

## **Prof. Harun Akkuş**

### **Personal Information**

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**Address:** Van Yüzüncü Yıl Üniversitesi Fen Fakültesi Fizik Bölümü Kampüs 65080 Tuşba Van

### **International Researcher IDs**

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Yoksis Researcher ID: 20211

### **Education Information**

Doctorate, Cukurova University, Fen Bilimleri Enstitüsü, Fizik, Turkey 2001 - 2007

Postgraduate, Van Yüzüncü Yıl University, Fen Bilimleri Enstitüsü, Fizik, Turkey 1997 - 2000

Undergraduate, Van Yüzüncü Yıl University, Fen Edebiyat Fakültesi, Fizik Bölümü, Turkey 1993 - 1997

### **Foreign Languages**

English, B2 Upper Intermediate

### **Dissertations**

Doctorate, SbSI Kristalinin Elektronik Ve Optik Özellikleri: Yoğunluk Fonksiyoneli Teorisinin Uygulaması, Cukurova University, Fen Bilimleri Enstitüsü, Fizik, 2007

Postgraduate, Bileşik Manyetik Yapıarda Faz Geçişleri ve Rezonans Frekansları, Van Yüzüncü Yıl University, Fen Bilimleri Enstitüsü, Fizik, 2000

### **Research Areas**

Physics, General Physics, Condensed Matter 1: Structural, Mechanical and Thermal Properties, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Natural Sciences

### **Academic Titles / Tasks**

Professor, Van Yüzüncü Yıl University, Fen Fakültesi, Fizik Bölümü, 2015 - Continues

Associate Professor, Van Yüzüncü Yıl University, Fen Fakültesi, Fizik Bölümü, 2010 - 2015

Assistant Professor, Van Yüzüncü Yıl University, Fen Fakültesi, Fizik Bölümü, 2009 - 2010

Research Assistant PhD, Van Yüzüncü Yıl University, Fen Fakültesi, Fizik Bölümü, 2007 - 2009

Research Assistant, Cukurova University, Fen Edebiyat Fakültesi, Fizik, 2001 - 2007

Research Assistant, Van Yüzüncü Yıl University, Fen Fakültesi, Fizik Bölümü, 1997 - 2001

## **Academic and Administrative Experience**

Director of The Institution, Van Yüzüncü Yıl University, 2021 - Continues  
Van Yüzüncü Yıl University, Fen Fakültesi, 2017 - Continues  
Van Yüzüncü Yıl University, Fen Fakütesi, 2017 - Continues  
Van Yüzüncü Yıl University, Fen Fakültesi, Fizik Bölümü, 2017 - Continues  
Van Yüzüncü Yıl University, Kalite Komisyonu, 2016 - Continues  
Van Yüzüncü Yıl University, Fen Fakültesi, Fizik, 2016 - Continues  
Van Yüzüncü Yıl University, Fen Fakültesi, Fizik Bölümü, 2015 - Continues  
Van Yüzüncü Yıl University, Fen Fakültesi, 2015 - Continues  
Van Yüzüncü Yıl University, Temel Bilimler, Fizik, 2015 - 2016  
Van Yüzüncü Yıl University, Fen Fakültesi, Fizik, 2014 - 2016

