Prof. Fethi Soyalp

Personal Information

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Education Information

Doctorate, Gazi University, Ankara Meslek Yüksekokulu, Fizik, Turkey 2002 - 2006
Postgraduate, Van Yüzüncü Yil University, Fen Bilimleri Enstitüsü, Yoğun Madde Fiziği, Turkey 1999 - 2002
Undergraduate, Van Yüzüncü Yil University, Fen Edebiyat Fakültesi, Fizik Bölümü, Turkey 1994 - 1998

Dissertations

Postgraduate, Fizik öğretmen adaylarının kuantum mekaniği ile ilgili kavramsal anlama düzeylerinin araştırılması , Van Yüzüncü Yil University, Fen Bilimleri Enstitüsü, Ofmae Bölümü, 2012
Doctorate, Yoğunluk fonksiyon teorisi ile bazı bileşiklerin elektronik yapılarının ve titreşim özelliklerinin teorik olarak incelenmesi, Gazi University, Fizik Bölümü, 2006

Research Areas

Physics, Condensed Matter 1: Structural, Mechanical and Thermal Properties, Equations of State, Phase Equilibria, and Phase Transitions, Lattice Dynamics, Mechanical and Acoustic Properties of Condensed Matter, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Electronic structure of bulk material, Electronic structure of bulk material, Natural Sciences

Academic Titles / Tasks

Professor, Van Yüzüncü Yil University, Eğitim Fakültesi, Ofmae Bölümü, 2014 - Continues
Associate Professor, Van Yüzüncü Yil University, Eğitim Fakültesi, Ofmae Bölümü, 2010 - 2014
Assistant Professor, Van Yüzüncü Yil University, Eğitim Fakültesi, Ofmae Bölümü, 2008 - 2010
Research Assistant PhD, Van Yüzüncü Yil University, Fen Edebiyat Fakültesi, Fizik Bölümü, 2007 - 2008
Research Assistant, Gazi University, Fen Edebiyat Fakültesi, Fizik Bölümü, 2003 - 2007
Research Assistant, Van Yüzüncü Yil University, Fen Edebiyat Fakültesi, Fizik Bölümü, 2002 - 2003
Research Assistant, Van Yüzüncü Yil University, Fen Edebiyat Fakültesi, Fizik Bölümü, 1999 - 2001

Academic and Administrative Experience

Van Yüzüncü Yil University, 2015 - 2016
Van Yüzüncü Yil University, Sosyal Ve Beşeri Bilimler, 2015 - 2016
Van Yüzüncü Yil University, Denizcilik Fakültesi, 2015 - 2016
Van Yüzüncü Yil University, Eğitim Fakültesi, 2012 - 2015

Advising Theses

Soyalp F., Yoğunluk fonksiyoneli teorisi ile CaX (X=O, S, Se ve Te) bileşiklerinin yapısal, elektronik, elastik, dinamik ve termodinamik özelliklerinin teorik olarak araştırılması, Postgraduate, Y.Soyvural(Student), 2017
Soyalp F., Yoğunluk fonksiyoneli teorisi ile abf3 bileşiklerinin yapısal, elektronik, elastik, titreşim ve termodinamik özelliklerinin teorik olarak incelenmesi, Postgraduate, N.Aydın(Student), 2014
Soyalp F., YOĞUNLUK FONKSİYONELİ TEORİSİ İLE PtGa2 BİLEŞİĞİNİN YAPISAL, ELEKTRONİK, ELASTİK VE TİTREŞİM ÖZELLİKLERİNİN TEORİK OLARAK İNCELENMESİ, Postgraduate, Ö.Şahin(Student), 2014

Jury Memberships

Doctorate, Ömer Faruk Özdemir (Doktora Tez Jürisi), Yüzüncü Yıl Üniversitesi, February, 2016

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Electronic, optical, and thermoelectric properties of vacancy-ordered double perovskite K2SnX6 (X = Cl, Br, I) from first-principle calculations**
Zikem A., Baaziz H., Ghellab T., Charifi Z., Soyalp F.
Physica Scripta, vol.99, no.3, 2024 (SCI-Expanded)

II. **Theoretical investigations of structural, electronic, optical and elastic properties of wurtzite ZnO1−xSex ternary alloys using first principle method**
Djalab Y., Moussa R., Maache M., Rouf S. A., Abdiche A., Khenata R., Soyalp F.
Journal of Materials Research, vol.38, no.3, pp.799-813, 2023 (SCI-Expanded)

