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Kişisel Bilgiler

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Uluslararası Araştırmacı ID'leri

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Publons / Web Of Science ResearcherID: AHB-5893-2022

ScopusID: 57202854951

Yoksis Araştırmacı ID: 47969

Eğitim Bilgileri

Doktora, Gazi Üniversitesi, Fen Bilimleri Enstitüsü, Fizik (Dr), Türkiye 2016 - 2021

Yüksek Lisans, Giresun Üniversitesi, Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli), Türkiye 2012 - 2015

Lisans, Karadeniz Teknik Üniversitesi, Fen Fakültesi, Fizik Bölümü, Türkiye 2007 - 2012

Yabancı Diller

İngilizce, C1 İleri

Yaptığı Tezler

Doktora, Bazı XYZ, X₂YZ VE XX'YZ (X, X', Y: geçiş metalleri, Z: III-V A grubu elementleri) bileşiklerinin yapısal, elektronik, yarı metalik ve manyetik özelliklerinin incelenmesi, Gazi Üniversitesi, Fen Bilimleri Enstitüsü, 2021

Yüksek Lisans, Bazı Karboksilik Asit-Metal Komplekslerinin K beta/K alfa Şiddet Oranlarının Hesaplanması, Giresun Üniversitesi, Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli), 2015

Araştırma Alanları

Yoğun Madde 2:Elektronik Yapı, Elektrik, Manyetik ve Optik Özellikler

Akademik Unvanlar / Görevler

Doç.Dr., Gazi Üniversitesi, Fen Fakültesi, Fizik, 2023 - Devam Ediyor

Öğretim Görevlisi Dr., Gazi Üniversitesi, Fen Fakültesi, Fizik, 2021 - 2023

Öğretim Görevlisi, Gazi Üniversitesi, Fen Fakültesi, Fizik, 2020 - 2021

Araştırma Görevlisi, Ankara Hacı Bayram Veli Üniversitesi, Polatlı Fen-Edebiyat Fakültesi, Fizik Bölümü, 2018 - 2020

Araştırma Görevlisi, Gazi Üniversitesi, Polatlı Fen-Edebiyat Fakültesi, Fizik, 2014 - 2018

