

## Assoc. Prof. CENGİZ OKAY

### Personal Information

**Email:** cokay@marmara.edu.tr

**Web:** <https://avesis.marmara.edu.tr/cokay>

**Address:** Marmara Üniversitesi- Göztepe Kampüsü, Fen-Edebiyat Fakültesi, Fizik Bölümü

### International Researcher IDs

ORCID: 0000-0001-9609-2912

Yoksis Researcher ID: 142578

### Education Information

Doctorate, Marmara University, Institute for Graduate Studies in Pure and Applied Sciences, Department of Physics, Turkey 1999 - 2004

Postgraduate, Marmara University, Institute for Graduate Studies in Pure and Applied Sciences, Department of Physics, Turkey 1992 - 1996

Undergraduate, Middle East Technical University, Faculty Of Engineering, Fizik Mühendisi, Turkey 1986 - 1991

### Dissertations

Doctorate, Granüler Magnetik Filmlerde Ferromagnetik Rezonans (FMR) İncelemeleri, Marmara University, Institute for Graduate Studies in Pure and Applied Sciences, Department of Physics, 2004

Postgraduate, Atmosferik Kirletici Gaz ve Parçacıkların Ölçüm ve Analizi, Marmara University, Institute for Graduate Studies in Pure and Applied Sciences, Department of Physics, 1996

### Research Areas

Physics, Magnetic Properties and Materials

### Academic Titles / Tasks

Associate Professor, Marmara University, Faculty Of Sciences, Department Of Physics, 2024 - Continues

Assistant Professor, Marmara University, Faculty Of Arts And Sciences, Physics, 2018 - 2024

Assistant Professor, Marmara University, Faculty of Arts and Sciences, Physics, 2011 - 2018

Lecturer PhD, Marmara University, Faculty of Arts and Sciences, Physics, 2004 - 2011

Research Assistant, Marmara University, Faculty of Arts and Sciences, Physics, 2001 - 2004

Research Assistant, Marmara University, Ataturk Faculty of Education, Mathematics and Science Education, 1992 - 2001

### Courses

Titreşim ve Dalgalar, Undergraduate, 2024 - 2025

Maddenin Yapısı ve Özellikleri, Undergraduate, 2021 - 2022

Classical Mechanics, Undergraduate, 2022 - 2023

fizik2, Undergraduate, 2019 - 2020  
Elektrik 2, Undergraduate, 2019 - 2020  
Fizik2, Undergraduate, 2019 - 2020  
Mekanik 2, Undergraduate, 2019 - 2020  
Fizik-1, Undergraduate, 2019 - 2020  
Mekanik-1, Undergraduate, 2019 - 2020  
Fizik-2, Undergraduate, 2018 - 2019  
Fiziğe Giriş 2, Undergraduate, 2018 - 2019  
Elektrik 1, Undergraduate, 2019 - 2020  
Mekanik-2, Undergraduate, 2018 - 2019  
Fizik-1, Undergraduate, 2019 - 2020  
fizik2, Undergraduate, 2017 - 2018  
Fizik-1, Undergraduate, 2018 - 2019  
Fizik2, Undergraduate, 2017 - 2018  
Physics-2, Undergraduate, 2017 - 2018  
MODERN OPTİK, Undergraduate, 2017 - 2018  
Fiziğe Giriş 1, Undergraduate, 2018 - 2019  
FİZİK2, Undergraduate, 2016 - 2017  
FİZİK2, Undergraduate, 2016 - 2017  
Fizik1, Undergraduate, 2017 - 2018  
Physics-1, Undergraduate, 2017 - 2018  
Optik ve Dalgalar, Undergraduate, 2017 - 2018  
OPTİK, Undergraduate, 2016 - 2017  
FİZİK1, Undergraduate, 2016 - 2017  
FİZİK1, Undergraduate, 2016 - 2017  
FİZİK2, Undergraduate, 2015 - 2016  
FİZİK1, Undergraduate, 2015 - 2016

