

## Prof. Musa Mutlu CAN

### Personal Information

**Office Phone:** [+90 212 440 0000](tel:+902124400000) Extension: 15498

**Email:** [musa.can@istanbul.edu.tr](mailto:musa.can@istanbul.edu.tr)

**Web:** <https://avesis.istanbul.edu.tr/musa.can>

**Address:** Fizik Bölümü, Fen Fakültesi, İstanbul Üniversitesi, Vezneciler, 34314, İstanbul

### International Researcher IDs

ORCID: 0000-0002-6593-3202

Publons / Web Of Science ResearcherID: J-7796-2013

ScopusID: 55031202900

Yoksis Researcher ID: 168814

### Biography

Dr. Musa Mutlu Can obtained his PhD. from Hacettepe University at 2011. The studies of Dr. Musa Mutlu Can were based on physical properties of advance materials such as magnetic nano particles, oxide semiconductors, biomaterials/sensors and fuel cells. During his researches, he worked at Hacettepe University (Turkey), University of Delaware (USA), Sabanci University (Turkey), SPIN-CNR (Italy). In 2018, he established the "Renewable Energy and Oxide Hybrid Systems Laboratory" in Physics Department at Istanbul University. He continues his studies at Istanbul University as a professor.

Dr. Can continues to work on magnetic nanoparticles, diluted magnetic semiconductors, micro / nano-sized electrochemical sensors and electrochemical fuel cells. Currently;

He has academic projects on the use of magnetic nanoparticles in the treatment of hyperthermia, hydrogen chain technologies, micro-sized electrochemical sensors and electrochemical photocatalytic fuel cells.

For attached list of publications for review. (Please refer - Scopus Author ID: 55031202900)

### Education Information

Doctorate, Hacettepe University, Fizik Mühendisliği, Turkey 2005 - 2011

Postgraduate, Hacettepe University, Fizik Mühendisliği, Turkey 2002 - 2005

Undergraduate, Hacettepe University, Fizik Mühendisliği, Turkey 1996 - 2002

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, Synthesis and physical properties of Co doped ZnO diluted magnetic thin films, Hacettepe University, Fizik Mühendisliği, Fizik, 2011

Postgraduate, Investigation of physical properties of magnetic nanoparticles, Hacettepe University, Fizik Mühendisliği, Fizik, 2002

## Research Areas

Physics, Condensed Matter 1: Structural, Mechanical and Thermal Properties, Surfaces, Interfaces, Thin Films and Nanosystems, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Natural Sciences

## Academic Titles / Tasks

Professor, Istanbul University, Faculty of Science, Department of Physics, 2020 - Continues  
Associate Professor, Istanbul University, Faculty of Science, Department of Physics, 2014 - 2020  
Research Assistant PhD, Università degli studi di Napoli Federico II, CNR, SPIN, 2013 - 2014  
Research Assistant PhD, Sabanci University, Fizik, 2011 - 2013  
Research Assistant, Hacettepe University, Fizik Mühendisliği, Fizik, 2002 - 2011  
Research Assistant, University of Delaware, Mühendislik, Malzeme Bilimi Ve Mühendisliği Bölümü, 2009 - 2010

## Courses

GENEL FİZİK, Undergraduate, 2018 - 2019  
İLERİ KUANTUM MEKANİĞİ I, Postgraduate, 2018 - 2019  
Analiz I, Undergraduate, 2017 - 2018  
DÜZ VE KISMİ TÜREVLİ DİFERANSİYEL DENKLEMLER, Undergraduate, 2017 - 2018  
Analizi III, Undergraduate, 2017 - 2018  
Matematik II, Undergraduate, 2016 - 2017  
Genel Fizik II, Undergraduate, 2016 - 2017  
Genel Fizik I, Undergraduate, 2016 - 2017  
Malzeme Bilimi, Undergraduate, 2014 - 2015

## Jury Memberships

Post Graduate, Yüksek Lisans Tez Savunma Jürisi, İstanbul Teknik Üniversitesi, June, 2016  
Doctorate, Doktora Tez Savunma Jürisi, Sabancı Üniversitesi, February, 2016