## **Courses**

Klasik Elektromanyetik Alan Teorisi, Postgraduate, 2017 - 2018  
Kuantum Mekaniği II, Undergraduate, 2015 - 2016, 2014 - 2015  
Elektromanyetik Teori II, Undergraduate, 2015 - 2016, 2014 - 2015, 2012 - 2013, 2011 - 2012, 2010 - 2011, 2009 - 2010  
Kuantum Mekaniği II, Undergraduate, 2015 - 2016, 2014 - 2015  
Elektromanyetik Teori II, Undergraduate, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011, 2009 - 2010  
Klasik Elektromanyetik Alan Teorisi II, Doctorate, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013  
Elektromanyetik Teori I, Undergraduate, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011, 2009 - 2010  
Varyasyonel İlkeler ve Uygulamaları, Undergraduate, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011  
Kuantum Mekaniği I, Undergraduate, 2015 - 2016, 2014 - 2015  
Grup Teorisine Giriş, Undergraduate, 2015 - 2016  
Mezuniyet Çalışması II, Undergraduate, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011  
Katıhal Fizигinde Grup Teorisi, Postgraduate, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2009 - 2010  
Grup Teorisine Giriş, Undergraduate, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011, 2009 - 2010  
Elektromanyetik Teori I, Undergraduate, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011, 2009 - 2010  
Mezuniyet Çalışması II, Undergraduate, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011  
Varyasyonel İlkeler ve Uygulamaları, Undergraduate, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011  
Kuantum Mekaniği I, Undergraduate, 2015 - 2016, 2014 - 2015  
Grup Teorisine Giriş, Undergraduate, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011, 2009 - 2010  
Mezuniyet Çalışması I, Undergraduate, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011  
Mezuniyet Çalışması I, Undergraduate, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011  
Fizikte Varyasyonlar Hesabı, Postgraduate, 2014 - 2015  
Klasik Elektromanyetik Alan Teorisi I, Postgraduate, 2012 - 2013, 2011 - 2012, 2010 - 2011  
Fizikte Matematik Metotlar I, Postgraduate, 2012 - 2013  
Fizik II, Undergraduate, 2011 - 2012  
Fizik I, Undergraduate, 2011 - 2012  
Fizik, Undergraduate, 2010 - 2011  
Fizik II, Undergraduate, 2009 - 2010  
Fizik II, Undergraduate, 2009 - 2010

Fizik I, Undergraduate, 2009 - 2010

Fizik I, Undergraduate, 2009 - 2010

## Advising Theses

Akkuş H., A complex plane analysis of dielectric response: Decomposition of  $\epsilon_2(\omega)$  spectra into single lorentzian oscillators, Postgraduate, F.AL(Student), 2020

Akkuş H., Bazı Ras04 (R: Dy, Gd, Nd, Tb) kristallerinin fizikalı özelliklerinin yoğunluk fonksiyoneli teorisi ile hesaplanması, Doctorate, R.EDA(Student), 2019

Kavak G., Akkuş H., Yoğunluk fonksiyoneli teorisi (YFT) kullanılarak LiX<sub>2</sub>Y (X:Rh, Cu, Pd, Ni, Y: Ge, Si) Heusler yapılarının yapısal elektronik ve manyetik özelliklerinin incelenmesi, Doctorate, S.AYHAN(Student), 2018

Akkuş H., FARKLI FAZLARDA PEROVSKİT RbNbO<sub>3</sub> KRİSTALİNİN FİZİKSEL ÖZELLİKLERİNİN YOĞUNLUK FONKSİYONELİ TEORİSİ İLE İNCELENMESİ, Postgraduate, M.ERZEN(Student), 2017

Akkuş H., YOĞUNLUK FONKSİYONELİ TEORİSİ İLE LuRhO<sub>3</sub> BİLEŞİĞİNİN ELEKTRONİK, OPTİK VE DİNAMİK ÖZELLİKLERİNİN İNCELENMESİ, Postgraduate, M.KAVAL(Student), 2017

Akkuş H., ORTOROMBİK CsIO<sub>3</sub> KRİSTALİNİN YAPISAL, ELASTİK, ELEKTRONİK, OPTİK, DİNAMİK VE TERMODİNAMİK ÖZELLİKLERİNİN AB İNİTİÖ YÖNTEMLERLE İNCELENMESİ, Postgraduate, R.KAN(Student), 2016

Akkuş H., Simorfik Olmayan Kübik Uzay Gruplarının Permütasyon Gruplarının Yardımıyla Elde Edilmesi, Postgraduate, V.AYKAN(Student), 2014

Akkuş H., Kübik Simorfik Uzay Gruplarının Permütasyon Gruplarının Yardımıyla Elde Edilişi, Postgraduate, D.TÜRKKAN(Student), 2014

Akkuş H., Kristal Fiziğinde Oh Nokta Grubu, Postgraduate, A.DELİBAŞ(Student), 2014

Akkuş H., BAZI A5B6C7 TİP KRİSTALLERİN ELEKTRO-MEKANİK ÖZELLİKLERİ, Postgraduate, İ.AKŞIT(Student), 2012

Mehmetov E., Akkuş H., Sb<sub>2</sub>S<sub>3</sub> ve SbI<sub>3</sub> kristallerin enerji band yapısı ve optik özellikleri: Ab-initio (temel prensip) hesaplamaları, Doctorate, H.KOÇ(Student), 2010