III. **Characterization of quaternary Heusler alloys CoFeYGe (Y = Ti, Cr) with respect to structural, electronic, magnetic, mechanical, and thermoelectric features**
Charifi Z., Ghellab T., Baaziz H., Soyalp F.
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.46, no.10, pp.13855-13873, 2022 (SCI-Expanded)

IV. **Effect of octahedral cation on electronic, magnetic and optic properties of CoX2O4 (X = Cr, Mn and Fe) spinel compound**
Hetache N., Charifi Z., Ghellab T., Baaziz H., Soyalp F.
PHILOSOPHICAL MAGAZINE, vol.102, no.2, pp.166-188, 2022 (SCI-Expanded)

V. **First principles calculation of the structural, electronic, optical and elastic properties of the cubic AlxGa1-xSb ternary alloy**
Moussa R., Abdiche A., Khenata R., Soyalp F.
OPTICAL MATERIALS, vol.113, 2021 (SCI-Expanded)

VI. **Structural, electronic, optical and thermodynamic properties of the cubic quadratic quaternary alloys Ga(x)In(1-x)AsyN(1-y). Insight from DFT computations**
Abdiche A., Oualdine A., Guemou M., Khenata R., Soyalp F., Ahmed R., Tahir S. A., Bin-Omran S.
MATERIALS TODAY COMMUNICATIONS, vol.26, 2021 (SCI-Expanded)

VII. **The study of structural, electronic and thermoelectric properties of Ca1-xYbxZn2Sb2 (x=0, 0.25, 0.5, 0.75, 1) Zintl compounds**

Mili I., Latelli H., Ghellab T., Charifi Z., Baaziz H., Soyalp F.
INTERNATIONAL JOURNAL OF MODERN PHYSICS B, vol.35, no.7, 2021 (SCI-Expanded)

VIII. **First principles study of the structural, electronic, optical and thermodynamic properties of cubic quaternary AlxIn1-xPyBi1-y alloys**
Abdiche A., Guemou M., Moussa R., Soyalp F., Khenata R.
ZEITSCHRIFT FUR NATURFORSCHUNG SECTION A-A JOURNAL OF PHYSICAL SCIENCES, vol.76, no.6, pp.517-534, 2021 (SCI-Expanded)

IX. **Computational investigations on band structure and electronic features of chromium-based carbides and nitride Cr3PX (X = C and N) through the FP-APW+LO approach**
SEDDIK T., Uğur G., Soyalp F., KHENATA R., PRAKASH D., KITYK I., KHAN S. A., BOUHEMADOU A., BIN-OMRAN S., RAI D., et al.
Superlattices and Microstructures, vol.109, pp.1-12, 2017 (SCI-Expanded)

X. **Electronic structure, phase stability, vibrational and thermodynamic properties of the ternary Nowotny-Juza materials LiMgSb and LiZnSb**
Guendouz D., Charifi Z., Baaziz H., Soyalp F., Uğur G., Uğur S.
Physica B: Condensed Matter, vol.519, pp.39-52, 2017 (SCI-Expanded)

XI. **Computational investigations on band structure and optical properties of the BeSexTe1-xalloys through the FP-LAPW approach**
HADJI K., ABDICHE A., Soyalp F., OMRAN S. B., KHENATA R.
Optik, vol.130, pp.1080-1091, 2017 (SCI-Expanded)

XII. **First-principles study of structural, electronic, and optical properties of cubic InAsxNyP1-x-y triangular quaternary alloys**
Hattabi I., Abdiche A., Soyalp F., Moussa R., Riane R., Hadji K., Bin-Omran S., Khenata R.
CHINESE PHYSICS B, vol.26, no.1, 2017 (SCI-Expanded)

XIII. **Thermodynamics and P-T phase diagram of lanthanum monosulfide**
PATEL A., BHATT N., THAKORE B., Soyalp F., VYAS P.
High Temperatures - High Pressures, vol.46, no.3, pp.189-209, 2017 (SCI-Expanded)

XIV. **Investigation of electronic structure and thermodynamic properties of quaternary Li-containing chalcogenide diamond-like semiconductors**
Berarma K., Charifi Z., Soyalp F., Baaziz H., Ugur G., Ugur S.
SEMICONDUCTOR SCIENCE AND TECHNOLOGY, vol.31, no.12, 2016 (SCI-Expanded)

