

# Prof. Kemal ÖZDOĞAN

## Personal Information

**Office Phone:** [+90 212 383 4282](tel:+902123834282)

**Email:** [kozdogan@yildiz.edu.tr](mailto:kozdogan@yildiz.edu.tr)

**Web:** <https://avesis.yildiz.edu.tr/kozdogan>

**Address:** Yıldız Teknik Üniversitesi, Fen-Edebiyat Fakültesi Fizik Bölümü E-1007 Davutpaşa Kampüsü Esenler/İSTANBUL

## International Researcher IDs

ORCID: 0000-0001-9720-6221

Publons / Web Of Science ResearcherID: AAZ-6850-2020

Yoksis Researcher ID: 118113

## Education Information

Doctorate, Gebze Yüksek Teknoloji Enstitüsü, Fen Bilimleri, Fizik, Turkey 2004 - 2009

Postgraduate, Gebze Yüksek Teknoloji Enstitüsü, Fen Bilimleri, Fizik, Turkey 2001 - 2004

Undergraduate, Karadeniz Technical University, Fen Fakültesi, Fizik, Turkey 1996 - 2000

## Research Areas

Physics, Interdisciplinary Physics and Related Science and Technology Areas, Materials Science, Condensed Matter 1: Structural, Mechanical and Thermal Properties, Thermal Properties of Condensed Matter, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Electronic structure of bulk material, Electrical properties of electronic structures, interfaces, thin films and low-dimensional structures, Magnetic Properties and Materials, Electronic transport in condensed matter, Natural Sciences

## Academic Titles / Tasks

Professor, Yildiz Technical University, Faculty Of Arts & Science, Department Of Physics, 2017 - Continues

## Academic and Administrative Experience

Deputy Head of Department, Yildiz Technical University, Faculty Of Arts & Science, Department Of Physics, 2018 - 2022

## Courses

Doktora Seminer, Doctorate, 2020 - 2021

Doktora Uzmanlık Alan, Doctorate, 2019 - 2020

Uzmanlık Alan, Postgraduate, 2019 - 2020

Fizik Laboratuvarı 3, Undergraduate, 2019 - 2020

Atom ve Molekül Fiziği Lab, Undergraduate, 2019 - 2020

FİZİK 2, Undergraduate, 2019 - 2020

Uzmanlık Alan Dersi, Postgraduate, 2020 - 2021

Yüksek Lİsans Uzmanlık Alan, Postgraduate, 2019 - 2020  
Seminer, Doctorate, 2019 - 2020  
Doktora Uzmanlık Alan Dersi, Doctorate, 2019 - 2020  
Modern Fizik, Undergraduate, 2017 - 2018  
FİZİK I (Servis Dersi Grup 3-17), Undergraduate, 2018 - 2019  
FİZİK 2 (Servis Dersi Grup 14), Undergraduate, 2017 - 2018  
Fizik I (Servis Dersi, Gr: 53), Undergraduate, 2017 - 2018  
Manyetik Malzemeler, Postgraduate, 2016 - 2017  
FİZİK 2 (Servis Dersi Grup 11-59), Undergraduate, 2016 - 2017  
FİZİK I (Servis Dersi Grup 16-37-53), Undergraduate, 2017 - 2018  
Modern Fizik Gr1, Undergraduate, 2015 - 2016  
FİZİK 2 (Servis Dersi Grup 20-46), Undergraduate, 2014 - 2015  
FİZİK 2 (Servis Dersi Grup 20-48), Undergraduate, 2013 - 2014  
Fizikte Matematik Yöntemler 1, Undergraduate, 2014 - 2015  
FİZİK I (Servis Dersi Grup 13-62), Undergraduate, 2014 - 2015  
Bitirme Çalışması, Undergraduate, 2014 - 2015  
FİZİK I (Servis Dersi Grup 18), Undergraduate, 2013 - 2014  
FİZİK 2 (Servis Dersi Grup 18-21-66), Undergraduate, 2011 - 2012  
Undergraduate, 2011 - 2012  
FİZİK I (Servis Dersi Grup 52), Undergraduate, 2011 - 2012  
Fizikte Matematik Yöntemler 1, Undergraduate, 2011 - 2012  
FİZİK I (Servis Dersi Grup 17), Undergraduate, 2011 - 2012

## Advising Theses

Özdoğan K., Bazı Manyetik Yarıiletkenlerin Elektronik ve Manyetik Özellikleri Üzerinde Sıkıştırma ve Genleşme Etkisinin İncelenmesi , Postgraduate, Z.Zeki(Student), 2019  
ÖZDOĞAN K., Oksit Tabanlı Termoelektrik Malzemelerin Yoğunluk Fonksiyonel Teorisi İle İncelenmesi, Postgraduate, A.AYKARA(Student), 2016

## Jury Memberships

Doctorate, Doctorate, Gebze Teknik Üniversitesi, July, 2016  
Doctorate, Doctorate, Gebze Teknik Üniversitesi, July, 2016  
Doctorate, Doctorate, Gebze Teknik Üniversitesi, July, 2016  
Doctorate, Doctorate, Gebze Teknik Üniversitesi, June, 2016  
Doctoral Examination, Doctoral Examination, Gebze Teknik Üniversitesi, June, 2015