FİZİK I, Lisans, 2023 - 2024

Fizik Laboratuvarı, Lisans, 2023 - 2024

Fizikteki Son Gelişmeler, Lisans, 2023 - 2024

Fizik I, Lisans, 2023 - 2024

Fizik, Lisans, 2022 - 2023

Fizik Laboratuvarı, Lisans, 2021 - 2022

Physics II, Lisans, 2021 - 2022

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **Spin-oriented magnetic phase, pressure-dependent elastic calculations, and band gap predictions of V_{Pd2}Br₄ spinel**
ÖZDEMİR E. G.
Indian Journal of Physics, cilt.98, sa.6, ss.2005-2014, 2024 (SCI-Expanded)
- II. **High-performance optoelectronic and thermoelectric properties of transparent conductors based on Ti₂O₃ under pressure**
Aliabad H. A. R., Arzefooni A. A., Sadati S. Z., Özdemir E. G., Khosrojerdi P.
SCIENTIFIC REPORTS, cilt.14, ss.9237-9248, 2024 (SCI-Expanded)
- III. **First-Principles Calculations to Investigate Spin-Oriented Magnetic Phases, Band Gaps, Elastic, and Thermodynamic Calculations of VNi₂O₄**
Ak F., Özdemir E. G., Merdan Z.
CHEMICAL PHYSICS, cilt.581, ss.112252-112261, 2024 (SCI-Expanded)
- IV. **Magnetic, pressure-dependent elastic, and band gap calculations of VCo₂O₄ oxide spinel via GGA, GGA+mBJ, and GGA+U**
ÖZDEMİR E. G., Balmumcu F. I.
Physica B: Condensed Matter, cilt.674, 2024 (SCI-Expanded)
- V. **Effects of applied different potentials on electronic and Half-Metallic characteristics and investigated Pressure-Dependent elastic and thermodynamic properties of VRu₂Br₄ spinel**
Özdemir E. G., Merdan Z., Rahnamaye Aliabad H.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, cilt.590, 2024 (SCI-Expanded)
- VI. **Electronic, magnetic, half-Metallic, pressure-induced elastic and curie temperature predictions of Zr₂RhTi Heusler alloy: DFT and EFT studies**
Özdemir E. G., Doğruer S., Merdan Z.
Philosophical Magazine, cilt.104, sa.2, ss.115-135, 2024 (SCI-Expanded)
- VII. **Optoelectronic and thermoelectric properties of Sb₂S₃ under hydrostatic pressure for energy conversion**
Azadparvar M., Aliabad H. A. R., Özdemir E. G.
AIP ADVANCES, cilt.13, ss.65128-65240, 2023 (SCI-Expanded)
- VIII. **Structural, half-metallic, electronic, magnetic and pressure-induced elastic changes of PdVSi, PdVGe, PdVS_n, and PdVS_b alloys**
Balmumcu F. I., Özdemir E. G., Merdan Z.
Journal of Materials Science, cilt.58, sa.12, ss.5349-5361, 2023 (SCI-Expanded)
- IX. **The structural, magnetic, and pressure-induced elastic predictions of ZrPd₂O₄ oxide spinel via GGA, GGA+mBJ, and GGA+U approximations**
Özdemir E. G., Doğruer S.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, cilt.568, ss.170417-170424, 2023 (SCI-Expanded)
- X. **Electronic, magnetic, and pressure-induced elastic investigations of MnY₂O₄ oxide spinel**
Özdemir E. G., Doğruer S.
EUROPEAN PHYSICAL JOURNAL PLUS, cilt.138, ss.23-30, 2023 (SCI-Expanded)
- XI. **Comparisons of the Magnetic and Half-Metallic Properties of Sb-V-Te Compounds in Low and Rich**

Vanadium Region

Özdemir E. G.

JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, cilt.35, sa.12, ss.3745-3759, 2022 (SCI-Expanded)

