

## Assoc. Prof. GÖKHAN SÜRÜCÜ

### Personal Information

**Mobile Phone:** [+90 505 923 1041](tel:+905059231041)

**Office Phone:** [+90 312 202 8351](tel:+903122028351)

**Email:** [gokhansurucu@gazi.edu.tr](mailto:gokhansurucu@gazi.edu.tr)

**Web:** <https://avesis.gazi.edu.tr/arastirma-grubu/srg>

**Address:** Gazi Üniversitesi Teknoloji Fakültesi Enerji Sistemleri Mühendisliği Bölümü Dursun Önkuzu Binası (B-Blok) Zemin K B27 06560 Teknikokullar Yenimahalle / Ankara

### International Researcher IDs

ScholarID: o1df-9wAAAAJ

ORCID: 0000-0002-3910-8575

Publons / Web Of Science ResearcherID: JJD-7550-2023

ScopusID: 35957498000

Yoksis Researcher ID: 215832

### Biography

Assoc. Prof. Dr. Gökhan SÜRÜCÜ received his Ph.D., M.Sc, and Bachelor's degrees from Gazi University. Recently, he is a faculty member of the Department of Energy Systems Engineering, Gazi University.

Assoc. Dr. Gökhan SÜRÜCÜ conducts theoretical and experimental research to investigate and determine the basic physical properties of functional materials in energy applications.

He is interested in Computational Materials Science, Solar cell, Hydrogen Energy, Topological Materials and Energy Applications. Currently, He is working on materials with varying topological properties for the Hydrogen Evolution Reaction (HER). In addition, there are collaborations with national and international groups to reveal the detailed properties of the materials.

### Education Information

Post Doctorate, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Physics, Turkey 2016 - 2018

Doctorate, Gazi University, Fen Bilimleri Enstitüsü, Turkey 2010 - 2014

Postgraduate, Gazi University, Fen Bilimleri Enstitüsü, Turkey 2007 - 2010

Undergraduate, Gazi University, Fen Fakültesi, Fizik, Turkey 2002 - 2006

### Dissertations

Doctorate,  $W1-xTcxB2$  ( $x = 0.1 \sim 0.9$ ),  $Pd3X$  ( $x = Ti, Zr, Hf$ ) alaşımlarının ve  $Tin+1GaN$  ( $n=1,2,3$ ) bileşiklerinin ab initio yöntemlerle incelenmesi, Gazi University, Fen Bilimleri Enstitüsü, 2014

Postgraduate, Bazı A3B (L12) tipi alaşımların yapısal, elektronik, elastik, termodinamik ve titreşimsel özelliklerinin ab initio yöntemlerle incelenmesi, Gazi University, Fen Bilimleri Enstitüsü, 2009

## Research Areas

Renewable energy, Catalysis and Catalytic Processes, Solar energy, Hydrogen Technologies and Fuel Cells, Material science and engineering, Nanomaterials, Surfaces, Interfaces, Thin Films and Nanosystems, Electrical properties of electronic structures, interfaces, thin films and low-dimensional structures

## Academic Titles / Tasks

Associate Professor, Gazi University, Teknoloji Fakültesi, Enerji Sistemleri Mühendisliği, 2022 - Continues  
Associate Professor, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Physics, 2019 - 2022  
Assistant Professor, Kirşehir Ahi Evran University, 2014 - 2019

## Courses

ENERJİ SİSTEMLERİNDE SİMÜLASYON, Postgraduate, 2023 - 2024  
FİZİK II, Undergraduate, 2023 - 2024  
ESM-466 ENERJİTİK MALZEMELER, Undergraduate, 2023 - 2024  
ENERJİ SİSTEMLERİNİN PROJELENDİRİLMESİ, Undergraduate, 2022 - 2023  
ENERGETIC MATERIALS, Undergraduate, 2023 - 2024  
YARIİLETKEN TEKNOLOJİLERİ, Undergraduate, 2022 - 2023  
MEZUNİYET PROJESİ, Undergraduate, 2022 - 2023  
FİZİK I, Undergraduate, 2022 - 2023  
ENERJİ SİSTEM TASARIMI, Undergraduate, 2022 - 2023  
ENERJİ YÖNETİMİ, Undergraduate, 2020 - 2021  
PHYSICS II, Undergraduate, 2010 - 2011  
PHYSICS I, Undergraduate, 2009 - 2010

## Advising Theses

Sürücü G., ÇEVRE DOSTU CuSbSe<sub>2</sub> İNCE FİLM GÜNEŞ HÜCRELERİ: SÜRDÜRÜLEBİLİR ENERJİ İÇİN ZEHİRLİ OLMAYAN PENCERE KATMANLARININ KULLANIMI, Postgraduate, E.BAL(Student), 2024  
Sürücü G., WSi<sub>2</sub>N<sub>4</sub> ve WSiGeN<sub>4</sub> iki boyutlu malzemelerin fotokatalitik hidrojen üretim performansının incelenmesi, Postgraduate, F.HİMMET(Student), 2024  
Çiftci Y., Sürücü G., Investigation of hydrogen production potentials of Chevrel phase compounds by density functional theory, Doctorate, T.Sevinç(Student), 2023  
Sürücü G., Toffoli H., A density functional theory investigation for solid state hydrogen storage materials, Doctorate, A.GENCER(Student), 2019  
Sürücü G., Deligöz E., LaMgNi<sub>4</sub>H<sub>x</sub> (x=1, 4, 7) bileşiğinin mekanik ve titreşimsel özellikleri üzerine hidrojenin etkisi, Postgraduate, M.BAHADIR(Student), 2016

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

- I. **Determining the hydrogen production potential of ConMo<sub>6</sub>Se<sub>8</sub> chevrel phases**  
Gencer A., Surucu O., Sahin M., Ozel F., Surucu G.  
PHYSICA SCRIPTA, vol.100, no.1, pp.16008-16013, 2025 (SCI-Expanded)
- II. **Integrating theoretical and experimental approaches to unveil the mechanical properties of CuSbSe<sub>2</sub> thin films**  
Surucu O., Gencer A., Usanmaz D., Parlak M., Sürücü G.  
PHYSICA SCRIPTA, vol.99, no.12, pp.125978-125982, 2024 (SCI-Expanded)