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

- I. **Synthesis, Structure, Photoluminescence, and Optical Properties of (Co/B) Co-Doped ZnO Nanoparticles**  
Arda L., Veziroglu S., ÖZDOĞAN K., Özüğurlu E.  
Particle and Particle Systems Characterization, vol.41, no.10, 2024 (SCI-Expanded)
- II. **DFT Insights into the Physical Properties of Layered LiMnSe<sub>2</sub> and LiMnTe<sub>2</sub> Compounds**  
Benmakhlof A., Faid F., Ghermoul N., ÖZDOĞAN K., Helaimia T., Bouhemadou A., Galanakis I.  
Metals, vol.14, no.9, 2024 (SCI-Expanded)
- III. **Interplay between Structural, Electronic, and Magnetic Properties in the p<sub>0</sub>-d Semi-Heusler**

## **Compounds: The Case of Li-Based Compounds**

ÖZDOĞAN K., Galanakis I.

Crystals, vol.14, no.8, 2024 (SCI-Expanded)

- IV. **High Spin Magnetic Moments in All-3d-Metallic Co-Based Full Heusler Compounds**  
Tas M., ÖZDOĞAN K., Şaşıoğlu E., Galanakis I.  
Materials, vol.16, no.24, 2023 (SCI-Expanded)
- V. **Stability of spin-gapless semiconducting behavior in Ti<sub>2</sub>CoSi, Ti<sub>2</sub>MnAl, and Ti-2 VAs Heusler compounds**  
ÖZDOĞAN K., Galanakis I.  
PHYSICAL REVIEW MATERIALS, vol.5, no.2, 2021 (SCI-Expanded)
- VI. **Oxygen vacancies induced photoluminescence in SrZnO<sub>2</sub> nanophosphors probed by theoretical and experimental analysis**  
Manju M., Jain M., Madas S., Vashishtha P., Rajput P., Gupta G., Kahaly M. U., Özdoğan K., Vij A., Thakur A.  
SCIENTIFIC REPORTS, vol.10, 2020 (SCI-Expanded)
- VII. **High spin polarization in all-3d-metallic Heusler compounds: the case of Fe(2)CrZ and Co(2)CrZ (Z = Sc, Ti, V)**  
ÖZDOĞAN K., Maznichenko I., Ostanin S., Sasioglu E., Ernst A., Mertig I., Galanakis I.  
JOURNAL OF PHYSICS D-APPLIED PHYSICS, vol.52, no.20, 2019 (SCI-Expanded)
- VIII. **Thermoelectric response of quaternary Heusler compound CrVNbZn**  
Kara H., KAHALY M. U., ÖZDOĞAN K.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.735, pp.950-958, 2018 (SCI-Expanded)
- IX. **Itinerant G-type antiferromagnetism in D<sub>0</sub>(3)-type V(3)Z (Z = Al, Ga, In) compounds: A first-principles study**  
Galanakis I., Tirpanci S., ÖZDOĞAN K., SASIOGLU E.  
PHYSICAL REVIEW B, vol.94, no.6, 2016 (SCI-Expanded)
- X. **Spin-filter and spin-gapless semiconductors: The case of Heusler compounds**  
GALANAKIS I., ÖZDOĞAN K., SASIOGLU E.  
AIP ADVANCES, vol.6, no.5, 2016 (SCI-Expanded)
- XI. **TEMPO-functionalized zinc phthalocyanine: synthesis, magnetic properties, and its utility for electrochemical sensing of ascorbic acid**  
KORKUT S., Akyuz D., ÖZDOĞAN K., YERLİ Y., KOCA A., ŞENER M. K.  
DALTON TRANSACTIONS, vol.45, no.7, pp.3086-3092, 2016 (SCI-Expanded)
- XII. **Ab-initio investigation of electronic and magnetic properties of the 18-valence-electron fully-compensated ferrimagnetic (CrV)XZ Heusler compounds: A prototype for spin-filter materials**  
ÖZDOĞAN K., SASIOGLU E., Galanakis I.  
COMPUTATIONAL MATERIALS SCIENCE, vol.110, pp.77-82, 2015 (SCI-Expanded)
- XIII. **Void-driven breakdown of the local-symmetry and Slater-Pauling rule in half-metallic Heusler compounds**  
Galanakis I., Sasioglu E., Bluegel S., ÖZDOĞAN K.  
PHYSICAL REVIEW B, vol.90, no.6, 2014 (SCI-Expanded)
- XIV. **Effect of disorder on the magnetic properties of cubic Mn<sub>2</sub>Ru<sub>x</sub>Ga compounds: A first-principles study**  
Galanakis I., ÖZDOĞAN K., Sasioglu E., Bluegel S.  
JOURNAL OF APPLIED PHYSICS, vol.116, no.3, 2014 (SCI-Expanded)
- XV. **Conditions for spin-gapless semiconducting behavior in Mn<sub>2</sub>CoAl inverse Heusler compound**  
Galanakis I., ÖZDOĞAN K., Sasioglu E., Bluegel S.  
JOURNAL OF APPLIED PHYSICS, vol.115, no.9, 2014 (SCI-Expanded)
- XVI. **High-T-C fully compensated ferrimagnetic semiconductors as spin-filter materials: the case of CrVXAl (X = Ti, Zr, Hf) Heusler compounds**  
Galanakis I., ÖZDOĞAN K., Sasioglu E.  
JOURNAL OF PHYSICS-CONDENSED MATTER, vol.26, no.8, 2014 (SCI-Expanded)