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

- I. **Crystal orientation of epitaxial film deposited on silicon surface**  
Kaneko S., Tokumasu T., Yasui M., Kurouchi M., Shiojiri D., Yasuhara S., Sahoo S. K., CAN M. M., Yu R. S., Sardar K., et al.  
Scientific Reports, vol.14, no.1, 2024 (SCI-Expanded)
- II. **Electrical response of PVDF/BaTiO<sub>3</sub> nanocomposite flexible free-standing films**  
Jaffari G. H., Shawana H., Mumtaz F., CAN M. M.  
Bulletin of Materials Science, vol.46, no.4, 2023 (SCI-Expanded)
- III. **Synthesis and ultrafast humidity sensing performance of Sr doped ZnO nanostructured thin films: the effect of Sr concentration**  
ALGÜN G., AKÇAY N., Öztel H. O., CAN M. M.  
JOURNAL OF SOL-GEL SCIENCE AND TECHNOLOGY, vol.107, no.3, pp.640-658, 2023 (SCI-Expanded)

- IV. **Anticancer drug doxorubicin (DOX) loading performance of functionalized polyaniline (PANI) surface with active carbon**  
CAN M. M., Shawuti S., Kalindemirtas F. D., Erdemir G., Kuruca D. S., Kaneko S., Aktas Z., Oncul O.  
Journal of Materials Science, vol.58, no.11, pp.4726-4738, 2023 (SCI-Expanded)
- V. **Improvement of the catalytic activity of an Algerian clay by acid treatment under solvent and solvent-free conditions for 3,4-dihydropyrimidin-2(1H)-one synthesis**  
Bouchenka L., Bouremmad F., Belferdi F., Maane S., CAN M. M., Amayreh M., Gulgun M. A.  
SOUTH AFRICAN JOURNAL OF CHEMISTRY-SUID-AFRIKAANSE TYDSKRIF VIR CHEMIE, pp.179-186, 2023 (SCI-Expanded)
- VI. **Blue shift in optical emission spectra of ZnGa<sub>2</sub>O<sub>4</sub> by lattice deformation due to Eu atom amount in spinel lattice**  
Can M. M., Akbaba Y., Shawuti S., Kaneko S.  
APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.128, no.12, 2022 (SCI-Expanded)
- VII. **Carbon clusters on substrate surface for graphene growth-theoretical and experimental approach**  
Kaneko S., Tokumasu T., Yasui M., Kurouchi M., Tanaka S., Kato C., Yasuhara S., Endo T., Matsuda A., Yoshimoto M., et al.  
SCIENTIFIC REPORTS, vol.12, no.1, 2022 (SCI-Expanded)
- VIII. **Structural and electrical response of poly(vinylidene fluoride-co-chlorotrifluoroethylene) copolymer free- standing films**  
Jaffari G. H., Arooj H., Can M. M., Khan N. A.  
POLYMER INTERNATIONAL, vol.71, no.8, pp.1030-1038, 2022 (SCI-Expanded)
- IX. **Synthesis of Iron Gallate (FeGa<sub>2</sub>O<sub>4</sub>) Nanoparticles by Mechanochemical Method**  
Can M. M., Akbaba Y., Kaneko S.  
COATINGS, vol.12, no.4, 2022 (SCI-Expanded)
- X. **Effect of Ti Atoms on Neel Relaxation Mechanism at Magnetic Heating Performance of Iron Oxide Nanoparticles**  
Can M. M., Bairam C., Seda , Kuruca D. S., Kaneko S., Aktaş Z., Öncül M. O.  
COATINGS, vol.12, no.4, 2022 (SCI-Expanded)
- XI. **Synthesis and optical analyses of fluorine doped tin oxide (SnO<sub>2</sub>) nanoparticles**  
Karaman T., Sharwani A. U. R., Can M. M., Shawuti S., Kaneko S.  
European Physical Journal-Applied Physics, vol.95, no.20402, pp.1-6, 2021 (SCI-Expanded)
- XII. **Irreversible Multi-Band Effects and Lifshitz Transitions at the LaAlO<sub>3</sub>/SrTiO<sub>3</sub> Interface Under Field Effect**  
Pallecchi I., Lorenzini N., Safeen M. A., CAN M. M., Di Gennaro E., Granozio F. M., Marré D.  
ADVANCED ELECTRONIC MATERIALS, vol.7, no.3, 2021 (SCI-Expanded)
- XIII. **Optical and structural modification of boron-doped CoGa<sub>2</sub>O<sub>4</sub> particles**  
CAN M. M., Karaman T., Shawuti S.  
CERAMICS INTERNATIONAL, vol.46, no.9, 2020 (SCI-Expanded)
- XIV. **Complex Impedance Analyses of Li doped ZnO Electrolyte Materials**  
Shawuti S., Sherwani A. U. R., CAN M. M., Gulgun M. A.  
SCIENTIFIC REPORTS, vol.10, no.1, 2020 (SCI-Expanded)
- XV. **Constriction of a lattice constant in an epitaxial magnesium oxide film deposited on a silicon substrate**  
Kaneko S., Tokumasu T., Nakamaru Y., Kokubun C., Konda K., Yasui M., Kurouchi M., Can M., Shawuti S., Sudo R., et al.  
JAPANESE JOURNAL OF APPLIED PHYSICS, vol.58, 2019 (SCI-Expanded)
- XVI. **Influence of back gate voltage on electrical transport in Zn<sub>1-(y+x)</sub>(Al<sub>x</sub>,Eu<sub>y</sub>)O thin films**  
Algün G., Akcay N., Can M. M., Kaneko S.  
MATERIALS RESEARCH EXPRESS, vol.5, no.10, 2018 (SCI-Expanded)
- XVII. **Influence of grain boundary interface on ionic conduction of (Zn<sub>1-x</sub>,Co<sub>x</sub>)O**  
Shawuti S., Can M. M., GÜLGÜN M. A., Kaneko S., Endo T.