- III. **Exploring Temperature-Dependent bandgap and Urbach energies in CdTe thin films for optoelectronic applications**  
Surucu O, Sürücü G., Gasanly N., Parlak M., Isik M.  
MATERIALS LETTERS, vol.373, 2024 (SCI-Expanded)
- IV. **Innovative 2D materials for efficient photocatalysis: A comparative study for WSi<sub>2</sub>N<sub>4</sub>, WGe<sub>2</sub>N<sub>4</sub>, and their janus counterpart WSiGeN<sub>4</sub> monolayers**  
Himmet F., Sürücü G., Lisesivdin S. B., Surucu O., Altuntas G., Bostan B., Gencer A.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.78, pp.761-772, 2024 (SCI-Expanded)
- V. **An accurate DFT insights into optoelectronic, magnetic, thermodynamic and thermoelectric characteristics of monoclinic spiroffite Co<sub>2</sub>Te<sub>3</sub>O<sub>8</sub>**  
Chebbab I., Chiker F., Baki N., Khachai I., Miloua R., Khenata R., Sürücü G.  
OPTICAL AND QUANTUM ELECTRONICS, vol.56, no.8, 2024 (SCI-Expanded)
- VI. **Establishing the NiMo<sub>6</sub>Se<sub>8</sub> Chevrel Phase as a Promising Material Using DFT**  
Sürücü G., Surucu O., Usanmaz D., Özel F., Gencer A.  
ADVANCED THEORY AND SIMULATIONS, vol.7, no.7, 2024 (SCI-Expanded)
- VII. **Performance analysis of CuSbSe<sub>2</sub> thin-film solar cells with Cd-free window layers**  
Sürücü G., Bal E., Gencer A., Parlak M., Surucu O.  
MATERIALS LETTERS, vol.363, 2024 (SCI-Expanded)
- VIII. **Is Rb<sub>2</sub>PtX<sub>6</sub> (X = Cl, Br, and I) a promising Pb-free vacancy-ordered double perovskites for photoelectrochemical water splitting applications?**  
Hemidi D., Seddik T., Benmessabih T., Batouche M., Ouerghui W., Abdallah H. B., Surucu G., Ahmad S.  
Applied Physics A: Materials Science and Processing, vol.129, no.11, 2023 (SCI-Expanded)
- IX. **Investigation of Tungsten-Based Seleno-Chevrel Compounds with Different Compositions for Efficient Water Splitting**  
Dag T. S., Sürücü G., Gencer A., Surucu O., Ozel F., Ciftci Y.  
Advanced Theory and Simulations, vol.6, no.11, 2023 (SCI-Expanded)
- X. **Photoantimicrobial and Photocatalytic Hydrogen Evolution Activities of Seleno-Chevrel Phases**  
Kuru T., Sarilmaz A., Çekceoğlu İ. A., Aslan E., Gencer A., Sürücü G., Ozel F., Patir I. H.  
JOURNAL OF ENVIRONMENTAL CHEMICAL ENGINEERING, vol.11, pp.110190-110199, 2023 (SCI-Expanded)
- XI. **DFT Insights into Noble Gold-Based Compound Li<sub>5</sub>AuP<sub>2</sub>: Effect of Pressure on Physical Properties**  
Sürücü G., Gencer A., Surucu O., Ali M. A.  
ACS Omega, vol.8, 2023 (SCI-Expanded)
- XII. **Topological nodal line phonons: Recent advances in materials realization**  
Wang X., Yang T., Cheng Z., Surucu G., Wang J., Zhou F., Zhang Z., Zhang G.  
APPLIED PHYSICS REVIEWS, vol.9, no.4, 2022 (SCI-Expanded)
- XIII. **Equiatomic Quaternary CoXCrAl (X = V, Nb, and Ta) Heusler Compounds: Insights from DFT Calculations**  
Dag T. S., Gencer A., Ciftci Y., Sürücü G.  
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.560, pp.169620-169631, 2022 (SCI-Expanded)
- XIV. **Complex nodal structure phonons formed by open and closed nodal lines in CoAsS and Na<sub>2</sub>CuP solids**  
Ding G., Sun T., Sürücü G., Surucu O., Gencer A., Wang X.  
Physical Chemistry Chemical Physics, vol.24, no.28, pp.17210-17216, 2022 (SCI-Expanded)
- XV. **The spin effects on electronic, optical and mechanical properties of new ferromagnetic chalcopyrite: YMnS<sub>2</sub>**  
Yıldız B., Erkisi A., Surucu G.  
MATERIALS CHEMISTRY AND PHYSICS, vol.284, 2022 (SCI-Expanded)
- XVI. **Copper-based thiospinel quantum dots as potential candidates for nonlinear optical applications**  
Gundogdu Y., Sarilmaz A., Gencer A., Ozel F., Sürücü G., Kilic H. S., Ersoz M.  
Optics and Laser Technology, vol.148, 2022 (SCI-Expanded)

- XVII. **Exploration of carbon additives to the synthesis of Cu<sub>2</sub>Mo<sub>6</sub>S<sub>8</sub> structures and their electrocatalytic activity in oxygen reduction reaction**  
Karanfil G., Coskun H., Karakis M., Sarilmaz A., Gencer A., Sürücü G., Aljabour A., Ozel F.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.47, no.8, pp.5326-5336, 2022 (SCI-Expanded)
- XVIII. **Pressure and spin effect on the stability, electronic and mechanic properties of three equiatomic quaternary Heusler (FeVHfZ, Z = Al, Si, and Ge) compounds**  
Sürücü G., Gencer A., Surucu O., Usanmaz D., Candan A.  
MATERIALS TODAY COMMUNICATIONS, vol.29, 2021 (SCI-Expanded)
- XIX. **Experimental and theoretical investigation of the mechanical characteristics of sillenite compound: Bi<sub>12</sub>GeO<sub>20</sub>**  
Sürücü G., Isik M., Gencer A., Hasanlı N.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.882, 2021 (SCI-Expanded)
- XX. **Equiatomic quaternary Heusler compounds TiVFeZ (Z=Al, Si, Ge): Half-metallic ferromagnetic materials**  
Gencer A., Surucu O., Usanmaz D., Khenata R., Candan A., Sürücü G.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.883, 2021 (SCI-Expanded)
- XXI. **Evaluation of mechanical properties of Bi<sub>12</sub>SiO<sub>20</sub> sillenite using first principles and nanoindentation**  
Isik M., Sürücü G., Gencer A., Hasanlı N.  
PHILOSOPHICAL MAGAZINE, vol.101, no.20, pp.2200-2215, 2021 (SCI-Expanded)
- XXII. **Electronic, optical and thermodynamic characteristics of Bi<sub>12</sub>SiO<sub>20</sub> sillenite: First principle calculations**  
Isik M., Sürücü G., Gencer A., Hasanlı N.  
MATERIALS CHEMISTRY AND PHYSICS, vol.267, 2021 (SCI-Expanded)
- XXIII. **First principles study of Bi<sub>12</sub>GeO<sub>20</sub>: Electronic, optical and thermodynamic characterizations**  
Isik M., Sürücü G., Gencer A., Hasanlı N.  
MATERIALS TODAY COMMUNICATIONS, vol.27, 2021 (SCI-Expanded)
- XXIV. **Enhanced hydrogen storage of a functional material: Hf<sub>2</sub>CF<sub>2</sub> MXene with Li decoration**  
Gencer A., Aydın S., Surucu O., Wang X., Deligöz E., Sürücü G.  
APPLIED SURFACE SCIENCE, vol.551, 2021 (SCI-Expanded)
- XXV. **Electronic and thermodynamic properties of lanthanum tetraboride on low-temperature experimental and ab-initio calculation data**  
Sürücü G., Ozisik H., Deligoz E., Shein I. R., Matovnikov A., Mitroshenkov N., Morozov A., Novikov V. V.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.862, 2021 (SCI-Expanded)
- XXVI. **The investigation of electronic nature and mechanical properties under spin effects for new half-metallic ferromagnetic chalcogenides Ag<sub>3</sub>CrX<sub>4</sub> (X = S, Se, and Te)**  
Erkisi A., Yıldız B., Wang X., Isik M., Ozcan Y., Sürücü G.  
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.519, 2021 (SCI-Expanded)
- XXVII. **Editorial: Computational Modeling of Spintronic Materials**  
Wang X., Cheng Z., Sürücü G.  
FRONTIERS IN MATERIALS, vol.7, 2021 (SCI-Expanded)
- XXVIII. **The investigation of electronic, anisotropic elastic and lattice dynamical properties of MAB phase nanolaminated ternary borides: M<sub>2</sub>AIB<sub>2</sub> (M = Mn, Fe and Co) under spin effects**  
Sürücü G., Yıldız B., Erkisi A., Wang X., Surucu O.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.838, 2020 (SCI-Expanded)
- XXIX. **Anisotropic mechanical properties of Tl<sub>4</sub>Ag<sub>18</sub>Te<sub>11</sub> compound with low thermal conductivity**  
Gencer A., Surucu O., Sürücü G., Deligoz E.  
JOURNAL OF SOLID STATE CHEMISTRY, vol.289, 2020 (SCI-Expanded)
- XXX. **First-principles studies of Tin+1SiN(n) (n=1, 2, 3) MAX phase**  
Sürücü G., Gullu H. H., Candan A., Yıldız B., Erkisi A.  
PHILOSOPHICAL MAGAZINE, vol.100, no.17, pp.2183-2204, 2020 (SCI-Expanded)
- XXXI. **Pnma metal hydride system LiBH: a superior topological semimetal with the coexistence of twofold**

**and quadruple degenerate topological nodal lines**

Zhou F., Ding G., Cheng Z., Sürücü G., Chen H., Wang X.