- XVII. **A proposal for an alternative class of spin filter materials: Hybridization-induced high-T-C ferromagnetic semiconductors CoVXAl (X = Ti, Zr, Hf)**  
Galanakis I., ÖZDOĞAN K., Sasioglu E.  
APPLIED PHYSICS LETTERS, vol.103, no.14, 2013 (SCI-Expanded)
- XVIII. **Slater-Pauling behavior in LiMgPdSn-type multifunctional quaternary Heusler materials: Half-metallicity, spin-gapless and magnetic semiconductors**  
ÖZDOĞAN K., SASIOGLU E., Galanakis I.  
JOURNAL OF APPLIED PHYSICS, vol.113, no.19, 2013 (SCI-Expanded)
- XIX. **Generalized Slater-Pauling rule for the inverse Heusler compounds**  
Skafouturos S., ÖZDOĞAN K., Sasioglu E., Galanakis I.  
PHYSICAL REVIEW B, vol.87, no.2, 2013 (SCI-Expanded)
- XX. **Search for spin gapless semiconductors: The case of inverse Heusler compounds**  
Skafouturos S., ÖZDOĞAN K., Sasioglu E., Galanakis I.  
APPLIED PHYSICS LETTERS, vol.102, no.2, 2013 (SCI-Expanded)
- XXI. **Half-metallic perovskite superlattices with colossal thermoelectric figure of merit**  
Kahaly M. U., Ozdogan K., Schwingenschloegl U.  
JOURNAL OF MATERIALS CHEMISTRY A, vol.1, no.29, pp.8406-8410, 2013 (SCI-Expanded)
- XXII. **Half-metallic antiferromagnetism in Cr<sub>2+x</sub>Se (0 ≤ x ≤ 1): A first-principles study**  
Galanakis I., ÖZDOĞAN K., Sasioglu E.  
PHYSICAL REVIEW B, vol.86, no.13, 2012 (SCI-Expanded)
- XXIII. **Robustness and stability of half-metallic ferromagnetism in alkaline-earth metal mononitrides against doping and deformation**  
ÖZDOĞAN K., SASIOGLU E., Galanakis I.  
JOURNAL OF APPLIED PHYSICS, vol.111, no.11, 2012 (SCI-Expanded)
- XXIV. **Anomalous enhancement of the thermoelectric figure of merit by V co-doping of Nb-SrTiO<sub>3</sub>**  
Ozdogan K., KAHALY M. U., ALSHAREEF H. N., SCHWINGENSCHLOEGL U.  
APPLIED PHYSICS LETTERS, vol.100, no.19, 2012 (SCI-Expanded)
- XXV. **Influence of the annealing atmosphere on structural, optical and magnetic properties of Co-doped ZnO microrods**  
Aksu S., BACAŞIZ E., YILMAZ Ş., POLAT İ., Altunbas M., Turksoy M., Topkaya R., ÖZDOĞAN K.  
PHYSICA E-LOW-DIMENSIONAL SYSTEMS & NANOSTRUCTURES, vol.44, pp.1244-1249, 2012 (SCI-Expanded)
- XXVI. **Enhanced carrier density in Nb-doped SrTiO<sub>3</sub> thermoelectrics**  
Ozdogan K., KAHALY M. U., KUMAR S. R. S., ALSHAREEF H. N., SCHWINGENSCHLOEGL U.  
JOURNAL OF APPLIED PHYSICS, vol.111, no.5, 2012 (SCI-Expanded)
- XXVII. **Structural, optical and magnetic properties of Mn diffusion-doped CdS thin films prepared by vacuum evaporation**  
Aksu S., BACAŞIZ E., PARLAK M., YILMAZ Ş., POLAT İ., Altunbas M., Turksoy M., Topkaya R., ÖZDOĞAN K.  
MATERIALS CHEMISTRY AND PHYSICS, vol.130, pp.340-345, 2011 (SCI-Expanded)
- XXVIII. **Effect of order on the half-metallic gap in Heusler compounds**  
ÖZDOĞAN K., Galanakis I.  
JOURNAL OF APPLIED PHYSICS, vol.110, no.7, 2011 (SCI-Expanded)
- XXIX. **Violation of Hund's third rule in structurally disordered ferromagnets**  
Kapaklis V., Korelis P. T., Hjorvarsson B., Vlachos A., Galanakis I., Pouloupoulos P., ÖZDOĞAN K., Angelakeris M., Wilhelm F., Rogalev A.  
PHYSICAL REVIEW B, vol.84, no.2, 2011 (SCI-Expanded)
- XXX. **Half-metallic ferrimagnetism in the [Sc<sub>1-x</sub>V<sub>x</sub>]C and [Sc<sub>1-x</sub>V<sub>x</sub>]Si alloys adopting the zincblende and wurtzite structures from first-principles**  
Oezdogan K., SASIOGLU E., Galanakis I.  
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.322, no.1, pp.46-50, 2010 (SCI-Expanded)
- XXXI. **First-principles electronic and magnetic properties of the half-metallic antiferromagnet Cr<sub>2</sub>MnSb**  
Ozdogan K., Galanakis I.

- JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.321, no.15, 2009 (SCI-Expanded)
- XXXII. **Optimizing the hydrogen storage in boron nitride nanotubes by defect engineering**  
Ozdogan K., Berber S.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.34, no.12, pp.5213-5217, 2009 (SCI-Expanded)
- XXXIII. **Tuning the magnetic properties of half-metallic semi-Heusler alloys by sp-electron substitution: the case of AuMnSn<sub>1-x</sub>Sb<sub>x</sub> quaternary alloys**  
Ozdogan K., SASIOGLU E., Galanakis I.  
JOURNAL OF PHYSICS D-APPLIED PHYSICS, vol.42, no.8, 2009 (SCI-Expanded)
- XXXIV. **Ab initio electronic and magnetic properties of half-metallic NiCrSi and NiMnSi Heusler alloys: The role of defects and interfaces**  
Galanakis I., Ozdogan K., SASIOGLU E.  
JOURNAL OF APPLIED PHYSICS, vol.104, no.8, 2008 (SCI-Expanded)
- XXXV. **Magnetic phase transition in half-metallic CoMnSb and NiMnSb semi-Heusler alloys upon Cu doping: First-principles calculations**  
Galanakis I., Sasioglu E., Oezdogan K.  
PHYSICAL REVIEW B, vol.77, no.21, 2008 (SCI-Expanded)
- XXXVI. **Ferrimagnetism and antiferromagnetism in half-metallic Heusler alloys**  
Galanakis I., Ozdogan K., Sasioglu E., Aktas B.  
PHYSICA STATUS SOLIDI A-APPLICATIONS AND MATERIALS SCIENCE, vol.205, no.5, pp.1036-1039, 2008 (SCI-Expanded)
- XXXVII. **Role of the presence of transition-metal atoms at the antisites in CrAs, CrSe and VAs zinc-blende compounds**  
Oezdogan K., Galanakis I., SASIOGLU E., Aktas B.  
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.320, pp.197-203, 2008 (SCI-Expanded)
- XXXVIII. **Engineering the electronic, magnetic, and gap-related properties of the quaternary half-metallic Heusler alloys**  
Ozdogan K., SASIOGLU E., Galanakis I.  
JOURNAL OF APPLIED PHYSICS, vol.103, no.2, 2008 (SCI-Expanded)
- XXXIX. **Vacancy-induced minority-spin states in half-metallic Heusler alloys**  
Oezdogan K., SASIOGLU E., GALANAKIS I.  
PHYSICA STATUS SOLIDI-RAPID RESEARCH LETTERS, vol.1, no.5, pp.184-186, 2007 (SCI-Expanded)
- XL. **EPR of VO<sub>2</sub><sup>+</sup> in double format, Ba<sub>2</sub>Zn(HCOO)<sub>6</sub>(H<sub>2</sub>O)<sub>4</sub> single crystals**  
Yerli Y., Zerentuerk A., Oezdogan K.  
SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.68, no.1, pp.147-149, 2007 (SCI-Expanded)
- XLI. **Magnetic anisotropies in ultrathin iron films grown on the surface-reconstructed GaAs substrate**  
Aktas B., Heinrich B., Woltersdorf G., Urban R., Tagirov L. R., Yildiz F., Oezdogan K., Oezdemir M., Yalcin O., Rameev B. Z.  
JOURNAL OF APPLIED PHYSICS, vol.102, no.1, 2007 (SCI-Expanded)
- XLII. **Defects-driven appearance of half-metallic ferrimagnetism in Co-Mn-based Heusler alloys**  
Ozdogan K., GALANAKIS I., SASIOGLU E., AKTAS B.  
SOLID STATE COMMUNICATIONS, vol.142, no.9, pp.492-497, 2007 (SCI-Expanded)
- XLIII. **Ab initio design of half-metallic fully compensated ferrimagnets: The case of Cr(2)MnZ (Z=P, As, Sb, and Bi)**  
Galanakis I., Ozdogan K., Sasioglu E., Aktas B.  
PHYSICAL REVIEW B, vol.75, no.17, 2007 (SCI-Expanded)
- XLIV. **Defect-induced ferrimagnetism in the half-metallic Co<sub>2</sub>CrAl and Co<sub>2</sub>CrSi compounds**  
Ozdogan K., GALANAKIS I., SASIOGLU E., AKTAS B.  
PHYSICA STATUS SOLIDI-RAPID RESEARCH LETTERS, vol.1, no.3, pp.95-97, 2007 (SCI-Expanded)
- XLV. **Influence of mixing the low-valent transition metal atoms (Y, Y\*=Cr, Mn, Fe) on the properties of the quaternary Co-2[Y<sub>1-x</sub>Y<sub>x</sub>]\*Z (Z=Al, Ga, Si, Ge, or Sn) Heusler compounds**

Ozdogan K., AKTAS B., GALANAKIS I., SASIOGLU E.