## Advising Theses

Okay C., DÜNYA'NIN MANYETİK ALANINDA NÜKLEER MANYETİK REZONANS (EF-NMR) SPEKTROMETRESİ ÖLÇÜM VERİLERİNİN SİNYAL İŞLEME VE MAKİNE ÖĞRENME TEKNİKLERİ KULLANILARAK ANALİZİ İLE MADDE TAYİNİ VE TESPİTİ, Postgraduate, M.Şimşek(Student), 2024

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

- I. **Comparative analysis of vegetable oils by <sup>1</sup>H NMR in low and high magnetic fields**  
Kupriyanova G., Smirnov M., Mershiev I., Maraşlı A., OKAY C., Mozhukhin G., Rameev B.  
Journal of Food Composition and Analysis, vol.126, 2024 (SCI-Expanded)
- II. **Classification of Edible Oils by using Time Domain NMR (TD-NMR) Technique and Microwave (MW) Dielectric Spectroscopy**  
OKAY C.  
Food Analytical Methods, vol.16, no.9-10, pp.1529-1536, 2023 (SCI-Expanded)
- III. **Comparison of homemade TD-NMR device and commercial devices for detection of oil adulteration**  
Maraşlı A., OKAY C., Karataş Ö., Mozhukhin G., Rameev B.  
European Physical Journal Plus, vol.138, no.5, 2023 (SCI-Expanded)
- IV. **Structural and magnetic studies of TiO<sub>2</sub> rutile implanted with vanadium ions**  
Vakhitov I., Shemukhin a., Gumarov a., Lyadov N. M., Nuzhdin V., Faizrakhmanov I., OKAY C., Rameev B. Z., Tagirov L., Khaibullin R.

MATERIALS RESEARCH EXPRESS, vol.6, no.11, 2019 (SCI-Expanded)

- V. **Thermoelectric properties and EPR analysis of Fe doped Cu<sub>12</sub>Sb<sub>4</sub>S<sub>13</sub>**  
Guler A., Ballikaya S., Boyraz C., Okay C., Shulgin D., Rameev B.  
JOURNAL OF SOLID STATE CHEMISTRY, vol.269, pp.547-552, 2019 (SCI-Expanded)
- VI. **Bond length (Ti-O) dependence of nano ATO(3)-based (A = Pb, Ba, Sr) perovskite structures: Optical investigation in IR range**  
Ghasemifard M., Ghamari M., OKAY C.  
MODERN PHYSICS LETTERS B, vol.32, no.1, 2018 (SCI-Expanded)
- VII. **Magnetic Resonance Study of Fe-Implanted TiO<sub>2</sub> Rutile**  
Okay C., Vakhitov I. R., Valeev V. F., Khaibullin R. I., Rameev B.  
APPLIED MAGNETIC RESONANCE, vol.48, no.4, pp.347-360, 2017 (SCI-Expanded)
- VIII. **Optical and magnetic properties of Ni-implanted and post-annealed ZnO thin films**  
Okay C., Rameev B. Z., Guler S., Khaibullin R. I., Khakimova R. R., Osin Y. N., Akdogan N., Gumarov A. I., Nefedov A., Zabel H., et al.  
APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.104, no.2, pp.667-675, 2011 (SCI-Expanded)
- IX. **Ferromagnetic resonance study of iron implanted PET foils**  
Okay C., Rameev B., Khaibullin R., Okutan M., Yildiz F., Popok V., Aktas B.  
PHYSICA STATUS SOLIDI A-APPLICATIONS AND MATERIALS SCIENCE, vol.203, no.7, pp.1525-1532, 2006 (SCI-Expanded)
- X. **Ferromagnetic resonance investigations of cobalt-implanted polyimides**  
Rameev B., Okay C., Yildiz F., Khaibullin R., Popok V., Aktas B.  
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.278, pp.164-171, 2004 (SCI-Expanded)
- XI. **Ion synthesis and FMR studies of iron and cobalt nanoparticles in polyimides**  
Rameev B., Yildiz F., Aktas B., Okay C., Khaibullin R., Zheglov E., Pivin J., Tagirov L.  
MICROELECTRONIC ENGINEERING, vol.69, no.2-4, pp.330-335, 2003 (SCI-Expanded)
- XII. **Ion Synthesis and FMR Studies of Iron and Cobalt Nanoparticles in Polyimides**  
OKAY C., RAMÍ B., Bulat r., YILDIZ F., AKTAŞ B., Khaibullin R., J p., Lenar T.  
Microelectronic Engineering, vol.69, pp.330-335, 2003 (SCI-Expanded)
- XIII. **Ion synthesis of iron granular films in polyimide**  
Khaibullin R., Popok V., Bazarov V., Zheglov E., Rameev B., Okay C., Tagirov L., Aktas B.  
NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS, vol.191, pp.810-814, 2002 (SCI-Expanded)
- XIV. **Composition of wet deposition in Kaynarca, Turkey**  
Okay C., Akkoyunlu B. O., Tayanc M.  
ENVIRONMENTAL POLLUTION, vol.118, no.3, pp.401-410, 2002 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Investigation of Dielectric Constants of Alcohol-Water Mixtures by Microwave (MW) Spectroscopy Technique**  
okay c.  
Afyon Kocatepe Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, vol.24, no.2, pp.255-259, 2024 (Peer-Reviewed Journal)
- II. **Investigation of Relaxation Times of Alcohol-Water Mixtures by Time Domain NMR Technique**  
OKAY C.  
Afyon Kocatepe Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, vol.23, pp.300-305, 2023 (Peer-Reviewed Journal)
- III. **Fe ve As Elementleri ile Katkılı Tetrahedritlerin Karakterizasyonu ve Fiziksel Özellikleri**  
OKAY C., BOYRAZ C., SHULGIN D. A., MOZZHUKHIN G., RAMÍ B.  
Süleyman Demirel Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.22, pp.1016, 2018 (Peer-Reviewed Journal)