JOURNAL OF PHYSICS-CONDENSED MATTER, vol.32, no.36, 2020 (SCI-Expanded)

- XXXII. **Investigation of structural, electronic, magnetic and lattice dynamical properties for XCoBi (X: Ti, Zr, Hf) Half-Heusler compounds**  
Sürücü G., Isik M., Candan A., Wang X., Gullu H. H.  
PHYSICA B-CONDENSED MATTER, vol.587, 2020 (SCI-Expanded)
- XXXIII. **Coexistence of parabolic and linear band crossings and electron-doped spin-gapless properties in rhombohedral type YbB03**  
Yang T., Cheng Z., Sürücü G., Wang X.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.823, 2020 (SCI-Expanded)
- XXXIV. **Rich topological nodal line bulk states together with drum-head-like surface states in NaAlGe with anti-PbFCl type structure**  
Wang X., Ding G., Cheng Z., Sürücü G., Wang X., Yang T.  
JOURNAL OF ADVANCED RESEARCH, vol.23, pp.95-100, 2020 (SCI-Expanded)
- XXXV. **Lattice dynamical and thermo-elastic properties of M2AlB (M = V, Nb, Ta) MAX phase borides**  
Sürücü G., Gencer A., Wang X., Surucu O.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.819, 2020 (SCI-Expanded)
- XXXVI. **Properties of BaYO3 perovskite and hydrogen storage properties of BaYO3Hx**  
Gencer A., Surucu G.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.45, no.17, pp.10507-10515, 2020 (SCI-Expanded)
- XXXVII. **CaXH3 (X = Mn, Fe, Co) perovskite-type hydrides for hydrogen storage applications**  
Surucu G., Gencer A., Candan A., Gullu H. H., Isik M.  
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.44, no.3, pp.2345-2354, 2020 (SCI-Expanded)
- XXXVIII. **Novel topological nodal lines and exotic drum-head-like surface states in synthesized CsCl-type binary alloy TiOs**  
Wang X., Ding G., Cheng Z., Surucu G., Wang X., Yang T.  
JOURNAL OF ADVANCED RESEARCH, vol.22, pp.137-144, 2020 (SCI-Expanded)
- XXXIX. **Enhancement of hydrogen storage properties of Ca3CH antiperovskite compound with hydrogen doping**  
Gencer A., Sürücü G.  
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.44, no.1, pp.567-573, 2020 (SCI-Expanded)
- XL. **Electronic, mechanical and lattice dynamical properties of YXB4 (X = Cr, Mn, Fe, and Co) compounds**  
Candan A., Surucu G., Gencer A.  
PHYSICA SCRIPTA, vol.94, no.12, 2019 (SCI-Expanded)
- XLI. **Density functional theory (DFT) study of BaScO3H0.5 compound and its hydrogen storage properties**  
Gencer A., Surucu G.  
CANADIAN JOURNAL OF PHYSICS, vol.97, no.11, pp.1191-1199, 2019 (SCI-Expanded)
- XLII. **First-principle investigation for the hydrogen storage properties of NaXH3 (X= Mn, Fe, Co) perovskite type hydrides**  
Surucu G., Candan A., Gencer A., Isik M.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.44, no.57, pp.30218-30225, 2019 (SCI-Expanded)
- XLIII. **Transition metal-doped janus monolayer SMOSe with excellent thermal spin filter and spin Seebeck effect**  
Ding G., Wei M., Surucu G., Liang Z., Wang X.  
APPLIED SURFACE SCIENCE, vol.491, pp.750-756, 2019 (SCI-Expanded)
- XLIV. **First principles study on the structural, electronic, mechanical and lattice dynamical properties of XRhSb (X = Ti and Zr) paramagnet half-Heusler antimonides**  
Sürücü G., Candan A., Erkisi A., Gencer A., Gullu H. H.  
MATERIALS RESEARCH EXPRESS, vol.6, no.10, 2019 (SCI-Expanded)

- XLV. **First principles study on new half-metallic ferromagnetic ternary zinc-based sulfide and telluride (Zn<sub>3</sub>VS<sub>4</sub> and Zn<sub>3</sub>VTe<sub>4</sub>)**  
Erkisi A., Yıldız B., Demir K., Sürücü G.  
MATERIALS RESEARCH EXPRESS, vol.6, no.7, 2019 (SCI-Expanded)
- XLVI. **Investigation of structural, electronic and lattice dynamical properties of XNiH<sub>3</sub> (X = Li, Na and K) perovskite type hydrides and their hydrogen storage applications**  
Gencer A., Surucu G.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.44, no.29, pp.15173-15182, 2019 (SCI-Expanded)
- XLVII. **MgTiO<sub>3</sub>H<sub>x</sub> and CaTiO<sub>3</sub>H<sub>x</sub> perovskite compounds for hydrogen storage applications**  
Gencer A., Surucu G., Al S.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.44, no.23, pp.11930-11938, 2019 (SCI-Expanded)
- XLVIII. **The electronic and elasticity properties of new half-metallic chalcogenides Cu(3)TMCh(4) (TM = Cr, Fe and Ch = S, Se, Te): an ab initio study**  
Erkisi A., Sürücü G.  
PHILOSOPHICAL MAGAZINE, vol.99, no.4, pp.513-529, 2019 (SCI-Expanded)
- XLIX. **The effect of hydrogen on the electronic, mechanical and phonon properties of LaMgNi<sub>4</sub> and its hydrides for hydrogen storage applications**  
Baysal M. B., Surucu G., Deligoz E., Ozisik H.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.43, no.52, pp.23397-23408, 2018 (SCI-Expanded)
- L. **Electronic and lattice dynamical properties of Ti<sub>2</sub>SiB MAX phase**  
Gencer A., Surucu G.  
MATERIALS RESEARCH EXPRESS, vol.5, no.7, 2018 (SCI-Expanded)
- LI. **The structural, electronic, magnetic, and mechanical properties of perovskite oxides PbM<sub>1/2</sub>Nb<sub>1/2</sub>O<sub>3</sub> (M = Fe, Co and Ni)**  
Erkisi A., Surucu G., Deligoz E.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS B, vol.32, no.6, 2018 (SCI-Expanded)
- LII. **Investigation of structural, electronic, anisotropic elastic, and lattice dynamical properties of MAX phases borides: An Ab-initio study on hypothetical &ITM(2)AB&IT (M = &ITTi&IT, &ITZr&IT, & A = &ITAl&IT, &ITGa&IT, &ITIn&IT) compounds**  
Sürücü G.  
MATERIALS CHEMISTRY AND PHYSICS, vol.203, pp.106-117, 2018 (SCI-Expanded)
- LIII. **DFT-based ab-initio study of half-Heusler KCaP compound**  
Mogulkoc Y., Ciftci Y., Surucu G.  
JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS, vol.20, no.1-2, pp.61-68, 2018 (SCI-Expanded)
- LIV. **An ab initio study on the investigation of structural, electronic, mechanical and lattice dynamical properties of the M(2)AX type MAX phases Sc<sub>2</sub>AlB<sub>0.5</sub>Co<sub>0.5</sub>, Sc<sub>2</sub>AlB<sub>0.5</sub>N<sub>0.5</sub> and Sc<sub>2</sub>AlCo<sub>0.5</sub>N<sub>0.5</sub> compounds**  
Sürücü G., Erkisi A.  
MATERIALS RESEARCH EXPRESS, vol.4, no.10, 2017 (SCI-Expanded)
- LV. **The Investigation of Electronic, Elastic and Vibrational Properties of an Interlanthanide Perovskite: PrYbO<sub>3</sub>**  
Kaderoğlu Ç., Sürücü G., Erkisi A.  
JOURNAL OF ELECTRONIC MATERIALS, vol.46, no.10, pp.5827-5836, 2017 (SCI-Expanded)
- LVI. **Structural phase transition, electronic, elastic, and vibrational properties of LiAl intermetallic compound: insights from first-principles calculations**  
Mogulkoc Y., Ciftci Y., Surucu G.  
CANADIAN JOURNAL OF PHYSICS, vol.95, no.8, pp.691-698, 2017 (SCI-Expanded)
- LVII. **The investigation of electronic, magnetic, mechanical, and lattice dynamical properties of PdMX (M = Cr, Fe and X = Si and Ge) ferromagnetic half-Heusler metallics: an ab initio study**  
Erkisi A., Sürücü G.  
MATERIALS RESEARCH EXPRESS, vol.4, no.6, 2017 (SCI-Expanded)

