering Research, Other Indexed Journal, December 2019  
Applied Physics A, SCI Journal, June 2019  
Gümüşhane Üniversitesi Fen Bilimleri Enstitüsü Dergisi, National Scientific Refreed Journal, June 2019  
Journal of Physics and Chemistry of Solids, SCI Journal, February 2019  
Journal of Non-Crystalline Solids, SCI Journal, February 2019  
Journal of Physics and Chemistry of Solids, SCI Journal, November 2018  
Journal of Physics and Chemistry of Solids, SCI Journal, April 2018  
Journal of Non-Crystalline Solids, SCI Journal, March 2018

## **Metrics**

Publication: 48  
Citation (WoS): 344  
Citation (Scopus): 477  
H-Index (WoS): 11  
H-Index (Scopus): 12

## **Congress and Symposium Activities**

3. ULUSLARARASI SOSYAL ve BEŞERİ BİLİMLER KONGRESİ, Session Moderator, Van, Turkey, 2019