- XII. **Effects of atomic displacements on band gaps of Na₂MgXO₆ (X= Co, Fe) double perovskite oxides: GGA and GGA+U approaches**
Özdemir E. G.
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, cilt.152, ss.107078-107087, 2022 (SCI-Expanded)
- XIII. **The electronic, magnetic and half-metallic predictions of M-x (M = Ag, Cd, Y, Zr, Nb, and x=0, 0.125, 0.25, 1)W_{1-x}Sn alloys**
Özdemir E. G., Doğruer S.
PHILOSOPHICAL MAGAZINE, cilt.102, sa.20, ss.2074-2097, 2022 (SCI-Expanded)
- XIV. **The half-metallic predictions of M (M = Y, Zr, Nb)-Sc-Sn diluted ternary alloys via GGA and GGA + mBJ**
Özdemir E. G.
EUROPEAN PHYSICAL JOURNAL B, cilt.95, ss.129-143, 2022 (SCI-Expanded)
- XV. **The effect of structural changes on half-metallic, elastic and magnetic properties of the FeWGa half-Heusler compound via first-principles studies**
Özdemir E. G., Doğruer S., Özcan A., Merdan Z.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, cilt.546, ss.168872-168879, 2022 (SCI-Expanded)
- XVI. **Electronic, magnetic and elastic calculations on halfmetallic Heusler Ti₂RuTl compound**
Güleşçi Kartal Y., Özdemir E. G., Merdan Z.
PHILOSOPHICAL MAGAZINE, cilt.102, sa.2, ss.153-165, 2022 (SCI-Expanded)
- XVII. **The electronic, half-metallic, elastic, and magnetic properties of new PtWZ (Z= In, Tl, Sn, and Pb) half-Heusler alloys via GGA and GGA +mBJ methods**
Özdemir E. G., Doğruer S.
PHYSICA SCRIPTA, cilt.96, ss.125869-125880, 2021 (SCI-Expanded)
- XVIII. **First-principles calculations to investigate half-metallic band gap and elastic stability of Co(Mo,Tc)MnSb compounds**
Ozdemir G. E., MERDAN Z.
PHYSICA E-LOW-DIMENSIONAL SYSTEMS & NANOSTRUCTURES, cilt.133, 2021 (SCI-Expanded)
- XIX. **Bridge constant and atom between theoretical and experimental magnetism in Ni₂MnSb Heusler alloy: DFT and EFT studies**
Saatçi B., Şarlı N., Özdemir E. G., Merdan Z.
PHILOSOPHICAL MAGAZINE, cilt.101, sa.4, ss.501-516, 2021 (SCI-Expanded)
- XX. **The effect of structural changes on the half metallic properties by using Tran Blaha modified Becke Johnson (TB_mBJ) method**
ÖZDEMİR E. G., MERDAN Z.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, cilt.514, 2020 (SCI-Expanded)
- XXI. **Comparisons of half-metallic results of Al_{0.75}Co_{0.25}Sb diluted magnetic semiconductor with generalized gradient approximation (GGA) and Tran Blaha modified Becke-Johnson (TB_mBJ) potential methods**
ÖZDEMİR E. G., MERDAN Z.
PHYSICA B-CONDENSED MATTER, cilt.581, 2020 (SCI-Expanded)
- XXII. **First principle predictions on half-metallic results of MnZrX (X = In, Tl, C, Si, Ge, Sn, Pb, N, P, As, Sb, O, S, Se, Te) half-Heusler compounds**
Özdemir E. G., Merdan Z.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, cilt.491, 2019 (SCI-Expanded)
- XXIII. **Half-metal calculations of CoZrGe half-Heusler compound by using generalized gradient approximation (GGA) and modified Becke-Johnson (mBJ) methods**
Özdemir E. G., Merdan Z.
MATERIALS RESEARCH EXPRESS, cilt.6, sa.11, 2019 (SCI-Expanded)

- XXIV. **First-principles calculations on half-metal ferromagnetic results of VZrAs and VZrSb half-heusler compounds and Al_{1-x}M_xAs (M = Co, Fe and x=0.0625, 0.125, 0.25) diluted magnetic semiconductors**
Özdemir E. G., Merdan Z.
JOURNAL OF ALLOYS AND COMPOUNDS, cilt.807, 2019 (SCI-Expanded)
- XXV. **Theoretical calculations on half-metallic results properties of FeZrX (X = P, As, Sb and Bi) half-Heusler compounds: density functional theory**
Özdemir E. G., Merdan Z.
MATERIALS RESEARCH EXPRESS, cilt.6, sa.8, 2019 (SCI-Expanded)
- XXVI. **Key role of central antimony in magnetization of Ni_{0.5}Co_{1.5}MnSb quaternary Heusler alloy revealed by comparison between theory and experiment**
Sarlı N., Ak F., Özdemir E. G., Saatçi B., Merdan Z.
PHYSICA B-CONDENSED MATTER, cilt.560, ss.46-50, 2019 (SCI-Expanded)
- XXVII. **First-principles predictions on structural, electronic, magnetic and elastic properties of Mn₂IrAl Heusler alloy**
ÖZDEMİR E. G., MERDAN Z.
MATERIALS RESEARCH EXPRESS, cilt.6, sa.3, 2019 (SCI-Expanded)
- XXVIII. **Investigation of structural, half-metallic and elastic properties of a new full-Heusler compound-Ir₂MnSi**
Özdemir E. G., Eser E., Merdan Z.
CHINESE JOURNAL OF PHYSICS, cilt.56, sa.4, ss.1551-1558, 2018 (SCI-Expanded)