XV. **Optoelectronic and thermoelectric properties of Zintl YLi(3)A(2) (A = Sb, Bi) compounds through modified Becke-Johnson potential**
SEDDIK T., Ugur G., KHENATA R., Ugur S., Soyalp F., MURTAZA G., RAI D. P., BOUHEMADOU A., BIN OMRAN S.
CHINESE PHYSICS B, vol.25, no.10, 2016 (SCI-Expanded)

XVI. **First-Principle Study of the Structural, Electronic, and Optical Properties of Cubic InNxP1-x Ternary Alloys under Hydrostatic Pressure**
HATTABI I., ABDICHE A., MOUSSA R., RIANE R., HADJI K., Soyalp F., VARSHNEY D., SYROTYUK S., KHENATA R.
Zeitschrift fur Naturforschung - Section A Journal of Physical Sciences, vol.71, no.9, pp.783-796, 2016 (SCI-Expanded)

XVII. **Ortaöğretim Öğrencilerinin Proje Yarışması ve Okul Bağlamında Kullandıkları Öğrenme Yaklaşımları: Epistemolojik Değişkenlik**
Yerdelen Damar S., Soyalp F.
Yüzüncü Yıl Üniversitesi Eğitim Fakültesi Dergisi, vol.8, no.1, pp.593-630, 2016 (SSCI)

XVIII. **First principles study of hydrogen storage material NaBH4 and LiAlH4 compounds: electronic structure and optical properties**
GHELLAB T., CHARIFI Z., BAAZIZ H., Ugur S., Ugur G., Soyalp F.
PHYSICA SCRIPTA, vol.91, no.4, 2016 (SCI-Expanded)

XIX. **Ab Initio Investigation of the Structural, Electronic and Optical Properties of Cubic GaAs1-x P (x) Ternary Alloys Under Hydrostatic Pressure**
MOUSSA R., ABDICHE A., ABBAR B., GUEMOU M., RIANE R., MURTAZA G., BIN OMRAN S., KHENATA R., Soyalp F.

JOURNAL OF ELECTRONIC MATERIALS, vol.44, no.12, pp.4684-4699, 2015 (SCI-Expanded)

XX. **Theoretical investigations of Co2Mn1-xCrxSn and Co2MnSn1-ySiy pseudo-ternary alloys: First principles calculations**
CHARIFI Z., HAMAD B., BAAZIZ H., Soyalp F.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.393, pp.139-145, 2015 (SCI-Expanded)

XXI. **Studying structural, electronic and optical properties of zinc-blende Ga1-xAlxP at normal and under pressure by means of first principle**
MOUSSA R., ABDICHE A., KHENATA R., RAI D. P., Ahmed W. K., Bin Omran S., MURTAZA G., Soyalp F.
MATERIALS RESEARCH EXPRESS, vol.2, no.10, 2015 (SCI-Expanded)

XXII. **Prediction study of the mechanical and thermodynamic properties of the RBRh3(R = Sm, Eu, Gd, and Tb) compounds**
MEKKAOUI F., LITIMEIN F., KHENATA R., MERABIHA O., BOUHEMADOU A., VARSHNEY D., Soyalp F., Uğur S., BIN-OMRAN S., RACHED D.
International Journal of Thermophysics, vol.34, no.11, pp.2102-2118, 2013 (SCI-Expanded)

XXIII. **Elastic and phonon properties of FeSi and CoSi in the B2 structure**
Acun A. D., Soyalp F.
PHILOSOPHICAL MAGAZINE, vol.92, no.5, pp.635-646, 2012 (SCI-Expanded)

XXIV. **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)

XXV. **Ground state and phonon spectrum of NiSi2**
Soyalp F., UĞUR G.
PHILOSOPHICAL MAGAZINE, vol.91, no.3, pp.468-476, 2011 (SCI-Expanded)

XXVI. **Phonon and elastic properties of AlSc and MgSc from first-principles calculations**
UĞUR Ş., ARIKAN N., Soyalp F., Ugur G.
COMPUTATIONAL MATERIALS SCIENCE, vol.48, no.4, pp.866-870, 2010 (SCI-Expanded)

XXVII. **The first-principles study of LaSe and LaTe in B1 and B2 structures**
Soyalp F.
Computational Materials Science, vol.44, no.4, pp.1371-1378, 2009 (SCI-Expanded)

XXVIII. **Electronic structure calculations of rare-earth intermetallic compound YAg using ab initio methods**
Uğur Ş., Uğur G., Soyalp F., Ellialtioğlu R.
Journal of Rare Earths, vol.27, no.4, pp.664-666, 2009 (SCI-Expanded)