JOURNAL OF APPLIED PHYSICS, vol.101, no.7, 2007 (SCI-Expanded)

- XLVI. **Doping of Mn<sub>2</sub>VAl and Mn<sub>2</sub>VSi Heusler alloys as a route to half-metallic antiferromagnetism**  
Galanakis I., Ozdogan K., Sasioglu E., Aktas B.  
PHYSICAL REVIEW B, vol.75, no.9, 2007 (SCI-Expanded)
- XLVII. **Doping and disorder in the Co<sub>2</sub>MnAl and Co<sub>2</sub>MnGa half-metallic Heusler alloys**  
Ozdogan K., Sasioglu E., Aktas B., Galanakis I.  
PHYSICAL REVIEW B, vol.74, no.17, 2006 (SCI-Expanded)
- XLVIII. **Defects in CrAs and related compounds as a route to half-metallic ferrimagnetism**  
Galanakis I., Ozdogan K., Sasioglu E., Aktas B.  
PHYSICAL REVIEW B, vol.74, no.14, 2006 (SCI-Expanded)
- XLIX. **Effect of doping and disorder on the half metallicity of full Heusler alloys**  
Galanakis I., Ozdogan K., Aktas B., Sasioglu E.  
APPLIED PHYSICS LETTERS, vol.89, no.4, 2006 (SCI-Expanded)
- L. **Search for half-metallic ferrimagnetism in V-based heusler alloys Mn(2)VZ (Z = Al, Ga, In, Si, Ge, Sn)**  
Ozdogan K., Galanakis I., Sasioglu E., Aktas B.  
JOURNAL OF PHYSICS-CONDENSED MATTER, vol.18, no.10, pp.2905-2914, 2006 (SCI-Expanded)

## Articles Published in Other Journals

- I. **First-principles computed electronic and magnetic properties of zincblende alkaline-earth pnictides**  
Özdoğan K., Galanakis I.  
Journal of Advanced Physics, vol.1, no.1, pp.69-77, 2012 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **Fundamentals of half-metallic Full-Heusler alloys "Spintronics: Materials and Applications**  
Özdoğan K., Galanakis I., Şaşıoğlu E.  
in: Spintronics Materials Applications and Devices, , Editor, NOVA Science Publishers Inc. , New-York, pp.213-226, 2009
- II. **Role of Defects and Disorder in the Half-Metallic Full-Heusler Compounds**  
Özdoğan K., Galanakis I., Sasioglu E.  
in: Advances in Nanoscale Magnetism, B. Aktas,F. Mikailov, Editor, Springer-Verlag , Berlin, pp.1-16, 2008
- III. **Magnetic anisotropies in ultra-thin iron films grown on the surface-reconstructed GaAs substrate**  
Özdoğan K., Aktas B., Heinrich B., Woltersdorf G., Urban R., Tagirov L. R., Yıldız F., Özdemir M., Yalçın O., Rameev B.  
in: Magnetic Nanostructures, B. Aktas,L. R. Tagirov,and F. Mikailov, Editor, Springer-Verlag , Berlin, pp.167-184, 2007
- IV. **Magnetic anisotropies in the ultra-thin iron film grown on the GaAs substrate**  
Özdoğan K., Aktas B., Heinrich B., Woltersdorf G., Urban R., Tagirov L. R., Yıldız F., Özdemir M., Yalçın O.  
in: Nanostructured Magnetic Materials and their Applications, B.Aktas,L.Tagirov,F.Mikailov, Editor, Kluwer Academic Publishers, Amsterdam, pp.213-227, 2004

## Refereed Congress / Symposium Publications in Proceedings

- I. **Investigation of Thermoelectric Properties of FeVTiAl Heusler Alloy for Sustainable Energy Research**  
KARA H., ÖZDOĞAN K.  
3rd International Conference on Advances in Mechanical Engineering, Konya, Turkey, 19 - 21 December 2017
- II. **Material Prediction for Heat Management by Computational Method: The Evaluation of CoFeMnSi**

### **Half-Metallic Ferromagnet**

KARA H., ÖZDOĞAN K.

3rd International Conference on Advances in Mechanical Engineering, Konya, Turkey, 19 - 21 December 2017

