

# Prof. AYNUR ÖZCAN

## Personal Information

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## International Researcher IDs

ORCID: 0000-0003-2514-5460

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## Education Information

Doctorate, Gazi University, Fen Bilimleri Enstitüsü, Fizik (Dr), Turkey 1998 - 2005

Postgraduate, Manisa Celal Bayar University, Institute Of Science, Fizik (YL), Turkey 1994 - 1997

Undergraduate, Selcuk University, Faculty Of Education, Fizik Öğretmenliği Pr., Turkey 1990 - 1994

## Dissertations

Doctorate, SEL-çekirdek çarpıştırıcılarında toryum çekirdeğinin uyarılmış seviyelerinin incelenmesiInvestigations of the toryum nucleus excitations at the FEL-nucleus colliders, Gazi University, Fen Bilimleri Enstitüsü, Fizik (Dr), 2005

Postgraduate, Bazı çift-çift Nd izotoplarının nükleer özelliklerinin etkileşen bozon modeli ile incelenmesiThe Investigation on the nuclear properties of some even-even Nd isotopes within interacting bosson model, Manisa Celal Bayar University, Institute Of Science, 1997

## Research Areas

Physics, Natural Sciences

## Academic Titles / Tasks

Professor, Gazi University, Fen Fakültesi, Fizik, 2022 - Continues

Associate Professor, Gazi University, Fen Fakültesi, Fizik, 2014 - 2022

Research Assistant PhD, Gazi University, Fen Fakültesi, Fizik, 2005 - 2014

Research Assistant, Gazi University, Fen Fakültesi, Fizik, 1997 - 2005

Teacher, 1994 - 1997

## Academic and Administrative Experience

Vice Dean, Gazi University, Fen Fakültesi, Fizik, 2023 - Continues

Deputy Head of Department, Gazi University, Fen Fakültesi, 2017 - 2022

## Courses

Kalite Yönetimi II, Undergraduate, 2022 - 2023

## Advising Theses

ÖZCAN A., 6 MeV enerjili elektron hızlandırıcısı için 800 MHz frekanslı RF kovuk tasarımı, Postgraduate, T.SEVİNÇ(Student), 2019

ÖZCAN A., An Investigation On Level Density Parameter Dependency Of<sup>235</sup>u, <sup>238</sup>u, <sup>237</sup>np Ve <sup>239</sup>pu Nuclei Cross Sections, Postgraduate, Ş.Alver(Student), 2018

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

- I. **Monte Carlo simulation of gamma shielding properties of Lanthanum hexaboride (LaB<sub>6</sub>) and Cerium hexaboride (CeB<sub>6</sub>) materials synthesized by magnesiothermic reduction**  
ÖZCAN A., Turkan N., Aksu M., Gulbicim H., Kurt E.  
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.38, no.2, pp.927-936, 2023 (SCI-Expanded)
- II. **The Structural, Elastic, Electronic, Thermodynamic and Vibrational Properties of Protactinium Monocarbide (PaC) from First-Principles Calculations**  
Ciftci Y., Coban C., AYDIN S., Tatar A., Evecen M.  
JOURNAL OF NANOELECTRONICS AND OPTOELECTRONICS, vol.11, no.4, pp.506-513, 2016 (SCI-Expanded)
- III. **Effect of pressure on structural, electronic, mechanical and optical properties of ruthenium diboride with oP(12)-type structure**  
AYDIN S., Ciftci Y., Mogulkoc Y., Tatar A.  
INDIAN JOURNAL OF PHYSICS, vol.90, no.7, pp.767-779, 2016 (SCI-Expanded)
- IV. **Some new members of MAX family including light-elements: Nanolayered Hf<sub>2</sub>XY (X= Al, Si, P and Y=B, C, N)**  
AYDIN S., Tatar A., ÇİFTÇİ Y.  
SOLID STATE SCIENCES, vol.53, pp.44-55, 2016 (SCI-Expanded)
- V. **Pressure depended elastic, vibration and optical properties of NbIrSn from first principles calculations**  
Kocak B., Ciftci Y., Colakoglu K., Deligoz E., Tatar A.  
MATERIALS SCIENCE AND TECHNOLOGY, vol.29, no.8, pp.925-930, 2013 (SCI-Expanded)
- VI. **A theoretical study for thorium monocarbide (ThC)**  
AYDIN S., Tatar A., Ciftci Y.  
JOURNAL OF NUCLEAR MATERIALS, vol.429, pp.55-69, 2012 (SCI-Expanded)
- VII. **Superhard transition metal tetranitrides: XN<sub>4</sub> (X=Re, Os, W)**  
AYDIN S., ÇİFTÇİ Y., Tatar A.  
JOURNAL OF MATERIALS RESEARCH, vol.27, no.13, pp.1705-1715, 2012 (SCI-Expanded)
- VIII. **Study of the pre-equilibrium mean free path constant for light and heavy nuclei for (n, xn) reactions**  
TEL E., Tatar A., AYDIN A.  
ANNALS OF NUCLEAR ENERGY, vol.38, no.5, pp.964-968, 2011 (SCI-Expanded)
- IX. **The structural, elastic and thermodynamic properties of thorium tetraboride**  
AYDIN S., Tatar A.  
SOLID STATE COMMUNICATIONS, vol.151, no.8, pp.628-633, 2011 (SCI-Expanded)
- X. **The structural, mechanical and electronic properties of LiX<sub>6</sub> (X= C, B): a first principle study**  
Özcan A., Aydın S.  
Optoelectronics And Advanced Materials-Rapid Communications, vol.4, pp.1329-1331, 2010 (SCI-Expanded)
- XI. **CLIC-LHC-based FEL-nucleus collider: Feasibility and physics search potential**  
Yavas O., Corsini R., Braun H., Sultansoy S., Guliyev E., Yigit S., Ozcan A.

NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT, vol.552, no.3, pp.440-448, 2005 (SCI-Expanded)

**XII. Physics potential of the e-RHIC based FEL-nucleus collider**

Koru H., Ozcan A., Sultansoy S., Yavas O.

INTERNATIONAL JOURNAL OF MODERN PHYSICS E-NUCLEAR PHYSICS, vol.12, no.4, pp.533-541, 2003 (SCI-Expanded)

## Articles Published in Other Journals

**I. Experimental Study on The Gamma Ray Absorption Properties of Lanthanum and Cerium Borides**

Gülbiçim H., OZCAN A., turkan n., AKSU M., Kurt E.

Süleyman Demirel Üniversitesi Fen Edebiyat Fakültesi Fen Dergisi, vol.18, no.3, pp.238-247, 2023 (Peer-Reviewed Journal)

**II. An Ab-initio study on UAl for nuclear applications**

Özcan A., Çiftci Y., Alp İ.

EPJ WEB OF CONFERENCES, vol.154, pp.1021-1025, 2017 (Scopus)

**III. The investigation of hardness and bonding behavior in XB<sub>4</sub>, X = {Ce, Th, U, Pa}, tetraborides by first-principles**

AYDIN S., ÖZCAN A.

Turkish Journal of Physics, vol.34, no.1, pp.1-12, 2010 (ESCI)

**IV. Investigation of Proton Emission Spectra of Some Nuclear Reactor Materials for (p,xp) Reactions**

ÖZCAN A., TEL E.

SDU Journal of Science (E-Journal), vol.5, no.2, pp.211-215, 2010 (Peer-Reviewed Journal)

**V. The investigation of hardness and bonding behavior inXB<sub>4</sub> X Ce Th U Pa tetraborides by first principles**

AYDIN S., ÖZCAN A.

TURKISH JOURNAL OF PHYSICS, 2009 (Scopus)

**VI. Investigation of Nd<sup>144</sup> and Nd<sup>146</sup> Nucleus at FEL- Nucleus Colliders**

Özcan A.

Süleyman Demirel Üniversitesi, Fen Bilimleri Enstitüsü Dergisi,, vol.10, no.3, pp.317-322, 2006 (Peer-Reviewed Journal)

## Books & Book Chapters

**I. Optical Instruments**

Şebnem K. İ., Küçüközer H., Tatar A., Özsevgeç T., Ünlü Yavaş P., Ünsal Y., Temiz B. K., Yavuz A., Kızılcık H. Ş. in: Genel Fizik III, Yasin ÜNSAL, Şebnem Kandil İNGEÇ, Editor, Pegem Akademi, Ankara, pp.1-29, 2014

## Refereed Congress / Symposium Publications in Proceedings

**I. Determination of Gold setting By Ed-XRF Analysis**

ÖZCAN A., ÇATAK D. D.

Türk Fizik Derneği 39. Uluslararası Fizik Kongresi, Muğla, Turkey, 31 August 2023

**II. The Discussions on the atomic structures of two newly-synthesized boron compounds; Stated as the new radiation shielding materials**

ÖZCAN A., KURT E., AKSU M., TÜRKAN M., GÜLBİÇİM H.

XV. International Conference on Nuclear Structure Properties, Turkey, 28 June 2022

**III. An Ab-initio study on UAl for nuclear applications**

ÇİFTÇİ Y., ÖZCAN A., ALP İ.