- LVIII. Investigation of structural, electronic and anisotropic elastic properties of Ru-doped WB2 compound by increased valence electron concentration**  
Sürücü G., Kaderoğlu Ç., Deligöz E., Özışık H.  
MATERIALS CHEMISTRY AND PHYSICS, vol.189, pp.90-95, 2017 (SCI-Expanded)
- LIX. The investigation of electronic, mechanical and lattice dynamical properties of PdCoX (X=Si and Ge) half-Heusler metallics in , and structural phases: an ab initio study**  
Erkisi A., SÜRÜCÜ G., Ellialtioglu R.  
PHILOSOPHICAL MAGAZINE, vol.97, no.26, pp.2237-2254, 2017 (SCI-Expanded)
- LX. Structural and Thermoelectronic Properties of Chalcopyrite MgSiX<sub>2</sub> (X = P, As, Sb)**  
Kocak B., Ciftci Y., Surucu G.  
JOURNAL OF ELECTRONIC MATERIALS, vol.46, no.1, pp.247-264, 2017 (SCI-Expanded)
- LXI. Produce of graphene/iron pyrite (FeS<sub>2</sub>) thin films counter electrode for dye-sensitized solar cell**  
Kilic B., Turkdogan S., Ozer O. C., Asgin M., Bayrakli O., Surucu G., Astam A., Ekinici D.  
MATERIALS LETTERS, vol.185, pp.584-587, 2016 (SCI-Expanded)
- LXII. First-Principles Study on the MAX Phases Tin+1Ga<sub>n</sub>N (n=1,2, and 3)**  
Sürücü G., Colakoglu K., Deligöz E., Körözlü N.  
JOURNAL OF ELECTRONIC MATERIALS, vol.45, no.8, pp.4256-4264, 2016 (SCI-Expanded)
- LXIII. Anisotropic elastic and vibrational properties of Ru<sub>2</sub>B<sub>3</sub> and Os<sub>2</sub>B<sub>3</sub>: a first-principles investigation**  
Ozisik H., Deligoz E., Surucu G., Ozisik H. B.  
MATERIALS RESEARCH EXPRESS, vol.3, no.7, 2016 (SCI-Expanded)
- LXIV. First-principles investigation of LaGaO<sub>3</sub> and LaInO<sub>3</sub> lanthanum perovskite oxides**  
Erkisi A., Gököğlü G., Sürücü G., Ellialtioglu R., Yıldırım E. K.  
PHILOSOPHICAL MAGAZINE, vol.96, no.19, pp.2040-2058, 2016 (SCI-Expanded)
- LXV. Thermo-Elastic and Lattice Dynamical Properties of Pd<sub>3</sub>X (X = Ti, Zr, Hf) Alloys: An Ab Initio Study**  
Surucu G., Colakoglu K., Ciftci Y., Ozisik H. B., Deligoz E.  
BRAZILIAN JOURNAL OF PHYSICS, vol.45, no.6, pp.604-614, 2015 (SCI-Expanded)
- LXVI. Structural, electronic and mechanical properties of W<sub>1-x</sub>Tc<sub>x</sub>B<sub>2</sub> alloys**  
Surucu G., Colakoglu K., Deligoz E., Ciftci Y.  
SOLID STATE COMMUNICATIONS, vol.171, pp.1-4, 2013 (SCI-Expanded)
- LXVII. Ab-initio studies of some rare-earth borides: CeB<sub>2</sub>, PrB<sub>2</sub>, NdB<sub>2</sub>, and PmB<sub>2</sub>**  
Özışık H., Deligöz E., Colakoglu K., Surucu G.  
INTERNATIONAL JOURNAL OF MATERIALS RESEARCH, vol.104, no.9, pp.858-864, 2013 (SCI-Expanded)
- LXVIII. Structural and mechanical stability of rare-earth diborides**  
Özışık H., Deligöz E., Colakoglu K., Surucu G.  
CHINESE PHYSICS B, vol.22, no.4, 2013 (SCI-Expanded)
- LXIX. The electronic and optical properties of MB<sub>12</sub> (M = Zr, Hf, Y, Lu) dodecaboride compounds**  
Koroğlu N., Surucu G.  
PHYSICA SCRIPTA, vol.87, no.1, 2013 (SCI-Expanded)
- LXX. Structural, electronic, elastic, thermodynamic and vibration properties of TbN compound from first principles calculations**  
Ciftci Y., Ozayman M., Surucu G., Colakoglu K., Deligoz E.  
SOLID STATE SCIENCES, vol.14, no.3, pp.401-408, 2012 (SCI-Expanded)
- LXXI. Electronic, elastic and optical properties on the Zn<sub>1-x</sub>Mg<sub>x</sub>Se mixed alloys**  
Surucu G., Colakoglu K., Deligoz E., Ciftci Y., Koroğlu N.  
JOURNAL OF MATERIALS SCIENCE, vol.46, no.4, pp.1007-1014, 2011 (SCI-Expanded)
- LXXII. Mechanical and phonon properties of the superhard LuB<sub>2</sub>, LuB<sub>4</sub>, and LuB<sub>12</sub> compounds**  
Deligoz E., Ozisik H., Colakoglu K., Surucu G., Ciftci Y.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.509, no.5, pp.1711-1715, 2011 (SCI-Expanded)
- LXXIII. Structural and lattice dynamical properties of Zintl NaIn and NaTl compounds**  
Ozisik H. B., Colakoglu K., Surucu G., Ozisik H.  
COMPUTATIONAL MATERIALS SCIENCE, vol.50, no.3, pp.1070-1076, 2011 (SCI-Expanded)

- LXXIV. **Mechanical and lattice dynamical properties of the Re<sub>2</sub>C compound**  
Özışık H., Deligöz E., Colakoglu K., Surucu G.  
PHYSICA STATUS SOLIDI-RAPID RESEARCH LETTERS, vol.4, no.12, pp.347-349, 2010 (SCI-Expanded)
- LXXV. **The electronic and optical properties of Zn<sub>1-x</sub>CaxSe mixed alloys**  
Surucu G., Colakoglu K., Deligoz E., Korozlu N., Ciftci Y.  
SOLID STATE COMMUNICATIONS, vol.150, no.29-30, pp.1413-1418, 2010 (SCI-Expanded)
- LXXVI. **Thermo-elastic and lattice dynamical properties of Rh<sub>3</sub>Hf compound**  
Surucu G., Colakoglu K., Deligoz E., Korozlu N., Ozisik H.  
COMPUTATIONAL MATERIALS SCIENCE, vol.48, no.4, pp.859-865, 2010 (SCI-Expanded)
- LXXVII. **The lattice dynamical and thermo-elastic properties of Rh<sub>3</sub>X (X = Ti, V) compounds**  
Surucu G., Colakoglu K., Deligoz E., Ozisik H.  
INTERMETALLICS, vol.18, no.2, pp.286-291, 2010 (SCI-Expanded)
- LXXVIII. **First-principles study of structural, elastic, lattice dynamical and thermodynamical properties of GdX (X = Bi, Sb)**  
Korozlu N., Colakoglu K., Deligoz E., Surucu G.  
PHILOSOPHICAL MAGAZINE, vol.90, no.14, pp.1833-1852, 2010 (SCI-Expanded)

### Articles Published in Other Journals

- I. **The Investigation D03-type Fe<sub>3</sub>M (M=Al, Ga, Si and Ge) Full-Heusler Alloys Within First Principles Study**  
Erkisi A., Sürücü G.  
JOURNAL OF POLYTECHNIC-POLITEKNIK DERGISI, vol.21, pp.927-936, 2018 (ESCI)
- II. **The First Principles Investigation of Structural, Electronic, Mechanical and Lattice Dynamical Properties of the B and N Doped M<sub>2</sub>AX Type MAX Phases Ti<sub>2</sub>AlB<sub>0.5</sub>C<sub>0.5</sub> and Ti<sub>2</sub>AlN<sub>0.5</sub>C<sub>0.5</sub> Compounds**  
Sürücü G., Erkişi A.  
BOR DERGISI, vol.3, pp.24-32, 2018 (Peer-Reviewed Journal)
- III. **Enhancement in Photovoltaic Characteristics of CdS/CdTe Heterojunction**  
Surucu G., Gullu H. H., Bayrakli O., Parlak M.  
JOURNAL OF POLYTECHNIC-POLITEKNIK DERGISI, vol.20, no.4, pp.801-805, 2017 (ESCI)

### Books & Book Chapters

- I. **Computational Modeling of Spintronic Materials**  
Wang X., Sürücü G., Cheng Z.  
Frontiers, Washington, 2021

### Refereed Congress / Symposium Publications in Proceedings

- I. **Eco-friendly and non-toxic Cu-Sb-Se solar cells involving a Cd-Free window layer: Sustainable Energy Solutions**  
Sürücü G.  
6th International Congress on Engineering Sciences and Multidisciplinary Approaches, İstanbul, Turkey, 2 - 03 December 2023, pp.1-35
- II. **Environmentally Friendly and Non-Toxic Cu-Sb-Se Solar-Cell With ZnSnO Window Layer: Advancing Sustainable Energy Solutions**  
Bal E., Sürücü Ö., Bektaş T., Parlak M., Sürücü G.