- III. **Importance of Power Factor on Defining Energy Conversion Efficiency of CoFeCrAs Alloy in Thermoelectric Material Research**  
KARA H., ÖZDOĞAN K.  
3rd International Conference on Advances in Mechanical Engineering, Konya, Turkey, 19 November - 21 December 2017
- IV. **A first-principles study on the effect of lattice parameter and atomic order on magnetic and electronic properties of quaternary Heusler alloys CrV(Ti,Zr,Hf)Al**  
Tanrıverdi Z. Z., ÖZDOĞAN K.  
International Advanced Researches and Engineering Congress 2017 (IAREC' 17), 16 - 18 November 2017
- V. **Energy Conversion Efficiency for Renewable Waste Heat in Dynamic Electric Form: Full-Heusler Co<sub>2</sub>TiAl Material**  
KARA H., ÖZDOĞAN K.  
5th International Symposium on Development of KOP Region, Konya, Turkey, 26 - 28 October 2017
- VI. **Thermopower Effect on Thermoelectric Renewable Energy Research: Ferromagnetic Co<sub>2</sub>ScGe Compound**  
KARA H., ÖZDOĞAN K.  
5th International Symposium on Development of KOP Region, Konya, Turkey, 26 - 28 October 2017
- VII. **Computational Thermoelectric Study of Experimentally Synthesized Half-Metallic Co<sub>2</sub>TiGe Alloy for Solar-Thermal Electric Technologies**  
KARA H., ÖZDOĞAN K.  
5th International Symposium on Development of KOP Region, Konya, Turkey, 26 - 28 October 2017
- VIII. **Consideration of Co<sub>2</sub>VGe Heusler Alloy for Next Generation Energy Materials Using Free Heat as an Electrical Source**  
KARA H., ÖZDOĞAN K.  
5th International Symposium on Development of KOP Region, Konya, Turkey, 26 - 28 October 2017
- IX. **Evaluation of Thermopower on Co<sub>2</sub>MnGe Heusler Alloy for Thermoelectric Renewable Energy Systems**  
KARA H., ÖZDOĞAN K.  
4th International TURK-PAK Conference on Chemical Sciences, Konya, Turkey, 26 - 28 October 2017
- X. **Transport Properties in Ferromagnetic Co<sub>2</sub>MnSi for Future Thermoelectric Energy Materials**  
KARA H., ÖZDOĞAN K.  
4th International TURK-PAK Conference on Chemical Sciences, Konya, Turkey, 26 - 28 October 2017
- XI. **Searching Magnetic Phase, Electronic Structure and Thermoelectric Properties of Ti<sub>2</sub>MnAl Heusler Material**  
KARA H., ÖZDOĞAN K.  
24. WIEN2k Workshop, Viyana, Austria, 18 - 22 September 2017
- XII. **A DFT Based Thermoelectric Energy Research: Co<sub>2</sub>MnSn Heusler Alloy as a Direct Thermal Energy Conversion Material**  
KARA H., ÖZDOĞAN K.  
24. WIEN2k Workshop, Viyana, Austria, 18 - 22 September 2017
- XIII. **Energy Transfer Ability of Half-Metallic Co<sub>2</sub>CrAl Full-Heusler Alloy**  
KARA H., ÖZDOĞAN K.  
International Congress on Semiconductor Materials and Devices (ICSMD-2017), Konya, Turkey, 17 - 19 August 2017
- XIV. **Evaluation of Transport Properties of Co<sub>2</sub>CrIn Magnetic Heusler Alloy in Material Research for Thermoelectric Power Modules**  
KARA H., ÖZDOĞAN K.  
International Congress on Semiconductor Materials and Devices (ICSMD-2017), Konya, Turkey, 17 - 19 August