- COMPOSITES PART B-ENGINEERING, vol.147, pp.252-258, 2018 (SCI-Expanded)
- XVIII. **Europium dependent absorption properties of Zn<sub>1-(y+0.01)</sub>(Al-0.01, Eu (y) )O (y=0.00, 0.01, 0.03 and 0.05) thin films grown on the soda-lime glass substrates by spin coating**  
Akçay N., Algün G., Kilic N., Shawuti S., Can M. M.  
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.28, pp.4492-4497, 2017 (SCI-Expanded)
- XIX. **Experimentally tailoring s-d and p-d interactions in spin polarization via post deposition annealing conditions**  
Can M. M., Shawuti S., Firat T., Shah S. I.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.660, pp.423-432, 2016 (SCI-Expanded)
- XX. **Defect dependent polarized spin current in 1% Co doped ZnO thin films**  
Can M. M., Shah S. I., Firat T.  
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.377, pp.229-238, 2015 (SCI-Expanded)
- XXI. **Grain Size Dependent Comparison of ZnO and ZnGa<sub>2</sub>O<sub>4</sub> Semiconductors by Impedance Spectrometry**  
Shawuti S., Can M. M., Gulgun M. A., Firat T.  
ELECTROCHIMICA ACTA, vol.145, pp.132-138, 2014 (SCI-Expanded)
- XXII. **The formation of anomalous Hall effect depending on W atoms in ZnO thin films**  
Can M. M., Shah S. I., Firat T.  
APPLIED SURFACE SCIENCE, vol.303, pp.76-83, 2014 (SCI-Expanded)
- XXIII. **The magnetization in (Zn<sub>1-x</sub>Co<sub>x</sub>)Ga<sub>2</sub>O<sub>4</sub> (x=0.05, 0.10, and 0.20) diluted magnetic semiconductors depending on Co atoms in tetrahedral and octahedral sites**  
Can M. M.  
JOURNAL OF MATERIALS RESEARCH, vol.29, no.9, pp.1062-1068, 2014 (SCI-Expanded)
- XXIV. **Size dependent heating ability of CoFe<sub>2</sub>O<sub>4</sub> nanoparticles in AC magnetic field for magnetic nanofluid hyperthermia**  
Celik O., Can M. M., Firat T.  
JOURNAL OF NANOPARTICLE RESEARCH, vol.16, no.3, 2014 (SCI-Expanded)
- XXV. **The effects of postdeposition annealing conditions on structure and created defects in Zn<sub>0.90</sub>Co<sub>0.100</sub> thin films deposited on Si(100) substrate**  
Can M. M., Firat T., Shah S. I., Bakan F., Oral A.  
JOURNAL OF MATERIALS RESEARCH, vol.28, no.5, pp.708-715, 2013 (SCI-Expanded)
- XXVI. **Synthesis and characterization of ZnGa<sub>2</sub>O<sub>4</sub> particles prepared by solid state reaction**  
Can M. M., Jaffari G. H., Aksoy S., Shah S. I., Firat T.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.549, pp.303-307, 2013 (SCI-Expanded)
- XXVII. **A comparative study of nanosized iron oxide particles; magnetite (Fe<sub>3</sub>O<sub>4</sub>), maghemite (gamma-Fe<sub>2</sub>O<sub>3</sub>) and hematite (alpha-Fe<sub>2</sub>O<sub>3</sub>), using ferromagnetic resonance**  
Can M. M., Coskun M., Firat T.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.542, pp.241-247, 2012 (SCI-Expanded)
- XXVIII. **Magnetolectrical properties of W doped ZnO thin films**  
Can M. M., Firat T., Shah S. I.  
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.324, no.23, pp.4054-4060, 2012 (SCI-Expanded)
- XXIX. **Surface anisotropy change of CoFe<sub>2</sub>O<sub>4</sub> nanoparticles depending on thickness of coated SiO<sub>2</sub> shell**  
Coskun M., Can M. M., Coskun O. D., Korkmaz M., Firat T.  
JOURNAL OF NANOPARTICLE RESEARCH, vol.14, no.10, 2012 (SCI-Expanded)
- XXX. **Electrical and optical properties of point defects in ZnO thin films**  
Can M. M., Shah S. I., Doty M. F., Haughn C. R., Firat T.  
JOURNAL OF PHYSICS D-APPLIED PHYSICS, vol.45, no.19, 2012 (SCI-Expanded)
- XXXI. **Domain state-dependent magnetic formation of Fe<sub>3</sub>O<sub>4</sub> nanoparticles analyzed via magnetic resonance**  
Can M. M., Coskun M., Firat T.  
JOURNAL OF NANOPARTICLE RESEARCH, vol.13, no.10, pp.5497-5505, 2011 (SCI-Expanded)
- XXXII. **Interparticle interaction effects on magnetic behaviors of hematite (alpha-Fe<sub>2</sub>O<sub>3</sub>) nanoparticles**