MAS 18th INTERNATIONAL EUROPEAN CONFERENCE ON MATHEMATICS, ENGINEERING, NATURAL & MEDICAL SCIENCES, Ankara, Turkey, 14 - 15 August 2023, pp.51

- III. **2D WSi<sub>2</sub>N<sub>4</sub> and WSiGeN<sub>4</sub> Materials for Enhanced Photocatalytic Hydrogen Production**  
Himmet F., Gencer A., Sürücü G.  
MAS 18th INTERNATIONAL EUROPEAN CONFERENCE ON MATHEMATICS, ENGINEERING, NATURAL & MEDICAL SCIENCES, Ankara, Turkey, 14 - 15 August 2023, pp.52
- IV. **Investigation of Solid-State Hydrogen Storage Materials, 2D Catalysts, and Their Topological Engineering**  
Sürücü G.  
5th International conference on "Physics for Sustainable Development & Technology (ICPSDT-2023)", Chattagam, Bangladesh, 7 - 08 September 2023, pp.1
- V. **Investigation of Mechanical Properties of NixW<sub>6</sub>Se<sub>8</sub> (x=1,2,3,4) Chevrel Phase Compounds**  
Dağ T. S., Gencer A., Özel F., Sürücü G., Çiftci Y.  
International Conference on Advanced Materials Science & Engineering and High Tech Device Applications, Ankara, Turkey, 27 - 29 October 2022, pp.74
- VI. **Investigation of FeXMo<sub>6</sub>Se<sub>8</sub> (x = 1, 2, 3, 4) Chevrel Phases for Photocatalytic Hydrogen Production Performance and their Topological Properties**  
Gencer A., Sürücü G., Özel F.  
International Conference on Advanced Materials Science & Engineering and High Tech Device Applications, Ankara, Turkey, 27 - 29 October 2022, pp.75
- VII. **INVESTIGATION OF HYDROGEN STORAGE TECHNIQUES USING DENSITY FUNCTIONAL THEORY**  
Gencer A., Sürücü G.  
UNİKOP 9. Ulusal KOP Bölgesel Kalkınma Sempozyumu, Konya, Turkey, 24 - 25 October 2022, pp.1-2
- VIII. **Water splitting performance of selenium based Chevrel phase: CoW<sub>6</sub>Se<sub>8</sub>**  
Gencer A., Sürücü G., Özel F.  
E-MRS 2022 Spring Meeting, Strasbourg, France, 3 - 06 June 2022
- IX. **NiW<sub>6</sub>Se<sub>8</sub> Chevrel Phase for Photocatalytic Water Splitting: A DFT Study**  
DAĞ T. S., GENCER A., ÖZEL F., SÜRÜCÜ G., ÇİFTÇİ Y.  
10. EUROPEAN CONFERENCE ON RENEWABLE ENERGY SYSTEMS, 7 - 09 May 2022, pp.18
- X. **Hydrogen Storage Characteristics of Perovskite Type Hydrides**  
GENCER A., SÜRÜCÜ G.  
3rd International Hydrogen Energy Congress & Exhibitions, Ankara, Turkey, 14 - 16 June 2021
- XI. **Structural and Electronic Properties of Y<sub>2</sub>Te<sub>2</sub>O<sub>7</sub> Pyrochlore Oxide**  
GENCER A., SÜRÜCÜ G.  
International Conference on Advanced Materials Science Engineering and High Tech Devices Applications Exhibition (ICMATSE2020), Ankara, Turkey, 2 - 04 October 2020, pp.265
- XII. **Investigation of Mechanical Properties and the Electronic and Magnetic Behavior of Silver-Based Ferrite Chalcogenides Ag<sub>3</sub>FeCh<sub>4</sub> (Ch = S and Se)**  
YILDIZ B., ERKİŞİ A., SÜRÜCÜ G.  
Turkish Physical Society 36.nd International Physics Congress, İstanbul, Turkey, 1 - 05 September 2020, pp.85
- XIII. **Effect of Hydrogen Doping to MgTiH<sub>3</sub> Perovskite Type Hydride to Enhance Hydrogen Storage Properties**  
Gencer A., Surucu G.  
3rd International Symposium on Multidisciplinary Studies and Innovative Technologies, ISMSIT 2019, Ankara, Turkey, 11 - 13 October 2019
- XIV. **An ab initio Study of Cr and Mn Doped MAX Phase Ti<sub>3</sub>SiC<sub>2</sub>**  
Yıldız B., Surucu G., Erkisi A.  
3rd International Symposium on Multidisciplinary Studies and Innovative Technologies, ISMSIT 2019, Ankara, Turkey, 11 - 13 October 2019
- XV. **Investigation of Electronic, Magnetic and Mechanical Properties of Ternary MAB Phase Cr<sub>2</sub>AlB<sub>2</sub> Compound: An Ab-Initio**

YILDIZ B., SÜRÜCÜ G., ERKİŞİ A.

6. International Congress on Mathematics, Engineering and Natural Sciences, Adana, Turkey, 8 - 10 March 2019, pp.152

- XVI. **First Principles Study of the Vibrational and Thermo-Elastic Properties of BaScO<sub>3</sub> Perovskite Oxide**  
Gencer A., Surucu G.  
35th International Physics Congress of the Turkish-Physical-Society (TPS), Bodrum, Turkey, 4 - 08 September 2019, vol.2178
- XVII. **The Mechanical and Electronic Properties of Spinel Oxides VX<sub>2</sub>O<sub>4</sub> (X = Mn and Fe) by First Principle Calculations**  
YILDIZ B., Erkisi A., Surucu G.  
35th International Physics Congress of the Turkish-Physical-Society (TPS), Bodrum, Turkey, 4 - 08 September 2019, vol.2178
- XVIII. **DFT Study for the Mechanical and Electronic Properties of Mg<sub>3</sub>BH<sub>x</sub> (x=1,4,7) Compounds for Hydrogen Storage Applications**  
Gencer A., SÜRÜCÜ G.  
35th International Physics Congress of the Turkish-Physical-Society (TPS), Bodrum, Turkey, 4 - 08 September 2019, vol.2178
- XIX. **Properties of LiNiH<sub>3</sub> and NaNiH<sub>3</sub> Perovskite Type Hydrides for Hydrogen Storage Applications**  
SÜRÜCÜ G., GENCER A.  
CSC2018 - Computational Sciences Congress, Amasya, Turkey, 26 - 28 October 2018
- XX. **Hydrogen Storage Properties of CaTiO<sub>3</sub>H<sub>x</sub> and MgTiO<sub>3</sub>H<sub>x</sub>**  
GENCER A., SÜRÜCÜ G.  
CSC2018 - Computational Sciences Congress, Amasya, Turkey, 26 - 28 October 2018
- XXI. **Mechanical, Vibrational and Thermodynamical Properties of Ti<sub>2</sub>SiB MAX Phase**  
GENCER A., SÜRÜCÜ G.  
INTERNATIONAL CONGRESS ON THE WORLD OF TECHNOLOGY AND ADVANCED MATERIALS, Kırşehir, Turkey, 21 - 23 September 2018
- XXII. **Hydrogen Storage Properties of MgTiO<sub>3</sub>H<sub>x</sub>. INTERNATIONAL CONGRESS ON THE WORLD OF TECHNOLOGY AND ADVANCED MATERIALS**  
Gencer A., Sürücü G.  
INTERNATIONAL CONGRESS ON THE WORLD OF TECHNOLOGY AND ADVANCED MATERIALS, Kırşehir, Turkey, 21 - 23 September 2018
- XXIII. **DFT Study of BaScO<sub>3</sub>H<sub>5</sub> Compound and Its Hydrogen Storage Properties**  
GENCER A., SÜRÜCÜ G.  
Turkish Physical Society 34th International Physics Congress, Muğla, Turkey, 5 - 09 September 2018
- XXIV. **Properties of BaYO<sub>3</sub> Perovskite and Hydrogen Storage Properties of BaYO<sub>3</sub>H<sub>x</sub>**  
GENCER A., SÜRÜCÜ G.  
International Conference on Advanced Nanomaterials, Porto, Portugal, 18 - 20 July 2018
- XXV. **Hydrogen Storage Properties of BaScO<sub>3</sub>H<sub>x</sub> Perovskite**  
GENCER A., SÜRÜCÜ G.  
European Materials Research Society Spring Meeting 2018, Strasbourg, France, 18 - 22 June 2018
- XXVI. **Bor'lu Max Faz Bileşiklerin Yapısal, Elektronik, Anizotropik Elastik Ve Örgü Dinamiksel Özelliklerinin İncelenmesi**  
SÜRÜCÜ G.  
23. YOĞUN MADDE FİZİĞİ ANKARA TOPLANTISI, Ankara, Turkey, 22 December 2017
- XXVII. **Device Behavior Of CZTSe/Si Nanowire Heterojunction**  
SÜRÜCÜ G., BAYRAKLI Ö., GÜLLÜ H. H., TERLEMEZOĞLU M., PARLAK M.  
Photovoltaic Technical Conference, 26 - 28 October 2017
- XXVIII. **Deposition of CZTSe thin films and investigation of their devices properties**  
BAYRAKLI Ö., TERLEMEZOĞLU M., GÜLLÜ H. H., YILDIZ D. E., SÜRÜCÜ G., PARLAK M.  
International Conference on Condensed Matter and Materials Science, Adana, Turkey, 11 - 15 October 2017