2017

- XV. **Influence of Electrical Conductivity on Energy Transfer Efficiency of Co<sub>2</sub>CrGe Heusler Alloy**  
KARA H., ÖZDOĞAN K.  
International Congress on Semiconductor Materials and Devices (ICSMD-2017), Konya, Turkey, 17 - 19 August 2017
- XVI. **Effect of Power Factor on Obtaining Electric Current by Using Waste Heat in Ferromagnetic Co<sub>2</sub>CrGa Alloy**  
KARA H., ÖZDOĞAN K.  
International Congress on Semiconductor Materials and Devices (ICSMD-2017), Konya, Turkey, 17 - 19 August 2017
- XVII. **The contribution of thermopowers to energy conversion in Ti<sub>2</sub>XAl (X =Cu,Ni) Heusler alloys**  
KARA H., ÖZDOĞAN K.  
INTERNATIONAL CONFERENCE ON ENERGY AND THERMAL ENGINEERING: ISTANBUL 2017, 25 - 28 April 2017
- XVIII. **The electrical conductivity supplement to the figure of merit for ferromagnetic X<sub>2</sub>VAl (X=Sc,Ti) in clean energy research**  
KARA H., ÖZDOĞAN K.  
INTERNATIONAL CONFERENCE ON ENERGY AND THERMAL ENGINEERING: ISTANBUL 2017, 25 - 28 April 2017
- XIX. **Computational determination of Hall coefficients for the comparison of charge carrier densities between X<sub>2</sub>CrAl (X=Sc,Ti)**  
KARA H., ÖZDOĞAN K.  
INTERNATIONAL CONFERENCE ON ENERGY AND THERMAL ENGINEERING: ISTANBUL 2017, 25 - 28 April 2017
- XX. **Thermal conductivity effect on the yield of waste heat recovery systems in Sc<sub>2</sub>MnAl and Ti<sub>2</sub>ZnAl materials**  
KARA H., ÖZDOĞAN K.  
INTERNATIONAL CONFERENCE ON ENERGY AND THERMAL ENGINEERING: ISTANBUL 2017, 25 - 28 April 2017
- XXI. **To regenerate electricity from waste heat: The comparison of power factors in X<sub>2</sub>CoAl (X=Sc,Ti) compounds**  
KARA H., ÖZDOĞAN K.  
INTERNATIONAL CONFERENCE ON ENERGY AND THERMAL ENGINEERING: ISTANBUL 2017, 25 - 28 April 2017
- XXII. **Finding of Seebeck coefficients by DFT calculations for X<sub>2</sub>FeAl (X=Sc,Ti) for thermoelectric energy conversion systems**  
KARA H., ÖZDOĞAN K.  
INTERNATIONAL CONFERENCE ON ENERGY AND THERMAL ENGINEERING: ISTANBUL 2017, 25 - 28 April 2017
- XXIII. **FROM HEAT TO ELECTRICITY ENERGY CONVERSION ABILITY OF Sc<sub>2</sub>XAl X Ti V Cr HEUSLER COMPOUNDS**  
KARA H., ÖZDOĞAN K.  
Second International Conference on Energy Systems, (ICES-2016) Yildiz Technical University, December 21-23, 2016, Istanbul, Turkey, 21 - 23 December 2016
- XXIV. **EVALUATION OF THERMOELECTRIC PERFORMANCE OF Sc<sub>2</sub>XAl X Cu Zn BY USING AB INITIO CALCULATIONS**  
KARA H., ÖZDOĞAN K.  
Second International Conference on Energy Systems, (ICES-2016) Yildiz Technical University, December 21-23, 2016, Istanbul, Turkey, 21 - 23 December 2016
- XXV. **SrMO<sub>3</sub> (M=Sc,Y,Lu) Bileşiklerinin Termoelektrik Özelliklerinin İncelenmesi**  
Özdoğan K., Kara H., Aykara A.  
Adım Fizik Günleri V, Eskişehir, Turkey, 21 - 23 April 2016, pp.67
- XXVI. **SrTiO<sub>3</sub> ve SrVO<sub>3</sub> Bileşiklerinin Elektronik ve Termoelektrik Özelliklerinin İlk Prensiplere Hesaplamaları ile İncelenmesi**  
Özdoğan K., Kara H., Aykara A.  
Adım Fizik Günleri V, Eskişehir, Turkey, 21 - 23 April 2016, pp.142
- XXVII. **Thermoelectric Properties of SrYO<sub>3</sub> Y V Nb Ta First Principles Calculations**



- Aykara A., KARA H., ÖZDOĞAN K.  
1st. International Conference on Organic Electronic Material Technologies, OEMT 2015, 25 - 28 March 2015, pp.29
- XXVIII. **Thermoelectric Properties of Cubic Perovskites SrYO<sub>3</sub> Y Ti Zr Hf**  
Aykara A., KARA H., ÖZDOĞAN K.  
1st. International Conference on Organic Electronic Material Technologies, OEMT 2015, 25 - 28 March 2015, pp.41
- XXIX. **Farklı çaplardaki bor nitrür (BN) nanotüplerde hidrojen depolanmasının defekt mühendisliği ile geliştirilmesi**  
Özdoğan K., Berber S.  
UGHEK 2008 II. Ulusal Güneş ve Hidrojen Enerjisi Kongresi, Eskişehir, Turkey, 12 - 13 June 2008, pp.45-46
- XXX. **Bor Nitrür (BN) Nanotüplerde Hidrojen Depolanması**  
Özdoğan K., Berber S.  
II. Ulusal Bor Çalıştayı MTA, Ankara, Turkey, 17 - 18 April 2008, pp.69-75
- XXXI. **Co<sub>2</sub>MnGa ve Co<sub>2</sub>MnAl Heusler Alaşımalarında Basınçla Yarı Metalik Ferromanyetizmanın Gözlenmesi**  
Özdoğan K., Aktaş B.  
Türk Fizik Derneği, 22. Fizik Kongresi, Muğla, Turkey, 14 - 17 September 2004, pp.102
- XXXII. **Magnetic anisotropies in ultrathin Fe films grown on GaAs**  
Özdoğan K., Yıldız F., Özdemir M., Yalçın O., Heinrich B., Woltersdorf G., Urban R., Rameev B., Tagirov L.  
2nd Euro-Asian Symposium Trends in Magnetism (EASTMAG-2004), Krasnojarsk, Russia, 24 - 27 August 2004, pp.305
- XXXIII. **Magnetic anisotropies in ultrathin iron films grown on the surface reconstructed GaAs Substrate**  
Özdoğan K., Aktaş B., Yıldız F., Özdemir M., Yalçın O., Heinrich B., Woltersdorf G., Urban R., Rameev B., Tagirov L.  
Nanoscale properties of condensed matter probed by resonance phenomena, Kazan, Russia, 15 - 19 August 2004, pp.87
- XXXIV. **Magnetic anisotropies in ultrathin film structures**  
Özdoğan K., Aktaş B., Heinrich B., Tagirov L., Woltersdorf G., Urban R., Yıldız F., Özdemir M., Rameev B.  
7th Conference on Nanostructured Materials - Nano2004, Wiesbaden, Germany, 20 - 24 June 2004, pp.90
- XXXV. **FMR studies on ultrathin Au/Fe/GaAs structures**  
Özdoğan K., Aktaş B., Heinrich B., Woltersdorf G., Urban R., Tagirov L., Yıldız F., Yalçın O.  
NATO Advanced Research Workshop on Nanostructured Magnetic Materials and Their Applications, Kocaeli, Turkey, 1 - 04 July 2003, pp.37
- XXXVI. **Magnetic anisotropies in magnetic ultrathin film structures**  
Özdoğan K., Aktaş B., Heinrich B., Tagirov L., Woltersdorf G., Urban R., Yıldız F., Özdemir M., Rameev B.  
Nanostructured Magnetic Materials and Their Applications ARW NMMA-2003, Kocaeli, Turkey, 1 - 04 July 2003, pp.63
- XXXVII. **ESR Study of Hard/oft (Sm-Co/Fe) Magnetic Film: Exchange-Spring Magnetic Multilayer Samples**  
Özdoğan K., Yalçın O., Yıldız F., Özdemir M., Aktaş B., Jiang J. C.  
Türk Fizik Derneği 21. Fizik Kongresi (TFD-21) , Isparta, Turkey, 11 - 14 September 2002, pp.273
- XXXVIII. **Theoretical Study of Ferromagnetic Rezonans in Exchanged-Coupled Magnetic/Nonmagnetic/Magnetic Multilayer Structures**  
Özdoğan K., Özdemir M., Yalçın O., Aktaş B.  
Türk Fizik Derneği 21. Fizik Kongresi (TFD-21) , Isparta, Turkey, 11 - 13 September 2002, pp.315