## Jury Memberships

Post Graduate, Tez Savunması, Van Yüzüncü Yıl Üniversitesi, December, 2017

Associate Professor Exam, Sözlü Sınavı, ÜAK, October, 2017

Appointment to Academic Staff-Assistant Professorship, Yrd. Doç. Ataması, Mersin Üniversitesi, September, 2017

Post Graduate, Tez Savunması, Van Yüzüncü Yıl Üniversitesi, September, 2017

Associate Professor Exam, Dosya İnceleme, ÜAK, May, 2017

Associate Professor Exam, Dosya İnceleme, ÜAK, May, 2017

Associate Professor Exam, Dosya İnceleme, ÜAK, May, 2017

Post Graduate, Tez Savunması, Van Yüzüncü Yıl Üniversitesi, March, 2017

Competition, LİSE ÖĞRENCİLERİ ARAŞTIRMA PROJELERİ YARIŞMASI, TÜBİTAK, March, 2017

Post Graduate, Tez Savunması, Van Yüzüncü Yıl Üniversitesi, January, 2017

Appointment to Academic Staff-Assistant Professorship, Prof. Ataması, Mersin Üniversitesi, August, 2016

Competition, LİSE ÖĞRENCİLERİ ARAŞTIRMA PROJELERİ YARIŞMASI, TÜBİTAK, March, 2016

Appointment to Academic Staff-Assistant Professorship, Doç. Ataması, Siirt Üniversitesi, August, 2015

Competition, LİSE ÖĞRENCİLERİ ARAŞTIRMA PROJELERİ YARIŞMASI, TÜBİTAK, March, 2015

Appointment to Academic Staff-Assistant Professorship, Yrd. Doç. Ataması, Van Yüzüncü Yıl Üniversitesi, July, 2014

Competition, LİSE ÖĞRENCİLERİ ARAŞTIRMA PROJELERİ YARIŞMASI, TÜBİTAK, March, 2014

Competition, LİSE ÖĞRENCİLERİ ARAŞTIRMA PROJELERİ YARIŞMASI, TÜBİTAK, March, 2013

Competition, LİSE ÖĞRENCİLERİ ARAŞTIRMA PROJELERİ YARIŞMASI, TÜBİTAK, March, 2012

Appointment to Academic Staff-Assistant Professorship, Yrd. Doç. Ataması, Siirt Üniversitesi, September, 2011

Appointment to Academic Staff-Assistant Professorship, Yrd. Doç. Ataması, Van Yüzüncü Yıl Üniversitesi, September, 2011