#### IV. Tailoring magnetic anisotropy of Cobalt-Gold thin films

Okay C., Aksu P., Değer C., Yıldız F.

Turkish Journal of Physics, vol.42, pp.335-341, 2018 (Scopus)

### Books & Book Chapters

#### I. Ortaöğretim FİZİK 9 Sınıf

DURU M. K., TURGUT H., DUMLUDAĞ F., OKAY C., YILDIRIM U., MERCAN F. Ç., KARAMUSTAFAOĞLU O., DEĞİRMENÇİ S., SAKA Y., GARİP B.

MEB DEVLET KİTAPLARI, Ankara, 2014

#### II. Ion beam Synthesis of Magnetic Nanoparticles in Polymers,

khaibullin R., RAMİ B., OKAY C., Zheglov E., Zhikharev V., Tagirov L., AKTAŞ B.

in: Nanostructured Magnetic Materials and Their applications:Nato Science Series II, Mathematics, Physics and Chemistry, B.Aktaş, L. Tagirov, F. Mikailov, Editor, Kluwer Academic Publisher, Springer ScienceBusiness Media, pp.33-54, 2004

### Refereed Congress / Symposium Publications in Proceedings

#### I. Magnetic anisotropy in rutile (TiO<sub>2</sub>) heavily implanted with cobalt ions: FMR, VSM and TEM studies

KARATAŞ Ö., OKAY C., özkal B., KAZAN S., RAMEEV B., Cherkashin N., Begishev E., khaibullin R.

Magnetic Resonance-Current State and Future Perspectives (EPR 80), Kazan, Russia, 23 September 2024

#### II. DÜNYA'NIN MANYETİK ALANINDA ELDE EDİLEN NMR SPEKTRUM VERİSİNİN ÖN İŞLEME TEKNİKLERİ VE MAKİNE ÖĞRENMESİ KULLANILARAK KİMYASAL MADDE TİPİ TESPİTİ

Okay C., Şimşek M.

2. BİLSEL INTERNATIONAL KORYKOS SCIENTIFIC RESEARCHES AND INNOVATION CONGRESS, , Mersin, Turkey, 10 - 11 May 2024, pp.527-528

#### III. NQR Detection of Ammonium Nitrate in Partially Shielded Volumes

Mozzhukhin G., Kupriyanov P., Dogan E., Marasli A., Colak B., OKAY C., Maksutoglu M., Kazan S., Rameev B.