Diğer Dergilerde Yayınlanan Makaleler

- I. **Ab-initio Calculations of the Half-metallic Ferromagnetic New Variant Perovskites Li₂CrO₆ and Li₂CuO₆**
Özdemir E. G.
GAZI UNIVERSITY JOURNAL OF SCIENCE, cilt.36, sa.2, ss.909-918, 2023 (Scopus)
- II. **Comparison of Electronic and Magnetic Properties of 4d Transition Metals Based NbAl₂F₄ and TcAl₂F₄ Spinel**
Özdemir E. G.
Gazi University Journal of Science Part A: Engineering and Innovation, cilt.9, ss.452-460, 2022 (Hakemli Dergi)
- III. **The Electronic and Magnetic Properties of New Full-Heusler Compounds: M₂IrSi (M=Ti, Cr and Mn)**
MERDAN Z., ÖZDEMİR E. G.
GAZI UNIVERSITY JOURNAL OF SCIENCE, cilt.31, sa.3, ss.940-952, 2018 (ESCI)

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **The Half-metallic and Magnetic Properties of CrAl₂F₄ Spinel: A Density Functional Theory Study**
Özdemir E. G.
9th International Materials Science and Nanotechnology for Next Generation Conference, Ankara, Türkiye, 22 - 24 Eylül 2022, ss.55
- II. **The Co₂FeGe Full Heusler Alloy Magnetic and Curie Temperature Investigations with EFT Method**
Doğruer S., Özdemir E. G., Merdan Z.
1st International Conference on Innovative Academic Studies, Konya, Türkiye, 10 - 13 Eylül 2022, ss.227-228
- III. **The Electronic and Magnetic Properties of TiAl₂F₄ Spinel via GGA, GGA+mBJ, LDA, and LDA+mBJ**
Özdemir E. G.
1st International Conference on Innovative Academic Studies, Konya, Türkiye, 10 - 13 Eylül 2022, ss.172-173
- IV. **The Magnetic and Curie Temperature Investigations of Co₂NbGa Full Heusler Alloy with EFT Method**
Doğruer S., Özdemir E. G., Merdan Z.

3rd International Conference on Applied Engineering and Natural Sciences, Konya, Türkiye, 20 - 23 Temmuz 2022, ss.1238

- V. **Comparisons of Half-Metallic Band Gaps of $\text{Li}_2\text{TiMnO}_6$ Double Perovskite via GGA and GGA+mBJ**
Özdemir E. G.

3rd International Conference on Applied Engineering and Natural Sciences, Konya, Türkiye, 20 - 23 Temmuz 2022, ss.2216

- VI. **Half-Metallic Ferromagnetic Predictions of $\text{Na}_2\text{MgTiO}_6$ Double Perovskite with Wide Band Gap**
Özdemir E. G.

1st International Conference on Engineering and Applied Natural Sciences, Konya, Türkiye, 10 - 13 Mayıs 2022, ss.1517

- VII. **Electronic, Structural and Magnetic Properties of CrWBi Half-Heusler Alloy via Ab-Initio Method**
Özdemir E. G.

TURKISH PHYSICAL SOCIETY 37th INTERNATIONAL PHYSICS CONGRESS, Muğla, Türkiye, 1 - 05 Eylül 2021, ss.110-111

- VIII. **Cr_x ($x= 0.25, 0.50$ and 0.75) doping effect on half-metallic band gaps of $\text{CoTc}_{1-x}\text{MnSb}$ quaternary compounds**

Özdemir E. G., Merdan Z.

3rd International Hydrogen Energy Congress & Exhibitions, Ankara, Türkiye, 14 - 16 Haziran 2021, ss.146-147

- IX. **First Principle Studies of Structural, Electronic, Elastic Properties of Pd_2MnTi Full Heusler Compound**

Fadime Irmak B., ÖZDEMİR E. G., MERDAN Z.