3rd International Conference on Theoretical and Experimental Studies in Nuclear Applications and Technology, TESNAT 2017, Adana, Turkey, 10 - 12 May 2017, vol.154

- IV. **RhAl: Structural, elastic, electronic, thermodynamic and vibrational properties by first principles calculations**  
ÖZCAN A., ÇİFTÇİ Y., ALP İ.  
Turkish Physical Society 33rd International Physical Congress, 6 - 10 September 2017, pp.636
- V. **First- Principles Study of RuAl Compound in B2 Structure**  
ÇİFTÇİ Y., ÖZCAN A., EVECEN M.  
Turkish Physical Society 33rd International Physics Congress, 6 - 10 September 2017, pp.612
- VI. **First-principles Studies of RuAl compound of B2 structure**  
O Çiftci Y., ÖZCAN A., EVECEN M.  
TFD 33, 6 - 10 September 2017, pp.612
- VII. **Level Density Parameter Dependence in Fission Cross Sections 232Th, 238U and 237Np Nuclei Induced by Alphas with the Incident Energy up to 100 MeV**  
ÖZCAN A., AYDIN A., Alver Ş.  
3rd International Conference on Theoretical and Experimental Studies in Nuclear Applications and Technology", 10 - 12 May 2017
- VIII. **An Ab-initio Study on UAl for nuclear applications**  
ÖZCAN A., ÇİFTÇİ Y., ALP İ.  
"3rd International Conference on Theoretical and Experimental Studies in Nuclear Applications and Technology", 10 - 12 May 2017
- IX. **(n,p) reaction cross section calculations of 15N target nuclei with SKa skyrme parameter**  
TEL E., ÖZCAN A., AYDIN A., Savaşal Öge G., YİĞİT M., ŞAHAN M.  
3rd International Conference on Theoretical and Experimental Studies in Nuclear Applications and Technology", 10 - 12 May 2017
- X. **FIRST PRINCIPLES INVESTGATIONS OF STRUCTURAL ELASTIC ELECTRONIC THERMODYNAMIC AND VIBRATIONALPROPERTIES OF LACD COMPOUND**  
ÇİFTÇİ Y., ALP İ., MOĞULKOÇ Y., ÖZCAN A.  
TURKISH PHYSICAL SOCIETY 32. INTERNATIONAL PHYSICS CONGRESS, 6 - 09 September 2016
- XI. **Ab initio Calculations of YbCd Intermetallic Compounds in B2 Structure**  
ÇİFTÇİ Y., ALP İ., ÖZCAN A.  
Turkish Physical Society 32 nd International Physical Congress, Turkey, 6 - 09 September 2016
- XII. **AB INITIO CALCULATIONSO F YBCD INTERMETALLIC COMPOUND IN B2 STRUCTURE**  
ÇİFTÇİ Y., ALP İ., ÖZCAN A.  
TURKISH PHYSICAL SOCIETY 32. INTERNATIONAL PHYSICS CONGRESS, 6 - 09 September 2016
- XIII. **First Principles Investigations of Structural Elastic Electronic Thermodynamic and Vibrational Properties of LaCd Compound**  
Çiftci Y., Alp İ., Moğulkoç Y., Özcan A.  
Turkish Physical Society 32nd International Physics Congress, Muğla, Turkey, 6 - 09 September 2016
- XIV. **First Principles Study on UB6 for Nuclear Applications**  
ÇİFTÇİ Y., ÖZCAN A., KILIÇ M.  
International Conference on Theoretical and Experimental Studies in Nuclear Applications and Technology, 28 - 30 April 2016

## Supported Projects

ÖZCAN A., TÜRKAN M., KURT E., Project Supported by Higher Education Institutions, Sentezlenerek Optimize Edilen Bazı Lantanyum Hegzaborür ve Seryum Hegzaborür Bileşiklerinin Gama Zırhlama Özelliklerinin Monte Carlo Yöntemi İle İncelenmesi ve Deneysel Analizi, 2021 - 2023

ÖZCAN A., Project Supported by Higher Education Institutions, Bor tabanlı uranyum bileşiklerinin (UB2, UB4,UB6, UB12) fiziksel özellikleri, 2012 - 2015

ÖZCAN A., Project Supported by Higher Education Institutions, ThC, UC, PaC bileşiklerinin yapısal, elastik, elektronik, termodinamik ve optik özelliklerinin ab-initio yöntemlerle incelenmesi., 2010 - 2013

## **Metrics**

Publication: 35

Citation (WoS): 91

Citation (Scopus): 103

H-Index (WoS): 5

H-Index (Scopus): 5

## **Non Academic Experience**

Milli Eğitim Bakanlığı