2024 Photonics and Electromagnetics Research Symposium, PIERS 2024, Chengdu, China, 21 - 25 April 2024

#### IV. Detection of Chemical substance Type from NMR Spectrum Data in the Earth's Magnetic Field Using Machine Learning Techniques

Şimşek M., OKAY C.

6. International Antalya Scientific Research and Innovative Studies Congress, Antalya, Turkey, 2 - 04 December 2023, pp.952

#### V. Macnine Learning of NMR Spectra in the Earth's Magnetic Field Substance Detection with Learning-Based Signal Processing

Şimşek M., KUPRIYANOV P., OKAY C.

5th International Blacksea Modern Scientific Research Congress, Rize-Türkiye, Rize, Turkey, 8 November - 10 December 2023, pp.832-833

#### VI. Time Domain Nuclear Magnetic Resonance Investigations of Benign and Threat Liquids

MARAŞLI A., İpek H., OKAY C., RAMİ B.

Magnetic Resonance and its Applications, Saint-Petersburg University, 20 International School-Conference, SPINUS,2023, Saint Peter, Guernsey And Alderney, 27 March 2023

#### VII. Microwave (MW) Dielectric Spectroscopy investigations of benign and threat liquids

OKAY C.

Magnetic Resonance and its Applications, 20 International School-Conference, (SPINUS,2023, Saint Peter, Guernsey And Alderney, 27 March 2023

#### VIII. The detection of NQR signals with use of the single-turn toroid

OKAY C., Mouzhikkin G., MARAŞLI A., ÇOLAK B., MAKSUTOĞLU M., KAZAN S., İpek H., RAMİ B., Kupriyanov P.

”, Magnetic Resonance and its Applications, Saint-Petersburg University, 20 International School-Conference, SPINUS,2023, Saint Peter, Guernsey And Alderney, 27 March 2023