- XXIX. **Anisotropic Elastic Properties of BaScO<sub>3</sub>-xHx Compounds**  
GENCER A., SÜRÜCÜ G.  
INTERNATIONAL CONFERENCE ON CONDENSED MATTER AND MATERIALS, 11 - 15 October 2017
- XXX. **CDTE/CDS SOLAR CELL STRUCTURE WITH MOO<sub>3</sub>/AU BACK CONTACT**  
KINACI B., ÖZEN Y., SÜRÜCÜ G.  
TURKISH PHYSICAL SOCIETY 33RD INTERNATIONAL PHYSICS CONGRESS, 5 - 10 September 2017
- XXXI. **Functionalization of Silicon Surface by Thiadiazole Molecule**  
KADEROĞLU Ç., SÜRÜCÜ G.  
Physical Society 33rd International Physics Congress, 6 - 10 September 2017
- XXXII. **CdTe/CdS Solarcell Structure with MoO<sub>3</sub>/Au Back Contact**  
KINACI B., ÖZEN Y., SÜRÜCÜ G.  
TURKISH PHYSICAL SOCIETY 33 INTERNATIONAL PHYSICS CONGRESS, 6 - 10 September 2017
- XXXIII. **Theoretical and Experimental Investigation of Nano-mechanical Characteristics of SnTe Thin Films**  
BAYRAKLI Ö., GÜLLÜ H. H., SÜRÜCÜ G., TERLEMEZOĞLU M., PARLAK M.  
European Materials Research Society- Spring Meeting 2017, Strasbourg, France, 22 - 26 May 2017
- XXXIV. **Deposition and characterization of ZTSeS thin films for photovoltaic applications**  
BAYRAKLI Ö., TERLEMEZOĞLU M., GÜLLÜ H. H., SÜRÜCÜ G., PARLAK M.  
Photovoltaic Technical Conference, 26 - 28 April 2017
- XXXV. **WB2 bileşiminin Yapısal, Elektronik ve Mekanik Özellikleri Üzerine Rutenyum Katkısının Etkisi**  
KADEROĞLU Ç., SÜRÜCÜ G.  
22. Yoğun Madde Fiziği-Ankara Toplantısı, Ankara Üniversitesi, Ankara, Turkey, 16 December 2016
- XXXVI. **Deposition of Boron Doped Graphene for CdTe Solar Cell Applications**  
SÜRÜCÜ G., BAYRAKLI Ö., ÖZEN Y., KINACI B.  
2nd International Congress on the World of Technology and Advanced Materials, Kırşehir, Turkey, 28 September - 02 October 2016
- XXXVII. **A DFT Study on Structural Phase Transition and Mechanical Properties of LiAl**  
MOĞULKOÇ Y., ÇİFTÇİ Y., SÜRÜCÜ G.  
2nd International Congress On The World Of Technology And Advanced Materials, 28 September - 02 October 2016
- XXXVIII. **Deposition of Boron-Doped Graphene for CdTe Solar Cell Applications**  
SÜRÜCÜ G., Bayraklı Ö., ÖZEN Y., KINACI B.  
2nd International Congress on the World of Technology and Advanced Materials, Kırşehir, Turkey, 28 September - 02 October 2016
- XXXIX. **The First Principles Investigation Of LuXO<sub>3</sub> Al Ga and In Cubic Perovskite Oxides**  
sürücü G., ÇİFTÇİ Y., SÜRÜCÜ G.  
Turkish Physical Society 32nd International Physics congress, 6 - 09 September 2016
- XL. **The First Principles Calculations of Structural Electronic and Lattice Dynamical Properties of W<sub>2</sub>SiX<sub>3</sub> B C and N Compounds**  
SÜRÜCÜ G., KADEROĞLU Ç., ERKİŞİ A.  
Turkish Physical Society 32nd International Physics congress, 6 - 09 September 2016
- XLI. **The Investigation Of Electronic Band Structures And Ferroelectric Behaviors Of PbMnO<sub>3</sub> M Fe Co and Ni Multiferroic Perovskites With Ab Initio Method**  
ERKİŞİ A., SÜRÜCÜ G., YILDIRIM E. K.  
Turkish Physical Society 32nd International Physics congress, 6 - 09 September 2016
- XLII. **The Investigation Of Electronic Mechanical and Lattice Dynamical Properties Of B PdCoX Si and Ge Half Heusler Metallics An Ab Initio Study**  
ERKİŞİ A., ELLİALTIOĞLU M. R., SÜRÜCÜ G.  
Turkish Physical Society 32nd International Physics congress, 6 - 09 September 2016
- XLIII. **Reaktif Büyütülen MgO 40ZnO 600 İnce Filmlerin Karakterizasyonları**  
Akn N., Akçay N., Özen Y., KINACI B., SÜRÜCÜ G., ÖZÇELİK S.  
21. Yoğun Madde Fiziği Toplantısı, Turkey, 25 December 2015, pp.120