XXIX. **STRUCTURAL, ELECTRONIC AND PHONON PROPERTIES OF LaX COMPOUNDS (X = P, As)**
Ugur G., UĞUR Ş., Erkisi A., Soyalp F.
INTERNATIONAL JOURNAL OF MODERN PHYSICS B, vol.22, no.28, pp.5027-5033, 2008 (SCI-Expanded)

XXX. **First-principles investigation of structural, electronic and dynamical properties in ScAuSn alloy**
Soyalp F., Uğur Ş., Uğur G.
Computational Materials Science, vol.41, no.2, pp.134-137, 2007 (SCI-Expanded)

Articles Published in Other Journals

I. **Ab Initio Calculation of Physical Properties of Sodium Chloride**
Doğan E., Seçuk M. N., Erdinç B., Soyalp F., Akkuş H.
MATERIALS FOCUS, vol.2, no.5, pp.346-353, 2013 (Peer-Reviewed Journal)

II. **Ab Initio Calculation of Physical Properties of Sodium Chloride**
Doğan E., Seçuk M. N., Erdinç B., Soyalp F., Akkuş H.
MATERIALS FOCUS, vol.2, no.5, pp.346-353, 2013 (Peer-Reviewed Journal)

III. **Ab Initio Calculation of Physical Properties of Sodium Chloride**
Doğan E., Seçuk M. N., ERDINC B., Soyalp F., Akkuş H.
MATERIALS FOCUS, vol.2, no.5, pp.346-353, 2013 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

I. **The First-Principles Study of CsCaCl3**
Soyalp F., Kılıç M., Bodur E.
Türk Fizik Derneği 33. Uluslararası Fizik Kongresi, Muğla, Turkey, 6 - 09 September 2017, pp.625

II. **Structural, Elastic, Electronic and Lattice Dynamical Properties of LiCdBi**
Soyalp F., Bodur E.
Türk Fizik Derneği 33. Uluslararası Fizik Kongresi, Muğla, Turkey, 6 - 09 September 2017, pp.643

III. **First Principle Calculation on Structural and Lattice Dynamical Properties Of LiCdSb**
Soyalp F., UGUR G.
Türk Fizik Derneği 33. Uluslararası Fizik Kongresi, Muğla, Turkey, 6 - 09 September 2017, pp.610

IV. **Ab-Initio investigation of the Structural, Elastic, Electronic, Phonon and Thermodynamic properties of LiCdAs**
Soyalp F., UGUR G.
Türk Fizik Derneği 33. Uluslararası Fizik Kongresi, Muğla, Turkey, 6 - 09 September 2017, pp.283

V. **Elastic, Thermodynamic, and Phonon properties of TcNb, TcTa, and TcV: First principles study**
Akbudak S., Candan A., Soyalp F., Ünver H., Uğur G., Uğur Ş.
3th International Conference on Researches in Science and Technology (ICRST), Lisbon, Portugal, 25 - 26 May 2017, pp.22

VI. **ELECTRONIC, ELASTIC, DYNAMIC AND THERMODYNAMIC PROPERTIES OF THE LIBEAS AND LIBESB COMPOUNDS IN ?, ? AND ? PHASES: FIRST PRINCIPLES CALCULATIONS**
Soyalp F., UGUR S.
INTERNATIONAL JOURNAL OF ADVANCES ON AUTOMOTIVE AND TECHNOLOGY, İstanbul, Turkey, 29 - 31 March 2017, pp.322

VII. **AB-INITIO INVESTIGATION OF THE STRUCTURAL, ELASTIC, ELECTRONIC, PHONON AND THERMODYNAMIC PROPERTIES OF LIBEBI IN ? PHASE PHASE**
Soyalp F., UGUR G., UGUR S.
3th International Conference on Researches in Science and Technology (ICRST), İstanbul, Turkey, 29 - 31 March 2017, pp.90

VIII. **THEORETİCAL PREDİCTİON OF THE GROUNDSTATE PROPERTİES OF NOWOTNY–JUZA LİCDN AND LİCDP COMPOUNDS**
Soyalp F., Uğur G.
INTERNATIONAL JOURNAL OF ADVANCES ON AUTOMOTIVE AND TECHNOLOGY, İstanbul, Turkey, 29 - 31 March 2017, pp.275