- IX. **Detection of Nitrogen Substances by Nuclear Quadrupole Resonance in Large Volumes**  
Mozzhukhin G., Maksutoğlu M., Çolak B., Marasli A., Doğan E., Cinar K., Kupriyanov P., OKAY C., Khusnutdinov R., Kazan S., et al.  
2023 Photonics and Electromagnetics Research Symposium, PIERS 2023, Prague, Czech Republic, 3 - 06 July 2023, pp.912-916
- X. **Relaxation rates of alcohol-water mixtures in  $^1\text{H}$  NMR**  
OKAY C.  
International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT 2020), Tokat, Turkey, 22 October 2020
- XI. **FMR Analysis of Magnetic Anisotropies in Co-implanted  $\text{TiO}_2$  Rutile”**  
KARATAŞ Ö., OKAY C., KAZAN S., khaibullin R., ARDA L., RAMİ B.  
MAGNETIC RESONANCE: CURRENT STATE AND FUTURE PERSPECTIVES (EPR-75) (2019) 23-29 September 2019, Kazan, Russia, 23 - 29 September 2019
- XII. **Bimodal Relaxation Time Distribution of Ethanol Water Mixtures Revealed by Inverse Laplace Transform Technique**  
SINMAZ M. A., MARAŞLI A., OKAY C., RAMİ B.  
”, AMPERE Nuclear Magnetic Resonance Summer School, (AMPERE NMR 2019 23-29 June 2019, Zakopane-Poland., 23 - 29 June 2019
- XIII. **Non-Linear Concentration Behaviour of Alcohol-Water Mixtures Studied by TD NMR and MW Dielectric Spectroscopy**  
OKAY C., MARAŞLI A., ünver İ., Mozhukkin G., RAMİ B.  
AMPERE Nuclear Magnetic Resonance Summer School, (AMPERE NMR 2019), 23 June 2019
- XIV.  **$^1\text{H}$  NMR relaxation times of alcohol-water mixtures**  
OKAY C., MARAŞLI A., Mozhukkin G., RAMİ B.  
Magnetic Resonance and its Applications, Saint-Petersburg University, 16 International School-Conference, SPINUS,2019, Saint Peter, Guernsey And Alderney, 31 March - 05 April 2019, pp.103-105
- XV. **Textured growth of magnetic nanoparticles in implanted  $\text{TiO}_2$  and  $\text{ZnO}$  single crystals as revealed by FMR**  
KARATAŞ Ö., GÜLER KILIÇ S., OKAY C., KAZAN S., khaibullin R., RAMİ B.  
Magnetic Resonance and its Applications, Saint-Petersburg University, 16 International School-Conference, (SPINUS-2019, Saint Peter, Guernsey And Alderney, 31 March - 05 April 2019, pp.181-183
- XVI. **MAGNETIC RESONANCE STUDIES OF  $\text{TiO}_2$  AND  $\text{ZnO}$  SINGLE CRYSTALS IMPLANTED WITH 3d IONS**  
RAMİ B., karatas o., ozkal b., OKAY C., KAZAN S., güler s., khaibullin R.  
Academician G.B. Abdullayev, Centenary International Conference and School Modern Trends in Condensed Matter, Physics, 24 - 26 September 2018
- XVII. **Magnetic resonance and VSM studies of Co implanted  $\text{TiO}_2$  single crystals**  
OKAY C., KAZAN S., GÜLER KILIÇ S., khaibullin R., ARDA L., RAMİ B.  
6th International Conference on Superconductivity and Magnetism (ICSM2018-Sözlü Sunum, Antalya-Turkey, 29 April - 04 May 2018
- XVIII. **Electric Field Dependent EPR Measurements of vacancy related substitutional  $\text{Fe}^{3+}$  defects in  $\text{SrTiO}_3$  single crystal**  
KAZAN S., yıldız K., karatas o., özkal b., Vafadar M., RAMİ B., OKAY C., ARDA L.  
6th International Conference on Superconductivity and Magnetism (ICSM2018 Antalya-Turkey, 29 April - 04 May 2018
- XIX. **Physical Properties of Fe doped  $\text{Cu}_{12}\text{Sb}_4\text{S}_{13}$**   
GÜLER A., BOYRAZ C., OKAY C., RAMİ B.  
1 st international Symposium on Multidisciplinary Studies and Innovative Technologies, 2 - 04 November 2017
- XX. **PHYSICAL PROPERTIES OF Fe DOPED  $\text{Cu}_{12}\text{Sb}_4\text{S}_{13}$**   
GÜLER A., BOYRAZ C., OKAY C., bulat r.

