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Personal Information

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International Researcher IDs

ScholarID: [JySiigIAAAAJ&hl=en&oi=ao](https://orcid.org/0000-0002-4854-8142)

ORCID: 0000-0002-4854-8142

Publons / Web Of Science ResearcherID: E-7483-2013

ScopusID: 55428241300

Yoksis Researcher ID: 53263

Education Information

Doctorate, Hacettepe University, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, Turkey
2007 - 2014

Postgraduate, Hacettepe University, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, Turkey
2004 - 2007

Undergraduate, Hacettepe University, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü,
Turkey 1999 - 2004

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Ferrit tabanlı nanokompozit malzemelerde mikrodalga soğurma özelliklerinin araştırılması, Hacettepe Üniversitesi, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, 2014

Postgraduate, Metal ferrit nanoparçacıkların hazırlanması ve fiziksel özelliklerinin incelenmesi, Hacettepe Üniversitesi, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, 2007

Research Areas

Metallurgical and Materials Engineering, Material science and engineering, Physical Properties, Nanomaterials, Physics, Interdisciplinary Physics and Related Science and Technology Areas, Materials Science, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Magnetic Properties and Materials, Natural Sciences, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Hacettepe University, Fen Bilimleri Enstitüsü, Nanoteknoloji ve Nanotıp A.B.D., 2019 - Continues
Research Assistant, Hacettepe University, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, 2007 - 2019

Academic and Administrative Experience

Member of Unit Quality Commission, Hacettepe University, Fen Bilimleri Enstitüsü, Nanoteknoloji Ve Nanotıp A.B.D., 2024 - Continues

Rektörlük Kalite Komisyonu Üyesi, Hacettepe University, Fen Bilimleri Enstitüsü, Nanoteknoloji ve Nanotıp A.B.D., 2021 - Continues

BAP Subcommittee Member, Hacettepe University, Fen Bilimleri Enstitüsü, Nanoteknoloji Ve Nanotıp A.B.D., 2023 - 2024
Chairperson of Unit Quality Commission, Hacettepe University, Fen Bilimleri Enstitüsü, Nanoteknoloji Ve Nanotıp A.B.D., 2021 - 2024

Assistant Director of the Institute, Hacettepe University, Fen Bilimleri Enstitüsü, Nanoteknoloji ve Nanotıp A.B.D., 2020 - 2023

Araştırma Görevlisi Fakülte Temsilcisi, Hacettepe University, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, 2019 - 2019

Courses

Doctorate

Nanoteknolojinin Fiziksel Temelleri, Doctorate, 2023 - 2024, 2022 - 2023, 2021 - 2022

Nanomanyetik Yapılar ve Uygulamaları, Doctorate, 2024 - 2025, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020

Hidrojen Teknolojilerine Giriş, Doctorate, 2024 - 2025, 2023 - 2024

Postgraduate

Nanoyapıların Karakterizasyonu, Postgraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020

Undergraduate

Technical Drawing, Undergraduate, 2019 - 2020

Fizik I, Undergraduate, 2019 - 2020

Fizik, Undergraduate, 2019 - 2020, 2018 - 2019

Physics, Undergraduate, 2018 - 2019

Fizik II, Undergraduate, 2016 - 2017

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Development of magnetically driven contactless piezoelectric nanogenerators utilizing ZnO nanowires with different shaped top electrodes**
Ucar E. F., Ilbay A., Simsek T., Kaynar M. B., Ozbay E., Ozcan S.
SEMICONDUCTOR SCIENCE AND TECHNOLOGY, no.1, 2025 (SCI-Expanded)
- II. **Synthesis of Mo/Mo₂C-DLC composite thin films via diffusion of plasma generated C atoms into sputter coated Mo thin films**
Kaynar M. B., Ceylan A.
VACUUM, vol.233, pp.114008-114014, 2025 (SCI-Expanded)
- III. **Study of La_{1-x} Sr_x MnO₃ nanoparticles: synthesis, magnetic properties and their hyperthermia applications**

Sert E., Kaynar M. B., Özcan Ş.