- XLIV. **Reaktif Büyütülen Mg<sub>0.40</sub>Zn<sub>0.60</sub> İnce Filmlerin Karakterizasyonları**  
AKIN SÖNMEZ N., AKÇAY N., ÖZEN Y., KINACI B., SÜRÜCÜ G., ÖZÇELİK S.  
21. Yoğun Madde Fiziği Ankara Toplantısı, Turkey, 25 December 2015
- XLV. **Yarı-Heusler LiAlSi Bileşiğinin Yapısal, Elastik, Elektronik ve Dinamik Özelliklerinin İlk Prensiplerle İncelenmesi**  
SÜRÜCÜ G., ÇİFTÇİ Y., SÜRÜCÜ G.  
21. Yoğun Madde Fiziği-Ankara Toplantısı, Gazi Üniversitesi, Ankara, Turkey, 25 December 2015
- XLVI. **a-V<sub>3</sub>PC<sub>2</sub> Bileşiğinin Mekanik, Elektronik, Titreşimsel ve Termodinamik Özelliklerinin Yoğunluk Fonksiyoneli Teorisiyle İncelenmesi**  
ALTAY M., SÜRÜCÜ G., KEMAL Ç., ÇİFTÇİ Y.  
21. Yoğun Madde Fiziği-Ankara Toplantısı, Gazi Üniversitesi, Ankara, Turkey, 25 December 2015
- XLVII. **LaMgNi<sub>4</sub>H<sub>x</sub> (X =1, 4, 7) bileşiğinde hidrojen konsantrasyonunun elastik anisotropi üzerine etkisi**  
BAYSAL M. B., SÜRÜCÜ G., DELİGÖZ E.  
21. Yoğun Madde Fiziği-Ankara Toplantısı, Gazi Üniversitesi, Ankara, Turkey, 25 December 2015
- XLVIII. **Konsantre Sistem İle Entegre Edilen CdTe Bazlı İnce Film Güneş Hücre Yapısının Verimlilik Analizi**  
KINACI B., SÜRÜCÜ G., YAVUZ T., ÖZEN Y., AKIN SÖNMEZ N., AYDEMİR U., ÇÖREKÇİ S., ÖZÇELİK S.  
17. Ulusal Optik, Elektro-Optik ve Fotonik Çalıştayı Fotonik 2015, Turkey, 18 September 2015
- XLIX. **The Effect of Hydrogen On The Lattice Dynamical Properties Of LaMgNi<sub>4</sub>H<sub>x</sub> X 1 4 7 For Hydrogen Storage Applications**  
BAYSAL M. B., SÜRÜCÜ G., DELİGÖZ E.  
9th International Physics Conference of the Balkan Physics Union, 24 - 27 August 2015, pp.414
- L. **Performance Evaluation Of CdTe/CdS Solar Cell Structure with Concentrated Photovoltaic System**  
KINACI B., ÖZEN Y., AKIN SÖNMEZ N., SÜRÜCÜ G., AYDEMİR U., ÖZÇELİK S.  
Balkan Physical Union-BPU9, İstanbul, Turkey, 24 - 27 August 2015
- LI. **The Thermo Elastic Mechanic And Electronic Properties Of Lu<sub>1-x</sub>W<sub>x</sub>B<sub>12</sub> Compounds**  
SÜRÜCÜ G., KADEROĞLU Ç.  
9th International Physics Conference of the Balkan Physics Union, 24 - 27 August 2015, pp.204
- LII. **Performance Evaluation of CdTe CdS Solar Cell Structure With Concentrated Photovoltaic System**  
KINACI B., Özen Y., Akin N., SÜRÜCÜ G., Aydemir U., ÖZÇELİK S.  
9th International Physics Conference of the Balkan Physical Union, 24 - 27 August 2015
- LIII. **Study on efficiency of CdTe/CdS concentrated solar cell**  
KINACI B., ÖZEN Y., Akin N., SÜRÜCÜ G.  
11th Nanoscience and Nanotechnology Conference NanoTR-11, Ankara, Turkey, 22 - 25 June 2015
- LIV. **The Lattice Dynamical and Electronic Properties Of PrYbO<sub>3</sub> Compound From First Principles Calculations**  
KADEROĞLU Ç., SÜRÜCÜ G., KINACI B.  
11th Nanoscience and Nanotechnology Conference (NanoTR-11), 22 - 25 June 2015
- LV. **The lattice dynamical and electronic properties of PrYbO<sub>3</sub> compound from first principles calculations**  
KADEROĞLU Ç., SÜRÜCÜ G., KINACI B.  
11th Nanoscience and Nanotechnology Conference, 22 - 25 June 2015
- LVI. **LaMgNi<sub>4</sub>H<sub>x</sub> (x=1,4,7) bileşiğinde hidrojen konsantrasyonunun mekanik özellikleri üzerine etkisi**  
BAYSAL M. B., SÜRÜCÜ G., DELİGÖZ E.  
20. Yoğun Madde Fiziği-Ankara Toplantısı, Hacettepe Üniversitesi, Ankara, Turkey, 26 December 2014
- LVII. **LaMO<sub>3</sub> (M=Ga,In ve Tl) Lantanit Perovskit Oksitlerinin Ab-Initio Yöntemi ile Yapısal, Mekanik ve Elektronik Özelliklerinin İncelenmesi**  
ERKİŞİ A., YILDIRIM E. K., SÜRÜCÜ G., ELLİALTIOĞLU R.  
20. Yoğun Madde Fiziği-Ankara Toplantısı, Hacettepe Üniversitesi, Ankara, Turkey, 26 December 2014
- LVIII. **Investigation of mechanical electronic, vibrational and thermodynamic properties of a-V<sub>3</sub>AsC<sub>2</sub> composite with Ab-initio**  
ALTAY M., KEMAL Ç., SÜRÜCÜ G.

4th National Crystallographic Meeting with International Participation, Diyarbakır, Turkey, 17 - 19 May 2014

- LIX. **V2PC Bileşiminin Yapısal, Mekanik, Elektronik, Titreşimsel ve Termodinamik Özelliklerinin Ab-initio Yöntemle İncelenmesi**  
ALTAY M., KEMAL Ç., ÇİFTÇİ Y., SÜRÜCÜ G.  
Yoğun Madde Fiziği-İzmir Toplantısı, İzmir Yüksek Teknoloji Enstitüsü, İzmir, Turkey, 05 April 2014
- LX. **Structural, Electronic, Mechanical, and Lattice Dynamical Properties of Pd3X**  
SÜRÜCÜ G., ÇOLAKOĞLU K., DELİGÖZ E.  
30. Tfd. International Physics Congress, İstanbul, Turkey, 2 - 05 December 2013
- LXI. **V2AsC bileşiminin Yapısal, Elektronik, Elastik ve Titreşimsel Özellikleri Üzerine Ab-initio Hesaplamaları**  
ALTAY M., ÇOLAKOĞLU K., SÜRÜCÜ G., DELİGÖZ E.  
30. Tfd. International Physics Congress, İstanbul, Turkey, 2 - 05 December 2013
- LXII. **Structural, electronic and optical properties of hexagonal Si1-xGexC alloys**  
SÜRÜCÜ G., ÇOLAKOĞLU K., DELİGÖZ E., ÇİFTÇİ Y.  
NanoTR-9, Erzurum, Turkey, 24 - 28 June 2013
- LXIII. **First-principles study of structural, elastic and electronic properties of orthorhombic PrLuO3 perovskite**  
SÜRÜCÜ G., ÇOLAKOĞLU K., DELİGÖZ E., ÖZİŞİK H.  
2nd International Student Workshop on Condensed Matter and Materials Physics 2011, Antalya, Turkey, 27 - 31 December 2011
- LXIV. **K3As7 bileşiminin yapısal ve elastik özellikleri**  
ÖZİŞİK H., ÇOLAKOĞLU K., ÇİFTÇİ Y., DELİGÖZ E., SÜRÜCÜ G., ALP İ.  
18. Yoğun Madde Fiziği - Ankara Toplantısı, Ankara, Turkey, 25 November 2011
- LXV. **Lattice Dynamical and Thermodynamical Properties of Al2Mg and Al2Ca Compounds**  
DELİGÖZ E., ÇOLAKOĞLU K., ÖZİŞİK H., SÜRÜCÜ G., ÇİFTÇİ Y.  
28.Tfd. International Physics Congress, Muğla, Turkey, 6 - 09 September 2011
- LXVI. **Na3As7 ve Na3As11 Bileşiklerinin Yapısal, Elektronik ve Elastik Özellikleri**  
ÖZİŞİK H., ÇOLAKOĞLU K., ÇİFTÇİ Y., DELİGÖZ E., SÜRÜCÜ G., ALP İ.  
28.Tfd. International Physics Congress, Muğla, Turkey, 6 - 09 September 2011
- LXVII. **The Optical Properties of LaB12 Compound: A First-Principles Study**  
KÖRÖZLÜ N., ÇOLAKOĞLU K., DELİGÖZ E., SÜRÜCÜ G.  
28.Tfd. International Physics Congress, Muğla, Turkey, 6 - 09 September 2011
- LXVIII. **Ab-initio Yöntemlerle InTe-Bileşiminin İncelenmesi**  
ALP İ., ÇOLAKOĞLU K., ÖZİŞİK H., ÖZİŞİK H., SÜRÜCÜ G.  
17. Yoğun Madde Fiziği - Ankara Toplantısı, Ankara, Turkey, 05 November 2010
- LXIX. **Ab Initio Study on The Lattice Dynamical Properties of Zintl LiCd Alloy**  
SÜRÜCÜ G., ÇOLAKOĞLU K., SEYİS S., DELİGÖZ E.  
27. International Physics Congress, İstanbul, Turkey, 14 - 17 September 2010
- LXX. **Lattice Dynamical Properties of Zintl LiZn Alloy**  
SÜRÜCÜ G., ÇOLAKOĞLU K., UZUNALIOĞLU D., DELİGÖZ E.  
27. International Physics Congress, İstanbul, Turkey, 14 - 17 September 2010
- LXXI. **Ab initio study on the thermo-elastic properties of PtSb alloy**  
SÜRÜCÜ G., ÇOLAKOĞLU K., DELİGÖZ E., KÖRÖZLÜ N.  
27. International Physics Congress, 14 - 17 September 2010
- LXXII. **Ab-initio investigation of the structural and elastic properties of Gd5Sb3, Gd4Sb3 binary compounds**  
KÖRÖZLÜ N., ÇOLAKOĞLU K., DELİGÖZ E., SÜRÜCÜ G.  
27. International Physics Congress, İstanbul, Turkey, 14 - 17 September 2010
- LXXIII. **The structural, elastic, electronic and optical properties of LaPdBi compound**  
KÖRÖZLÜ N., ÇOLAKOĞLU K., DELİGÖZ E., SÜRÜCÜ G.  
26.Tfd. International Physics Congress, 24 - 27 September 2009
- LXXIV. **The Investigation Some The Structural, Electronic, Elastic, Thermodynamics, and Vibrational**