INTERNATIONAL CONFERENCE ON ADVANCED MATERIALS SCIENCE & ENGINEERING AND HIGH TECH DEVICE APPLICATIONS, Ankara, Türkiye, 02 Ekim 2020

- X. **The electronic, magnetic and half-metallic properties of new Ti_2RuTi full Heusler compound: An ab-initio investigation**

GÜLEŞÇİ KARTAL Y., ÖZDEMİR E. G., MERDAN Z.

International Conference on Advanced Materials Science Engineering and High Tech Devices Applications Exhibition (ICMATSE 2020), Ankara, Türkiye, 2 - 04 Ekim 2020

- XI. **Half-Metal Predictions on Sc_2As Compound: A First Principles Calculations**
ÖZDEMİR E. G., MERDAN Z.

Turkish Physical Society 35th International Physics Congress, Muğla, Türkiye, 4 - 08 Eylül 2019

- XII. **Theoretical Calculations of FeZrX ($X= \text{P, As, Sb and Bi}$) Half-Heusler Compounds**
ÖZDEMİR E. G., MERDAN Z.

Turkish Physical Society 35th International Physics Congress, Muğla, Türkiye, 4 - 08 Eylül 2019

- XIII. **Electronically, magnetically and elastically studies of Ti_2IrAl alloy**
ÖZDEMİR E. G., MERDAN Z.

International Congress on the World of Technology and Advanced Materials, 21 - 23 Eylül 2018

- XIV. **Density functional investigations of structural and magnetic properties of full-Heusler alloy - Ti_2ReSi using GGA method**
ÖZDEMİR E. G., MERDAN Z.

International Congress on the World of Technology and Advanced Materials, 21 - 23 Eylül 2018

- XV. **Theoretical Predictions of Ti_2ReSn Full-Heusler Compound Using Wien2k: Ab-Initio Calculations**
ÖZDEMİR E. G., MERDAN Z.

International Congress on the World of Technology and Advanced Materials, 21 - 23 Eylül 2018

- XVI. **Half-Metallic Studies on Inverse Ti_2ReGe Full-Heusler Compound**
MERDAN Z., ÖZDEMİR E. G.

International Congress on the World of Technology and Advanced Materials, 21 - 23 Eylül 2018

- XVII. **Ab-Initio Calculations of Ti_2IrTi full-Heusler Alloy**
Güleşçi Kartal Y., ÖZDEMİR E. G., MERDAN Z.

Turkish Physical Society 34th International Physics Congress, Bodrum/Muğla, Türkiye, 5 - 09 Eylül 2018

- XVIII. **First Principles Predictions on Structural, Electronic, Magnetic and Elastic Properties of Inverse**

Heusler Mn₂IrZ (Z=Al and Ge) Alloys

ÖZDEMİR E. G., MERDAN Z.

Turkish Physical Society 34th International Physics Congress, Bodrum/Muğla, Türkiye, 5 - 09 Eylül 2018

XIX. The Half-Metallic Property of Ti₂RePb Heusler Alloy: Ab Initio Calculations

ÖZDEMİR E. G., MERDAN Z.

Turkish Physical Society 34th International Physics Congress, Bodrum/Muğla, Türkiye, 5 - 09 Eylül 2018

XX. First Principles Study on Electronic and Magnetic Properties of Full-Heusler Compounds- M₂IrSi(M=Ti, Cr and Mn)

MERDAN Z., ÖZDEMİR E. G.

TÜRK FİZİK DERNEĞİ 33. ULUSLARARASI FİZİK KONGRESİ, Muğla, Türkiye, 6 - 10 Eylül 2017

XXI. Structural Phase Transition of Cadmium Sulfide Under High Pressure Via The Conjugate Gradient Method

YAMÇIÇIER Ç., MERDAN Z., YAMÇIÇIER S., KÜRKÇÜ C., ÖZDEMİR E. G.

TÜRK FİZİK DERNEĞİ 33. ULUSLARARASI FİZİK KONGRESİ, Muğla, Türkiye, 6 - 10 Eylül 2017

XXII. Theoretical Study of Structural Changes of ZnO Under High Hydrostatic Pressure

YAMÇIÇIER S., KÜRKÇÜ C., ÖZDEMİR E. G., YAMÇIÇIER Ç.