JOURNAL OF MATERIALS SCIENCE: MATERIALS IN ELECTRONICS, vol.35, no.18, pp.1-12, 2024 (SCI-Expanded)

- IV. **Structure and magnetic properties of $(La_{1-x}Fe_x)FeO_3$ ($x=0, 0.25, 0.50$) perovskite**
Unlu C. G., Kaynar M. B., Şimşek T., Tekgul A., Kalkan B., Özcan Ş.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.784, pp.1198-1204, 2019 (SCI-Expanded)
- V. **Saturation magnetization change with structure in $CoFe_2O_4$ nanostructures prepared from metallic iron and cobalt by wet grinding method**
KAYNAR M. B., Toprak A., ÖZCAN Ş.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.34, no.2, pp.1102-1108, 2019 (SCI-Expanded)
- VI. **Magnetocaloric effect in $La_{0.7}Nd_xBa_{(0.3-x)}MnO_3$ ($x=0, 0.05, 0.1$) perovskite manganites**
Unlu C. G., Tanis Y. E., KAYNAR M. B., ŞİMŞEK T., ÖZCAN Ş.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.704, pp.58-63, 2017 (SCI-Expanded)
- VII. **Magnetic Resonance Imaging Safety of Magnetically Controlled Growing Rods in an in Vivo Animal Model**
EROGLU M., DEMIRKIRAN G., Kocyigit I. A., Bilgili H., KAYNAR M. B., Bumin A., ÖZCAN Ş., YAZICI M.
Spine, vol.42, no.9, 2017 (SCI-Expanded)
- VIII. **Fabrication and Magnetic Properties of $Mn(x)B_{45}Co_{100-x}$ Alloys**
PIYAN C., ŞİMŞEK T., KAYNAR M. B., ÖZCAN Ş.
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.29, no.8, pp.2203-2206, 2016 (SCI-Expanded)
- IX. **Synthesis and magnetic properties of nanocrystalline $BaFe_{12}O_{19}$**
KAYNAR M. B., ÖZCAN Ş., Shah S. I.
CERAMICS INTERNATIONAL, vol.41, no.9, pp.11257-11263, 2015 (SCI-Expanded)
- X. **Solvent free fabrication of nanoporous TiO_2 filters using organic-inorganic nanocomposites**
KAYNAR M. B., DelPercio R., Yassitepe E., ÖZCAN Ş., Shah S. I.
POWDER TECHNOLOGY, vol.233, pp.331-334, 2013 (SCI-Expanded)
- XI. **Catalyst solubility and self-doping in ZnS nanostructures**
Hafeez M., Manzoor U., Bhatti A. S., KAYNAR M. B., Shah S. I.
JOURNAL OF APPLIED PHYSICS, vol.111, no.2, 2012 (SCI-Expanded)
- XII. **The influence of the sintering temperature on the structural and the magnetic properties of doped manganites: $La_{0.95}Ag_{0.05}MnO_3$ and $La_{0.75}Ag_{0.25}MnO_3$**
Irmak A. E., Coskun A., Tasarkuyu E., Akturk S., Unlu G., Samancioglu Y., Sarikurkcu C., Kaynar B. M., Yucel A.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.322, no.8, pp.945-951, 2010 (SCI-Expanded)
- XIII. **Synthesis of $ZnFe_2O_4$ from metallic zinc and iron by wet-milling process**
Ozcan S., Kaynar B., Can M., Firat T.
MATERIALS SCIENCE AND ENGINEERING B-SOLID STATE MATERIALS FOR ADVANCED TECHNOLOGY, vol.121, no.3, pp.278-281, 2005 (SCI-Expanded)

Papers Published in Refereed Scientific Meetings

- I. **SYNTHESIS OF GRAPHENE FILM BY LOW PRESSURE CHEMICAL VAPOR DEPOSITION AND TRANSFER ON TO THE SILICON SUBSTRATE**
Kesik O. D., Uçar E. F., Kaynar M. B., Ceylan A., Özcan Ş.
TFD 35 International Physics Congress, Muğla, Turkey, 4 - 08 September 2019
- II. **SYNTHESIS AND CHARACTERIZATION OF SEMI-CONDUCTOR CuS THIN FILM**
Yıldırım A. R., Uçar E. F., Kaynar M. B., Özcan Ş., Ceylan A.
TFD 35 International Physics Congress, Muğla, Turkey, 4 - 08 September 2019
- III. **MAGNETIC POLYMER COMPOSITES FOR TECHNICAL AND BIOMEDICAL APPLICATIONS**
Pourghaffari M., Kaynar M. B., Ceylan A., Özcan Ş.
TFD 35 International Physics Congress, Muğla, Turkey, 4 - 08 September 2019