Supported Projects

Soyalp F., Project Supported by Higher Education Institutions, Teorik Araştırma Laboratuvarı Altyapısının Güçlendirilmesi, 2017 - 2017

Soyalp F., UĞUR G., Project Supported by Higher Education Institutions, Bazı Nowotny-Juza bileşiklerinin yapısal, elektronik, elastik, fonon ve termodinamik özelliklerinin yoğunluk fonksiyonel teorisi ile araştırılması, 2013 - 2017

Soyalp F., Project Supported by Higher Education Institutions, Tetrahedrali Dolu Üçlü Bileşiklerin Taban Durum Özelliklerinin Hesaplanması, 2015 - 2016

Soyalp F., Project Supported by Higher Education Institutions, Yoğunluk Fonksiyonu Teorisi ile ABF3 Bileşiklerinin Yapısal, Elektronik, Elastik, Titreşim ve Termodinamik Özelliklerinin Teorik Olarak İncelenmesi, 2014 - 2015

Soyalp F., Project Supported by Higher Education Institutions, Bazı Kübik Bileşiklerinin Taban Durum Özelliklerinin Yoğunluk Fonksiyonu Teorisi İle İncelenmesi, 2010 - 2013

Soyalp F., Project Supported by Higher Education Institutions, Yoğunluk Fonksiyonu Teorisi ile FeSi ve CoSi un Elektronik,Elastik ve Titreşim Özelliklerinin Teorik Olarak İncelenmesi, 2011 - 2012

Soyalp F., Project Supported by Higher Education Institutions, Bazı Yüz Merkezli Kristallerin Taban Durum Özelliklerinin

İncelenmesi, 2008 - 2011

Metrics

Publication: 41
Citation (WoS): 90
Citation (Scopus): 108
H-Index (WoS): 4
H-Index (Scopus): 5

Congress and Symposium Activities

First Principle Calculation on Structural and Lattice Dynamical Properties Of LiCdSb, Attendee, Muğla, Turkey, 2017
Ab-Initio investigation of the Structural, Elastic, Electronic, Phonon and Thermodynamic properties of LiCdAs, Attendee, Turkey, 2017
Structural, Elastic, Electronic and Lattice Dynamical Properties of LiCdBi, Attendee, Muğla, Turkey, 2017
Elastic, Thermodynamic, and Phonon properties of TcNb, TcTa, and TcV: First principles study, Attendee, Lisboa, Portugal, 2017
THEORETİCAL PREDİCTİON OF THE GROUNDSTATE PROPERTİES OF NOWOTNY–JUZA LİCDN AND LİCDP COMPOUNDS, Attendee, İstanbul, Turkey, 2017
AB-INITIO INVESTIGATION OF THE STRUCTURAL, ELASTIC, ELECTRONIC, PHONON AND THERMODYNAMIC PROPERTIES OF LIBEBI IN ? PHASE PHASE, Attendee, İstanbul, Turkey, 2017
ELECTRONIC, ELASTIC, DYNAMIC AND THERMODYNAMIC PROPERTIES OF THE LIBEAS AND LIBESB COMPOUNDS IN ?, ? AND ? PHASES: FIRST PRINCIPLES CALCULATIONS, Attendee, İstanbul, Turkey, 2017
theoretıcal predıctıon of the nowotny-juzza liben and libep compounds, Attendee, Turkey, 2016
ab-ınıtıo structural, electronic, elastıc, phonon and thermodynamical properties for B1(NaCl) CaO, Attendee, Muğla, Turkey, 2016
FIRST PRINCIPLE CALCULATION ON STRUCTURAL AND LATTICE DYNAMICAL PROPERTIES OF LiMgSb, Attendee, Muğla, Turkey, 2016
First-principles Study of Electronic and Dynamical Properties of The CaTe in B1(NaCl) Structur, Attendee, Turkey, 2016
The First-principles Study Of CaS and CaSe in B1 And B2 Structures, Attendee, Erzurum, Turkey, 2016
Structural, Elastic, Electronic and Lattice Dynamical Properties of LiZnAs, Attendee, Erzurum, Turkey, 2016
Density Functional Theory Study of Structural, Elastic, Electronic, and Phonon Properties of LiZnP, Attendee, Turkey, 2016
Theoretical Prediction of the Ground-State Properties of Nowotny–Juza LiMgN and LiZnN Compounds, Attendee, Erzurum, Turkey, 2016
The first International workshop on the thermodynamics of metallic alloys, Attendee, Bâtnah, Algeria, 2015