## Properties of Rh3X(X=Ti, V, Hf, Zr, Nb) By AB Initio Method

SÜRÜCÜ G.

International Student Workshop on Condensed Matter and Materials Physics, 27 - 31 December 2009

- LXXV. **NiSb bileşiğinin Yapısal, Elektronik, Elastik ve Titreşimsel Özellikleri üzerinde ab initio Hesaplamaları**  
SÜRÜCÜ G., KEMAL Ç., DELİGÖZ E., ÖZİŞİK H.  
16. Yoğun Madde Fiziği – Ankara Toplantısı, Gazi Üniversitesi, Ankara, Turkey, 06 November 2009
- LXXVI. **The lattice dynamical and thermo-elastic properties of TlBi compound**  
SÜRÜCÜ G., ÇOLAKOĞLU K., DELİGÖZ E., KÖRÖZLÜ N., ÖZİŞİK H.  
26.Tfd. International Physics Congress, 24 - 27 September 2009
- LXXVII. **Ab-Initio Total Energy Calculations on the AgNd Compound**  
SÜRÜCÜ G., ÇOLAKOĞLU K., DELİGÖZ E., ÇİFTÇİ Y.  
25. International Physics Congress, Muğla, Turkey, 25 - 29 August 2008
- LXXVIII. **TaN Bileşiğinin Yapısal, Elektronik, Elastik ve Titreşimsel Özellikleri üzerine ab initio Hesaplamaları**  
SÜRÜCÜ G., KEMAL Ç., DELİGÖZ E., ÖZİŞİK H.  
15. YoğunMaddeFiziği – Ankara Toplantısı, Ankara, Turkey, 07 November 2008
- LXXIX. **KAs bileşiğinin Yapısal, Elektronik, Elastik ve Titreşimsel Özellikleri üzerinde ab initio Hesaplamaları**  
ÖZİŞİK H., KEMAL Ç., DELİGÖZ E., SÜRÜCÜ G.  
15. Yoğun Madde Fiziği – Ankara Toplantısı, Bilkent Üniversitesi, Ankara, Turkey, 07 November 2008
- LXXX. **The First-Principles Calculations on the NaP Compound**  
ÖZİŞİK H., ÇOLAKOĞLU K., DELİGÖZ E., SÜRÜCÜ G., KÖRÖZLÜ N., ÇİFTÇİ Y.  
25. International Physics Congress, 25 - 29 August 2008
- LXXXI. **YP bileşiğininYapısal, Elektronik, Elastik ve Titreşimsel Özellikleri Üzerinde ab initio Hesaplamaları**  
SÜRÜCÜ G., KEMAL Ç., DELİGÖZ E., ÇİFTÇİ Y., ÖZİŞİK H.  
14. YoğunMaddeFiziği – Ankara Toplantısı, Hacettepe Üniversitesi, Ankara, Turkey, 02 November 2007
- LXXXII. **Kübik Ruthenium Nitride (RuN) bileşiğinin Yapısal, elektronik ve Elastik Özelliklerinin ab initio yöntemle İncelenmesi**  
ÖZİŞİK H., KEMAL Ç., DELİGÖZ E., ÇİFTÇİ Y., SÜRÜCÜ G.  
14. YoğunMaddeFiziği – Ankara Toplantısı, Ankara, Turkey, 02 November 2007 - 02 November 2017

## Supported Projects

SÜRÜCÜ G., TURGUT E., HİMMET F., LİŞESİVDİN S. B., GENCER A., ALTUNTAŞ G., Project Supported by Higher Education Institutions, XSe / WSi2N4 ve XSe / WSiGeN4 (X= Al, Ga, ve In) heteroyapılarının fotokatalitik hidrojen üretim performansının incelenmesi, 2023 - Continues

Sürücü Ö., Özen Y., Gencer A., Sürücü G., Kara İ., Terlemezoğlu M., Parlak M., Terlemezoğlu Bilmiş M., TUBİTAK Project, Cu-Sb-Chalcogen (Cu-Sb-Se) Thin Film Hetero-Joint Fabrication And Photovoltaic Applications, 2021 - 2023

Sürücü G., Özel F., Gencer A., TÜBİTAK - AB COST Project, Modelling of Seleno-Circuit Structures with Density Functional Theory and Investigation of Hydrogen Production Performance, 2021 - 2023

Sürücü G., Project Supported by Higher Education Institutions, Fabrication of CdTe Thin Film Solar Cells and Improvement of Cell Performance, 2016 - 2018

Özçelik S., Sürücü G., TÜBİTAK International Bilateral Joint Cooperation Program Project, Investigation of Composition Effect on Structural Optical and Electrical Properties of Cu2ZnSn SxSe1-x Thin Films for Optoelectronic Devices, 2016 - 2018

Sürücü G., Project Supported by Higher Education Institutions, A2B2O6 A=La,Ce B=Ho, Er, Tm, Yb, Lu İnterlantanit Çift Perovskit Oksitlerinin İlk İlkeler Yöntemiyle İncelenmesi, 2015 - 2016

Sürücü G., TUBİTAK Project, Bor Katkılı Yüksek Performanslı İnce film Güneş hücre prototip üretimi, 2015 - 2016

## Activities in Scientific Journals

FRONTIERS IN CHEMISTRY, Editor, 2022 - Continues

FRONTIERS IN MATERIALS, Editor, 2020 - Continues

FRONTIERS IN PHYSICS, Editor, 2020 - Continues

Aksaray University Journal of Science and Engineering, Committee Member, 2018 - Continues

## **Tasks In Event Organizations**

Ateş H., Bahçeci E., Sürücü G., Er Z., Gür C. H., İmer M. B., International Conference on Advanced Materials Science & Engineering and High-Tech Device Applications, Scientific Congress, Turkey, Ekim 2022

Sürücü G., INTERNATIONAL CONFERENCE ON ADVANCED MATERIALS SCIENCE ENGINEERING AND HIGH TECHDEVICES APPLICATIONS EXHIBITION ICMATSE-2020, Scientific Congress, Ankara, Turkey, Ekim 2020

Sürücü G., INTERNATIONAL CONGRESS ON THE WORLD OF TECHNOLOGY AND ADVANCED MATERIALS WITAM-2018, Scientific Congress, Kırşehir, Turkey, Eylül 2018

Sürücü G., INTERNATIONAL CONGRESS ON THE WORLD OF TECHNOLOGY AND ADVANCED MATERIALS WITAM-2016, Scientific Congress, Kırşehir, Turkey, Ekim 2016

## **Scientific Research / Working Group Memberships**

Surucu Research Group, Gazi University, Turkey, <https://avesis.gazi.edu.tr/arastirma-grubu/srg>, 2023 - Continues

## **Metrics**

Publication: 178

Citation (WoS): 1554

Citation (Scopus): 1602

H-Index (WoS): 23

H-Index (Scopus): 23