- IV. **HYDROGEN PRODUCTION BY REACTING WATER WITH MECHANICALLY MILLED WASTE COKE CAN**
 Özcan E. T., Kılıç T., Rızalar M., Kaynar M. B., Ceylan A., Özcan Ş.
 TFD 35 International Physics Congress, Muğla, Turkey, 4 - 08 September 2019
- V. **PREPARİNG La_{1-x}AxB₃ (A=Fe, Ba B=Fe, Mn) PEROVSKİTENANOPARTİCLES BY SOL- GEL FOR MAGNETOCALORİC ANDHYPERTHERMİA APPLİCATIONS**
 ÜNLÜ C. G., KAYNAR M. B., ŞİMŞEK T., TEKGÜL a.
 International Conference on Applications in Chemistry and Chemical Engineering (ICACCHE), Sarajevo, Bosnia And Herzegovina, 11 - 15 October 2017
- VI. **Effect of Substitution Cobalt Atom in MnB alloy on Curie Temperature and Saturation Magnetization**
 Piyan Ç., Şimşek T., Kaynar M. B., Özcan Ş.
 9th International Conference on Magnetic and Superconducting Materials, Antalya, Turkey, 30 April - 03 May 2015, pp.26-27
- VII. **High Porous Coating for Enhanced Water Condensation**
 KAYNAR M. B., SHAH I.
 5th International Conference on Multifunctional, Hybrid and Nanomaterials, 6 - 10 March 2017
- VIII. **Fabrication and Magnetic Properties of Mn_{100-x}B₄₅C_x Bulk Alloys**
 YAVUZ İ., KAYNAR M. B., ÜNSAL T., CEYLAN A., ÖZCAN Ş.
 32th Physics Congress Turkish Physics Society, 6 - 09 September 2016
- IX. **Synthesis and I V Characterisation of ZnO Nanorods**
 DİNÇER S., KAYNAR M. B., CEYLAN A., ÖZCAN Ş.
 32th Physics Congress Turkish Physics Society, 6 - 09 September 2016
- X. **ITO silver Nanocompoiste defroster coating for aircrafts**
 KAYNAR M. B., ÖZCAN Ş.
 32nd International Physics Congress of the Turkish Physical Society (TPS-32, 6 - 09 September 2016
- XI. **HYDROGEN STORAGE FOR THE RENEWABLE ENERGY SYSTEMS**
 Bayazit G., Yıldız B., KAYNAR M. B., ÖZCAN Ş.
 International Workshop on Special Topicson Polymeric Composites, İstanbul, Turkey, 24 February 2016, pp.20
- XII. **High surface area Coating for Water Condensation System**
 Kaynar M. B., S Ismat S.
 9th International Physics Conference of the Balkan Physical Union, İstanbul, Turkey, 24 - 27 August 2015
- XIII. **Synthesis of Mn_xCo_{1-x}Fe₂O₄ Nanoparticles By wet milling**
 Oruç E., Buğra Y., Dinçer S., Bayazit G., Yavuz I., Kaynar M. B., Ceylan A., Özcan Ş.
 9th International Physics Conference of the Balkan Physical Union, İstanbul, Turkey, 24 - 27 August 2015
- XIV. **Effect of Nichel Addition on Hydrogen Generation Rate of Water Spliting Reaction Induced by Wet milling Method**
 Oruç E., Buğra Y., Dinçer S., Bayazit G., Yavuz I., Kaynar M. B., Ceylan A., Özcan Ş.
 9th International Physics Conference of the Balkan Physical Union, İstanbul, Turkey, 24 - 27 August 2015
- XV. **Magnetic Properties of Neodymium and Gadolinium Doped Barium Ferrite Nanostructures**
 Kaynar M. B., Özcan Ş., S Ismat S.
 9th International Physics Conference of the Balkan Physical Union 2015, İstanbul, Turkey, 24 - 27 August 2015
- XVI. **Effect of Annealing Time on Structural and Magnetic Properties of Mn_{0.4}Co_{0.6}Fe₂O₄ Nanostructures synthesized by wet milling**
 Oruç E., Buğra Y., Dinçer S., Bayazit G., Yavuz I., Kaynar M. B., Ceylan A., Özcan Ş.
 9th International Physics Conference of the Balkan Physical Union, İstanbul, Turkey, 24 - 27 August 2015
- XVII. **Nd ve Gd doped barium ferrite nanostructure with high magnetic coersivity for microwave absorption enhancement**
 KAYNAR M. B., ÖZCAN Ş.
 9th International Conference on Magnetic and Superconducting Materials (MSM15), 30 April - 03 May 2015
- XVIII. **Magnetic properties of Fe doped ZnO nanoparticles synthesis by using wet milling methods**
 Özdemir C., Piyan Ç., Deveci M., Kaynar M. B., Özcan Ş.
 International Conference on Magnetic and Superconducting Materials, Antalya, Turkey, 30 April - 03 May 2015