TÜRK FİZİK DERNEĞİ 33. ULUSLARARASI FİZİK KONGRESİ, Muğla, Türkiye, 6 - 10 Eylül 2017

XXIII. Investigation of Half-Metallicity of Full-Heusler Compound - Ir₂MnSi

ÖZDEMİR E. G., MERDAN Z., ESER E.

TÜRK FİZİK DERNEĞİ 33. ULUSLARARASI FİZİK KONGRESİ, Muğla, Türkiye, 6 - 10 Eylül 2017

XXIV. Spintronic, Electronic and Magnetic Properties of the Ti₂IrAl Full-Heusler Compound by Density Functional Theory

MERDAN Z., ÖZDEMİR E. G.

TÜRK FİZİK DERNEĞİ 33. ULUSLARARASI FİZİK KONGRESİ, Muğla, Türkiye, 6 - 10 Eylül 2017

XXV. An Ab Initio Study on Half-Metallic States and Magnetic Properties of Mn₂IrAl And V₂IrAl Alloys

ÖZDEMİR E. G., MERDAN Z.

TÜRK FİZİK DERNEĞİ 33. ULUSLARARASI FİZİK KONGRESİ, Muğla, Türkiye, 6 - 10 Eylül 2017

XXVI. First Principles Simulation of Pressure-Induced Phase Transition In BiOI: Structural Properties

CANPOLAT M., MERDAN Z., YAMÇIÇIER Ç., KÜRKÇÜ C., ÖZDEMİR E. G.

TÜRK FİZİK DERNEĞİ 33. ULUSLARARASI FİZİK KONGRESİ, Muğla, Türkiye, 6 - 10 Eylül 2017

XXVII. Structural And Electronic Properties of Zirconium Oxide Under Pressure

YAMÇIÇIER Ç., MERDAN Z., YAMÇIÇIER S., KÜRKÇÜ C., ÖZDEMİR E. G.

TÜRK FİZİK DERNEĞİ 33. ULUSLARARASI FİZİK KONGRESİ, Muğla, Türkiye, 6 - 10 Eylül 2017

Desteklenen Projeler

MERDAN Z., ÖZDEMİR E. G., Doğruer S., Yükseköğretim Kurumları Destekli Proje, Zr₂RhTi Heusler alaşımının yapısal manyetik ve elektronik özelliklerinin DFT ve EFT ile incelenmesi, 2022 - 2023

Özdemir E. G., Saatçi B., Merdan Z., Yükseköğretim Kurumları Destekli Proje, Ni₂-xMnCo_xSb alaşımına Cobalt katkılamanın (x=0.00 0.25 0.5 ve 1.0) teorik olarak modellenmesi ve manyetik özelliklere etkisinin incelenmesi, 2019 - 2021

Etkinlik Organizasyonlarındaki Görevler

Altındal Ş., Çiftçi Y., Şahingöz R., Şafak Asar Y., Çetinkaya H. G., Altındal Yerişkin S., Özdemir E. G., Bucurgat M., Erbilgen Tanrıkulu E., Ulusoy M., et al, 9th International Conference on Materials Science and Nanotechnology for Next Generation (MSNG-2022), Bilimsel Kongre / Sempozyum Organizasyonu, Ankara, Türkiye, Eylül 2022

Ketenoglu B., Süsoy Doğan G., Şahin Ö., Kудay S., Şahin M., Ketenoglu D., Canbaz Öztürk B., Culfa Ö., Akdoğan E., Kamışcioğlu Ç., et al, Türk Fizik Derneği XIV. Ulusal Parçacık Hızlandırıcıları ve Dedektörleri Yaz Okulu, Bilim / Sanat

Metrikler

Yayın: 58

Atıf (WoS): 229

Atıf (Scopus): 230

H-İndeks (WoS): 11

H-İndeks (Scopus): 11