2011

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

- I. Exploring electronic, structural, optical, and elastic properties of MgX<sub>206</sub> (x = Ta, Nb) compounds for photovoltaic and optoelectronic applications: first study effort  
Aycibin M., Çelebi M., Erzen M., Akkuş H.  
Indian Journal of Physics, vol.98, no.10, pp.3571-3582, 2024 (SCI-Expanded)
- II. Thermally switchable terahertz absorber based on a VO<sub>2</sub>-included one-dimensional photonic crystal  
Roumi B., Erzen M., Abdi-Ghaleh R., Akkuş H., Zhou Y., Prajapati Y. K., Cai Y., Maurya J. B.  
Applied Physics A: Materials Science and Processing, vol.129, no.6, 2023 (SCI-Expanded)
- III. Single-frequency into dual-frequency absorption switch based on a one-dimensional photonic crystal containing graphene and vanadium dioxide layers  
Roumi B., Abdi-Ghaleh R., Akkuş H.  
Photonics and Nanostructures - Fundamentals and Applications, vol.53, 2023 (SCI-Expanded)
- IV. Theoretical prediction by DFT on properties of β'-SrTa<sub>206</sub> crystal  
Aycibin M., Erzen M., Akkuş H.  
Processing and Application of Ceramics, vol.17, no.1, pp.1-8, 2023 (SCI-Expanded)
- V. Comprehensive theoretical investigation of electronic, structural, optical, elastic, and thermodynamic properties of orthorhombic SrTa<sub>206</sub> compound  
Erzen M., Aycibin M., Akkuş H.  
CANADIAN JOURNAL OF PHYSICS, 2022 (SCI-Expanded)
- VI. Effect of pressure on physical properties of LuAsO<sub>4</sub> crystal  
Erzen M., Akkuş H.  
MATERIALS RESEARCH EXPRESS, vol.5, no.11, 2018 (SCI-Expanded)
- VII. Computation of physical properties of ferroelectric RbNbO<sub>3</sub> under pressure  
Erzen M., Akkuş H.  
FERROELECTRICS, vol.526, no.1, pp.120-139, 2018 (SCI-Expanded)
- VIII. Ab-initio study of CsGeCl<sub>3</sub> compound in paraelectric and ferroelectric phases  
Erdinc B., Secuk M. N., Aycibin M., GÜLEBAGAN S. E., Dogan E., Akkuş H.  
FERROELECTRICS, vol.494, no.1, pp.138-149, 2016 (SCI-Expanded)
- IX. Linear Optical Properties of Ferroelectric Semiconductor Bi<sub>2</sub>NbO<sub>5</sub>F Crystal  
DURAN D., Erdinc B., Aycibin M., Akkuş H.  
Ferroelectrics, vol.486, no.1, pp.25-32, 2015 (SCI-Expanded)
- X. Electronic Structure and Lattice Dynamics of BaCeO<sub>3</sub> Compound in Cubic Phase  
Aycibin M., Erdinc B., Akkuş H.  
JOURNAL OF ELECTRONIC MATERIALS, vol.43, no.11, pp.4301-4307, 2014 (SCI-Expanded)
- XI. Physical properties of RbAu compound  
Aycibin M., Dogan E., Gulebaglan S. E., Nurullah Secuk M., Erdinc B., Akkuş H.  
Computational Condensed Matter, vol.1, no.1, pp.32-37, 2014 (SCI-Expanded)
- XII. Structural and electronic properties of zincblende phase of Tl (x) Ga<sub>1-x</sub> As (y) P<sub>1-y</sub> quaternary alloys: First-principles study  
Gulebaglan S., Doğan E., Aycibin M., Secuk M. N., Erdinc B., Akkuş H.  
CENTRAL EUROPEAN JOURNAL OF PHYSICS, vol.11, no.12, pp.1680-1685, 2013 (SCI-Expanded)
- XIII. A different method for calculation of the deflection angle of light passing close to a massive object by Fermat's principle  
Akkus H.  
ANNALS OF PHYSICS, vol.339, pp.293-297, 2013 (SCI-Expanded)
- XIV. Structural, thermodynamic and phonon properties of SbSi and SbSBr single crystals  
Doğan E., Aycibin M., Gulebaglan S., SECUK M. N., ERDINC B., Akkuş H.  
JOURNAL OF THE KOREAN PHYSICAL SOCIETY, vol.63, no.11, pp.2133-2137, 2013 (SCI-Expanded)
- XV. First-principles investigation of structural, electronic, optical and dynamical properties in CsAu  
Erdinc B., Soyalp F., Akkuş H.