- XIX. **Magnetic Properties of Fe doped ZnO nanoparticles Synthesis by using Wet Milling Method**
ceyda ö., piyan ç., mustafa d., KAYNAR M. B., ÖZCAN Ş.
9 th international Conference on Magnetic and Superconducting Materials, 30 April - 03 May 2015
- XX. **Nd and Gd doped barium ferrite nanostructures with high magnetic coercivity for microwave absorption enhancement**
Kaynar M. B., Özcan Ş.
International Conference on Magnetic and Superconducting Materials, Antalya, Turkey, 30 April - 03 May 2015
- XXI. **High Surface Area Nanoporous TiO₂ Coating for Effective Water Condensation**
KAYNAR M. B., Mcgarity M., Yassitepe E., Shah I.
APS March Meeting, Baltimore, United States Of America, 20 March 2013, pp.90
- XXII. **Microwave absorption properties of BaGdxFe_{12-x}O₁₉ nanoparticles synthesized by wet milling process**
KAYNAR M. B., ÖZCAN Ş., Shah I.
APS March Meeting, Baltimore, United States Of America, 20 March 2013, pp.90
- XXIII. **Fabrication of nanoporous TiO₂ filters using organic--inorganic nanocomposites**
Kaynar M. B., Delpercio R., Yassitepe E., Shah I., Özcan Ş.
APS March Meeting, Maryland, United States Of America, 18 - 22 March 2013, pp.90

Supported Projects

KAYNAR M. B., CEYLAN A., Project Supported by Higher Education Institutions, Hurda Metallerden LaNi₅ Tabanlı Hidrojen depolama Malzemelerinin Üretimi ve Hidrojen depolama Performanslarının Belirlenmesi, 2023 - Continues

KAYNAR M. B., BAYRAM C., Kılıçarslan B., GÖKCEN D., ÖZCAN Ş., Yakar E., Project Supported by Higher Education Institutions, Ferromanyetik Rezonans Yöntemi ile Yeni Nesil Yüksek Çözünürlüklü Hızlı Tanı ve Analiz Sistemi, 2022 - Continues

ÖZCAN Ş., KAYNAR M. B., ŞİMŞEK T., Project Supported by Higher Education Institutions, Manyetik Alanla Sürülebilir Temassız Nanojeneratör Üretimi ve Özelliklerinin Araştırılması (TÜBİTAK 119M066 Nolu Proje Ek Bütçe), 2022 - Continues

KAYNAR M. B., ÖZCAN Ş., Project Supported by Higher Education Institutions, Radar Kesit Alanı Düşürücü Hafifletilmiş Örtülerin Geliştirilmesi (Tübitak 120M999 ek bütçe), 2022 - 2024

BACIOĞLU A., HÖKELEK T., KAYNAR M. B., ŞİMŞEK T., Project Supported by Higher Education Institutions, Fiziksel Özellikler Ölçüm Sistemi Dış Ünite Değişimi, 2022 - 2023

Özcan Ş., Kaynar M. B., Şimşek T., TUBİTAK Project, Manyetik Alanla Sürülebilir Temassız Nano-Jeneratör Üretimi Ve Özelliklerinin Araştırılması, 2019 - 2023

ÖZCAN Ş., ŞİMŞEK T., KAYNAR M. B., CEYLAN A., Project Supported by Higher Education Institutions, FeB Nanoparçacıkların Üretilmesi Olası Kanser Tedavisi Uygulamalarının Araştırılması, 2019 - 2022

ÖZCAN Ş., CEYLAN A., ŞİMŞEK T., KAYNAR M. B., Project Supported by Higher Education Institutions, Magnetron Sputter Tekniği ile MnB İnce Filmlerinin Hazırlanması ve Özelliklerinin Araştırılması, 2018 - 2022