ISMSIT2017, 2 - 04 November 2017

- XXI. **Process, characterization and ESR properties of 3d transition ion doped-tetrahedrite compounds**  
BOYRAZ C., GÜLER A., OKAY C., shulgin d., MOZZHUKHIN G., RAMÍ B.  
Magnetism and Magnetic Materials, 9 - 10 October 2017
- XXII. **Process, characterization and ESR properties of 3d transition ion doped tetrahedrite compounds**  
GÜLER A., BOYRAZ C., rameev b., OKAY C.  
Magnetic Materials 2017, 9 - 10 October 2017
- XXIII. **EPR Studies of Tetrahedrite Doped by 3d Transition Ions**  
GÜLER A., OKAY C., BOYRAZ C., RAMAEEV B.  
NANOTR 12, Turkey, 3 - 05 June 2016
- XXIV. **EPR Studies of 3d transition ions doped tetrahedrite 3 5 Haziran 2016**  
GÜLER A., OKAY C., Shulgin d., BOYRAZ C., şen a., RAMÍ B.  
12th International Nanoscience and Nanotechnology Conference (NanoTR-12), Elite Hotel Darıca Kocaeli/Turkey,,  
Turkey, 3 - 05 June 2016
- XXV. **FMR Studies of Magnetic Anisotropy in Iron Implanted Single Crystal Rutile Films 3 5 Haziran 2016**  
OKAY C., RAMÍ B., Valeev V., khaibullin r.  
12th International Nanoscience and Nanotechnology Conference (NanoTR-12), Elite Hotel Darıca Kocaeli/Turkey,  
Turkey, 3 - 05 June 2016
- XXVI. **Ferromagnetic Resonance Investigations of Fe implanted Rutiles 22 25 Haziran 2015**  
OKAY C., Bulat r., VF V., Khaibullin R.  
NanoTR-11,Orta Doğu Teknik Üniversitesi Kültür ve Kongre Merkezinde (Ankara), Ankara, Turkey, 22 - 25 June  
2015
- XXVII. **Structural Magnetic and Electrical Studies of Fe Implanted Polyimides**  
RAMÍ B., khaibullin R., Tagirov L., v P., V.V B., OKAY C.  
International Workshop on Polymer/Metal Nanocomposites, Faculty of Engineering Christian-Albrechts University  
Kiel, September 22-23, 2003 pp.23 Germany., 22 - 23 September 2003
- XXVIII. **Ion Synthesis and FMR Studies of Cobalt and Iron Nanoparticles Implanted in Polyimides**  
RAMÍ B., YILDIZ F., AKTAŞ B., OKAY C., khaibullin R., Zheglov E., Pivin J., Tagirov L.  
Nano and Giga Challenges in Microelectronics Research and Opportunities in Russia, Symposium and Summer  
School, September 10-13 (2002) pp.212, Moscow, Russia., 10 - 13 September 2003
- XXIX. **Ion Synthesis of Magnetic Nanoparticles in Polymers**  
khaibullin R., RAMÍ B., OKAY C., Zheglov E., Zhikharev V., Tagirov L.  
Advanced Research Workshop, Nanostructured Magnetic Materials and Their Applications, ARW NMMA-2003 July  
1-4, 2003, pp.12, İstanbul- Turkey., 1 - 04 June 2003
- XXX. **C Okay B Rameev F Yıldız R I Khaibullin and B Aktaş Ferromagnetic Resonance and Electron  
Microscopy Studies of Cobalt Granuler Films in Polyimides Synthesized by Ion Implantation  
Technique**  
OKAY C., RAMÍ B., YILDIZ F., khaibullin R.  
Turk Fizik Derneği 21.Fizik Kongresi Suleyman Demirel Üniversitesi, 11-14 Eylül 2002, sayfa 435, Isparta., 11 - 14  
September 2002
- XXXI. **Hava Kalitesi Ölçümlerinde Doğal Temizlenme Mekanizmalarının Önemi: 1993-94 Dönemi Pendik-  
Kaynarca Yöresi Ölçümleri**  
OKAY C., ORALTAY R. G.  
Yanma ve Hava Kirliliği Kontrolü III. Ulusal Sempozyumu, ODTÜ Çevre Mühendisliği Bölümü, Turkey, 11 - 13  
September 1995

## Supported Projects

Rameev B., Okay C., Kazan S., Çolak B., Maksutoğlu M., Project Supported by Defense Industry, Proje Adı : Araç içi  
Amonyum Nitrat (AN) Tespiti için NQR Sistemi geliştirilmesi, 2021 - 2024

Okay C., Project Supported by Higher Education Institutions, Kobalt Altın Katkılı Manyetik İnce Filmlerin Sıçratma Metoduyla Hazırlanması Yapısal ve Manyetik Özelliklerinin İncelenmesi, 2016 - 2018

Kösoğlu G., Yahşi U., ESMER K., OKAY C., Project Supported by Higher Education Institutions, İleri Modern Fizik Laboratuvarı, 2013 - 2017

Okay C., Project Supported by Higher Education Institutions, Kobalt ve demir iyonları katkı polimid PI malzemelerin yapısal ve manyetik özelliklerinin incelenmesi, 2005 - 2006

## **Metrics**

Publication: 52

Citation (WoS): 173

Citation (Scopus): 154

H-Index (WoS): 7

H-Index (Scopus): 6

## **Non Academic Experience**

University, Fenerbahçe Üniversitesi, Eczacılık Fakültesi

University, Fenerbahçe Üniversitesi, Eczacılık fakültesi

University, Acıbadem Üniversitesi, Moleküler Biyoloji ve Genetik

University, Acıbadem Üniversitesi, Moleküler Biyoloji ve Genetik