- Central European Journal of Physics, vol.9, no.5, pp.1315-1320, 2011 (SCI-Expanded)
- XVI. **Electronic and Optical Properties of gamma-Ag<sub>3</sub>Si by Using First Principles**  
Erdinc B., Akkuş H.  
JOURNAL OF THE KOREAN PHYSICAL SOCIETY, vol.56, no.3, pp.796-800, 2010 (SCI-Expanded)
- XVII. **First-principles study of NaCdF<sub>3</sub>**  
Akkuş H., Erdinc B.  
PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS, vol.246, no.6, pp.1334-1339, 2009 (SCI-Expanded)
- XVIII. **First principle calculation of electronic band structure and optical properties of KIO<sub>3</sub>**  
Akkuş H., Erdinc B.  
International Journal of Modern Physics B, vol.23, no.10, pp.2405-2412, 2009 (SCI-Expanded)
- XIX. **Electronic band structure and linear optical properties of paraelectric KIO<sub>3</sub>**  
Erdinc B., Akkuş H.  
JOURNAL OF PHYSICS-CONDENSED MATTER, vol.21, no.12, 2009 (SCI-Expanded)
- XX. **Ab-initio study of the electronic structure and optical properties of KN<sub>3</sub> in the ferroelectric phase**  
Erdinc B., Akkuş H.  
PHYSICA SCRIPTA, vol.79, no.2, 2009 (SCI-Expanded)
- XXI. **Density functional calculation of the electronic structures of some A 5B<sub>6</sub>C<sub>7</sub>-type crystals**  
Akkuş H.  
International Journal of Modern Physics B, vol.23, no.1, pp.97-104, 2009 (SCI-Expanded)
- XXII. **Band structure and optical properties of antimony-sulfobromide: Density functional calculation**  
Akkuş H., Mamedov A. M., KAZEMPOUR A., AKBARZADEH H.  
Central European Journal of Physics, vol.6, no.1, pp.64-75, 2008 (SCI-Expanded)
- XXIII. **Band structure and optical properties of SbSeI: Density-functional calculation**  
Akkus H., KAZEMPOUR A., AKBARZADEH H., Mamedov A. M.  
Physica Status Solidi (B) Basic Research, vol.244, no.10, pp.3673-3683, 2007 (SCI-Expanded)
- XXIV. **Electronic and optical properties of KTaO<sub>3</sub>: Ab initio calculation**  
ÇABUK S., Akkus H., Mamedov A.  
Physica B: Condensed Matter, vol.394, no.1, pp.81-85, 2007 (SCI-Expanded)
- XXV. **Ab initio calculations of the electronic structure and linear optical properties, including self-energy effects, for paraelectric SbSI**  
Akkus H., MAMEDOV A. M.  
JOURNAL OF PHYSICS-CONDENSED MATTER, vol.19, no.11, 2007 (SCI-Expanded)
- XXVI. **Ab-initio calculation of band structure and linear optical properties of SbSI in para- and ferroelectric phases**  
Akkus H., Mamedov A. M.  
Central European Journal of Physics, vol.5, no.1, pp.25-34, 2007 (SCI-Expanded)

## Articles Published in Other Journals

- I. **POINT GROUPS  $D_{2d}$  and  $C_{3i}$  38T UNDER CLASS SUM APPROACH**  
Dede M., Akkuş H.  
Euroasia Journal of Mathematics, Engineering, Natural & Medical Sciences, vol.8, no.17, pp.141-149, 2021 (Peer-Reviewed Journal)
- II. **An Analysis of Dielectric Response**  
Al-Basree F., Akkuş H.  
Yuzuncu Yil University Journal of the Institute of Natural and Applied Sciences, vol.25, no.3, pp.107-116, 2020 (Scopus)
- III. **Investigation of Structural, Electronic, Optic and Elastic Properties of Perovskite RbGeCl<sub>3</sub> Crystal: A First Principles Study**  
Erdinc F., Kilit Dogan E., Akkuş H.

- GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.32, no.3, pp.1008-1019, 2019 (ESCI)
- IV. NADİR TOPRAK ARSENATLARI DyAsO<sub>4</sub> VE TbAsO<sub>4</sub> KRİSTALLERİNİN BAZI FİZİKSEL ÖZELLİKLERİNİN YOĞUNLUK FONKSİYONELİ TEORİSİYLE İNCELENMESİ  
Biçer R. E., AKKUŞ H.  
International Journal on Mathematic, Engineering and Natural Sciences, 2018 (Peer-Reviewed Journal)
- V. Electronic band structure, optical, dynamical and thermodynamic properties of cesium chloride (CsCl) from first-principles  
Akkuş H., Erdinç B., Bingöl S.  
Int. J. Simul. Multisci. Des. Optim., vol.6, pp.7-13, 2015 (Peer-Reviewed Journal)
- VI. First-principles study on electronic, optic, elastic, dynamic and thermodynamic properties of RbH compound  
Akkuş H., Erdinç B., Doğan E., Seçük M. N., Aycıbin M., Erden Gülebağlan S.  
Int. J. Simul. Multisci. Des. Optim., vol.6, pp.1-6, 2015 (Peer-Reviewed Journal)
- VII. Ab-initio calculations of physical properties of alkali chloride XCl (X=K, Rb and Li) under pressure  
Erdinc B., Secuk M. N., Aycibin M., GÜLEBAGAN S. E., Dogan E., Akkuş H.  
Computational Condensed Matter, vol.4, pp.6-12, 2015 (ESCI)
- VIII. A Short Review of Crystallographic Point Group T: Orbitals and Stabilizers for a Regular Tetrahedron  
Akkuş H.  
Physical Science International Journal, vol.8, no.3, pp.1-7, 2015 (Peer-Reviewed Journal)
- IX. Ab-initio Calculations of Structural, Electronic, Optical, Dynamic and Thermodynamic Properties of HgTe and HgSe  
Erdinç B., Doğan E., Seçük M. N., Aycıbin M., Erden Gülebağlan S., Akkuş H.  
American Journal of Condensed Matter Physics, vol.4, no.1, pp.13-19, 2014 (Peer-Reviewed Journal)
- X. The Bowing Parameters of Ca?Mg<sub>1-?</sub>O Ternary Alloys  
Erdinç B., Doğan E., Seçük M. N., Aycıbin M., Erden Gülebağlan S., Akkuş H.  
Journal of Modern Physics, vol.5, no.15, pp.1546-1551, 2014 (Peer-Reviewed Journal)
- XI. Calculation of electronic band structure of ferroelectric semiconductor bismuth niobium oxyfluoride (Bi<sub>2</sub>NbO<sub>5</sub>F) crystal  
Erdinc B., MCCABE E., DURAN D., Secuk M. N., Gulebaglan S., Dogan E., Aycibin M., Akkuş H.  
Gazi University Journal of Science, vol.27, no.4, pp.1099-1103, 2014 (Scopus)
- XII. Theoretical study of rhombohedral NaCaF<sub>3</sub>crystal in the predicted ferroelectric phase  
Erdinc B., Aycibin M., Secuk M., Gulebaglan S., Doğan E., Akkuş H.  
Gazi University Journal of Science, vol.27, no.4, pp.1093-1097, 2014 (Scopus)
- XIII. An Interpretation of Planck Constant  
Akkuş H.  
International Journal of Theoretical and Mathematical Physics, vol.3, no.5, pp.168-169, 2013 (Peer-Reviewed Journal)
- XIV. Ab Initio Calculation of Physical Properties of Sodium Chloride  
Doğan E., Seçük M. N., Erdinç B., Soyalp F., Akkuş H.  
MATERIALS FOCUS, vol.2, no.5, pp.346-353, 2013 (Peer-Reviewed Journal)
- XV. Point groups in solid state physics I: Point group Oh  
Akkuş H.  
American Journal of Modern Physics, vol.2, no.2, pp.81-87, 2013 (Peer-Reviewed Journal)
- XVI. Investigation of structural, electronic and optical properties of KCdF<sub>3</sub>  
Seçük M. N., Doğan E., Aycıbin M., Erdinç B., Akkuş H.  
American Journal of Modern Physics, vol.2, no.2, pp.77-80, 2013 (Peer-Reviewed Journal)
- XVII. Band structure and optical properties of BiOCl: Density functional Calculation  
Koc H., Akkuş H., Mamedov A. M.  
Gazi University Journal of Science, vol.25, no.1, pp.9-17, 2012 (Scopus)
- XVIII. Electronic and optical properties of GaS: A first-principles study  
Erdinc B., Akkuş H., GOKSEN K.