Ceylan A., Kaynar M. B., TUBİTAK Project, CZTS Tabanlı İnce Film Güneş Pillerinde MoS_x Oluşumuna Karşı Grafen Difüzyon Bariyeri Kullanımı, 2018 - 2021

KAYNAR M. B., ÖZCAN Ş., CEYLAN A., ŞİMŞEK T., Project Supported by Higher Education Institutions, Kobalt-Ferrit Tabanlı Kompozit Filmlerde Çinko Katkısının Ferromanyetik Rezonans (FMR) Frekanına Etkisi ve Olası Spintronik Uygulamalarının İrdelenmesi, 2018 - 2020

KAYNAR M. B., Project Supported by Higher Education Institutions, Ferrit Tabanlı İnce Filmlerde Manyetik Sönümlenme Özelliklerinin FMR yardımıyla belirlenmesi, 2017 - 2020

ŞİMŞEK T., ÖZCAN Ş., KAYNAR M. B., Project Supported by Higher Education Institutions, Islak Öğütme Tekniği ile Mangan Çinko Spinel Ferrit Nanoparçacıkların Üretilmesi, 2018 - 2019

Kaynar M. B., Ceylan A., Özcan Ş., TUBİTAK Project, Yüksek Verimli Atmosferik Su Toplama Sistemi, 2018 - 2019

KAYNAR M. B., Project Supported by Higher Education Institutions, Nanoporlu Su Filtrelerinin Geliştirilmesi, 2017 - 2017

KAYNAR M. B., Project Supported by Higher Education Institutions, Arttırılmış Su Yoğuşturma için yüksek porlu

kaplamalar, 2016 - 2017

KAYNAR M. B., Dinçer A. S., Project Supported by Higher Education Institutions, Sprey Kaplama Yöntemi ile Yüksek Verimli Su Yoğuşturma Yüzeylerinin Geliştirilmesi, 2015 - 2016

KAYNAR M. B., ÖZCAN Ş., Project Supported by Higher Education Institutions, Baryum-ferrit nanoyapılarda Mikrodalga Özelliklerinin Nd ve Gd katkılamayla Arttırılması, 2015 - 2015

Contractual Researches

Özcan Ş., Ceylan A., Kaynar M. B., Roketsan A.Ş., METAL HİDRÜR BAZLI HİDROJEN DEPOLAMA VE AKTİVİTASYON SİSTEMİ, 2019 - 2019

Peer Reviews in Scientific Publications

Dokuz Eylül Üniversitesi Fen ve Mühendislik Dergisi, National Scientific Refreed Journal, March 2018

Türk Fizik Dergisi, National Scientific Refreed Journal, December 2016

Scientific Project Refereeing

Project Supported by Higher Education Institutions, BAP Research Project, June 2016

Scientific Research / Working Group Memberships

Süperiletkenlik Ve Nanoteknoloji Grubu (Sntg), Hacettepe University, Turkey, www.sntg.hacettepe.edu.tr, 2005 - Continues

Mobility Activity

Bilateral Colloboration Agreement, Guest Researcher, Uppsala Universitet (Uppsala University), Sweden, 2017 - 2018

Research Scholarship Program, Research During Graduate Education, University of Delaware, United States Of America, 2010 - 2011

Metrics

Publication: 36

Citation (WoS): 119

Citation (Scopus): 159

H-Index (WoS): 4

H-Index (Scopus): 7

Congress and Symposium Activities

9th International Conference on Magnetic and Superconducting Materials, Invited Speaker, Antalya, Turkey, 2015

Scholarships

2214-A Yurt Dışı Doktora Sırası Araştırma Burs Programı (1 yıl), TÜBİTAK, 2010 - 2011

Awards

Kaynar M. B., Bigg Hamle İnovasyon yarışması 3. lük Ödülü, Hacettepe Üniversitesi Teknoloji Transfer Merkezi, July 2017

Entrepreneurship Activities

Limited, SNTG Enerji Sistemleri Ltd. Şti., 10 January 2018, Co-Founder

Non Academic Experience

Company, SNTG Enerji Sistemleri Ltd. Şti., SNTG Energy Systems, Kurucu Ortak
University, Uppsala Üniversitesi, KatıHal Fiziği Anabilim Dalı, Misafir Araştırmacı
University, Delaware Üniversitesi, Malzeme Bilimi ve Mühendisliği Bölümü, Misafir Araştırmacı