## Supported Projects

ÖZDOĞAN K., Project Supported by Higher Education Institutions, Oksit Tabanlı Termoelektrik Malzemelerin Modellenmesi, 2012 - 2014

ÖZDOĞAN K., Other International Funding Programs, Termoelektrik Malzemelerin yoğunluk fonksiyonel teorisi ile çalışılması, 2011 - 2012

## Activities in Scientific Journals

Turkish Journal of Physics, Editor, 2018 - Continues

## Scientific Refereeing

THIN SOLID FILMS, SCI Journal, January 2019

JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS, SCI Journal, November 2018

Çanakkale Onsekiz Mart Üniversitesi Fen Bilimleri Enstitüsü Dergisi, Other Indexed Journal, October 2018

Journal of Alloys and Compounds, SCI Journal, October 2018

Journal of Physics and Chemistry of Solids, SCI Journal, October 2018

Turkish Journal of Physics, Other Indexed Journal, May 2018

Journal of Alloys and Compounds, SCI Journal, March 2018

Journal of Materials Chemistry C, SCI Journal, June 2017

Journal of Applied Physics, SCI Journal, April 2017

Journal of Magnetism and Magnetic Materials, SCI Journal, April 2017

Journal of Alloys and Compounds, SCI Journal, January 2017

Journal of Physics and Chemistry of Solids, SCI Journal, January 2017

Journal of Magnetism and Magnetic Materials, SCI Journal, July 2016

INTERMETALLICS, SCI Journal, June 2016

Applied Physics Letters, SCI Journal, March 2016

Journal of Applied Physics, SCI Journal, June 2015

Journal of Alloys and Compounds, SCI Journal, July 2014

Journal of Magnetism and Magnetic Materials, SCI Journal, January 2014

Journal of Magnetism and Magnetic Materials, SCI Journal, January 2014

Communications in Computational Physics, SCI Journal, October 2011

## Tasks In Event Organizations

Özdoğan K., International Conference on Physical Chemistry and Functional Materials, Scientific Congress, Elazığ, Turkey, Haziran 2018

Özdoğan K., Erbahar D., İpek S., Bingölbali N. D., Güler Kılıç S., International Conference on Nanoscale Magnetism 2007, Scientific Congress, Turkey, Haziran 2007

Özdoğan K., Aktaş B., Rameev B., Kazan S., Köysal O., İpek S., Erbahar D., International Conference on Nanoscale Magnetism 2005, Scientific Congress, Turkey, Temmuz 2005

Özdoğan K., Aktaş B., Mikailzade F., Yıldız F., Kazan S., NATO Advanced Research Workshop on Nanostructured Magnetic Materials and Their Applications, Scientific Congress, Kocaeli, Turkey, Haziran 2003

## Metrics

Publication: 96

Citation (WoS): 2383

Citation (Scopus): 2564

H-Index (WoS): 25

H-Index (Scopus): 26

## Congress and Symposium Activities

International Workshop Recent Trends on Nanomagnetism, Attendee, Kocaeli, Turkey, 2003

NATO Advanced Research Workshop on Nanostructured Magnetic Materials and Their Applications, Attendee, Kocaeli, Turkey, 2003

Türk Fizik Derneđi 21. Fizik Kongresi (TFD-21) , Attendee, Isparta, Turkey, 2002

## **Non Academic Experience**

King Abdullah University of Science and Technology

Gebze Yüksek Teknoloji Enstitüsü

Gebze Yüksek Teknoloji Enstitüsü