- Gazi University Journal of Science, vol.23, no.4, pp.413-422, 2010 (Scopus)
- XIX. **Linear and nonlinear optica l susceptibilities in some ferroelectrics: Ab-initio calculation**  
 Akkuş H., Çabuk S., MAMEDOV A. M.  
 Int. J. Nanoelectronics and Materials, vol.3, no.2, pp.53-67, 2010 (Peer-Reviewed Journal)
- Refereed Congress / Symposium Publications in Proceedings**
- I. **First principle calculation of electroinic band structure of LuRhO<sub>3</sub> compound**  
 Erden Gülebağlan S., Kaval M., Erdinç B., Doğan E., Akkuş H., Seçük M. N., Aycibin M.  
 2. International Conference on Pure and Applied Mathematics, Van, Turkey, pp.157
  - II. **Structural, elastic and thermodynamic properties of hexagonal BiTeBr crystal , International Conference on Pure and Applied Mathematics**  
 Erden Gülebağlan S., Biçer R. E., Erdinç B., Doğan E., Akkuş H., Seçük M. N., Aycibin M.  
 2. International Conference on Pure and Applied Mathematics, Van, Turkey, pp.160
  - III. **Structural, elastic properties of BiTeI crystal**  
 Seçük M. N., Biçer R. E., Erden Gülebağlan S., Erdinç B., Doğan E., Akkuş H., Aycibin M.  
 2. International Conference on Pure and Applied Mathematics, Van, Turkey, 25 - 28 August 2015, pp.161
  - IV. **Structural, dynamic and termodynamic properties of CsPbBr<sub>3</sub> compoudin cubic perovskites via first principles**  
 Erden Gülebağlan S., Akkuş H., Erdinç B., Doğan E., Seçük M. N., Aycibin M.  
 2. International Conference on Pure and Applied Mathematics, Van, Turkey, 25 - 28 August 2015, pp.156
  - V. **Structural and electronic properties of AxD<sub>1-x</sub>ByC<sub>1-y</sub> quaternary alloys via first principles**  
 Erden Gülebağlan S., Erdinç B., Doğan E., Akkuş H., Seçük M. N., Aycibin M.  
 2. International Conference on Pure and Applied Mathematics, Van, Turkey, pp.155
  - VI. **Strusctrual, dynamic and optical properties of double-layer hexagonal BiTeCl crystal**  
 Erden Gülebağlan S., Erdinç B., Doğan E., Akkuş H., Seçük M. N., Aycibin M.  
 2. International Conference on Pure and Applied Mathematics, Van, Turkey, pp.159
  - VII. **AB-INITIO CALCULATION OF SOME PHYSICAL PROPERTIES OF TERBIUM 341 ARSENATE TbAsO<sub>4</sub>**  
 Biçer R. E., Akkuş H.  
 AHTAMARA I. ULUSLARARASI MULTİDİSİPLİNER ÇALIŞMALAR KONGRESİ, Van, Turkey, 25 - 26 August 2018, pp.341
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  - IX. **On the second variation of the action in classical mechanics**  
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- XX. **Structural, dynamic and optical properties of double-layer hexagonal BiTeCl crystal**  
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- XXI. **Dynamic and Thermodynamic Properties Properties of RbH**  
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- XXVII. **Physical Properties of Ferroelcric Bi<sub>2</sub>NbO<sub>5</sub>F**  
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- XXVIII. **First-Principles Study on Structural, Electronic, Optic and Elastic Properties of RbH**  
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- XXXVIII. Structural, electronic, dynamic and thermodynamic properties of XAu (X=Li, Na, K) alkali metal gold compounds**  
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- Akkuş H., ERZEN M., Project Supported by Higher Education Institutions, Farklı fazlarda perovskit RbNbO<sub>3</sub> kristalinin fiziksel özelliklerinin yoğunluk fonksiyoneli teorisi ile incelenmesi, 2017 - 2017
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- Mehmetov E., Akkuş H., Project Supported by Higher Education Institutions, Faz geçişlerinin p n eklemelerin özelliklerine

## Activities in Scientific Journals

Yüzüncü Yıl Üniversitesi Fen Bilimleri Enstitüsü Dergisi, First Editor, 2022 - Continues

## Scientific Refereeing

Chinese Journal of Physics, SCI Journal, December 2017

Materials Science and Engineering, SCI Journal, August 2017

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ÇUKUROVA ÜNİVERSİTESİ MÜHENDİSLİK-MİMARLIK FAKÜLTESİ DERGİSİ, National Scientific Refreed Journal, March 2017

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Physica Scripta, SCI Journal, April 2010

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## Scientific Consultations

TÜBİTAK, Project Consultancy, Van Yüzüncü Yıl University, Fen Fakültesi, Fizik Bölümü, Turkey, 2016 - 2016

TÜBİTAK, Project Consultancy, Van Yüzüncü Yıl University, Fen Fakültesi, Fizik Bölümü, Turkey, 2016 - 2016

TÜBİTAK, Project Consultancy, Van Yüzüncü Yıl University, Fen Fakültesi, Fizik Bölümü, Turkey, 2016 - 2016

TÜBİTAK, Project Consultancy, Van Yüzüncü Yıl University, Fen Fakültesi, Fizik Bölümü, Turkey, 2016 - 2016

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## **Metrics**

Publication: 95

Citation (WoS): 247

Citation (Scopus): 254

H-Index (WoS): 9

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## **Congress and Symposium Activities**

Caucasian Mathematics Conference, CMC II, Attendee, Van, Turkey, 2017

## **Scholarships**

3 Aylık Araştırma Bursu, Official Institutions of Foreign Countries, 2006 - Continues

Yoğun Madde Fiziği Eğitim Çalıştayı II, TUBITAK, 2004 - Continues

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