- Can M. M., Firat T., O Ş.  
PHYSICA B-CONDENSED MATTER, vol.406, no.13, pp.2483-2487, 2011 (SCI-Expanded)
- XXXIII. **Dominancy of antiferromagnetism in Zn<sub>1-x</sub>Co<sub>x</sub>O diluted magnetic semiconductors**  
Can M. M., Firat T., O Ş.  
JOURNAL OF MATERIALS SCIENCE, vol.46, no.6, pp.1830-1838, 2011 (SCI-Expanded)
- XXXIV. **Single step synthesis of nanocrystalline ZnO via wet-milling**  
O Ş., Can M. M., C A.  
MATERIALS LETTERS, vol.64, no.22, pp.2447-2449, 2010 (SCI-Expanded)
- XXXV. **Effect of milling time on the synthesis of magnetite nanoparticles by wet milling**  
Can M. M., O Ş., Ceylan A., Firat T.  
MATERIALS SCIENCE AND ENGINEERING B-ADVANCED FUNCTIONAL SOLID-STATE MATERIALS, vol.172, no.1, pp.72-75, 2010 (SCI-Expanded)
- XXXVI. **Synthetic, structural and magnetic studies on chromium orthoborate**  
Oeztuerk O. F., Zuemreoglu-Karan B., Can M. M., O Ş.  
ZEITSCHRIFT FUR ANORGANISCHE UND ALLGEMEINE CHEMIE, vol.634, pp.1127-1132, 2008 (SCI-Expanded)
- XXXVII. **Synthesis of ZnFe<sub>2</sub>O<sub>4</sub> from metallic zinc and iron by wet-milling process**  
O S., Kaynar B., M. 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)

## Articles Published in Other Journals

- I. **Growing Zn<sub>0.90</sub>Co<sub>0.100</sub> Diluted Magnetic Semiconductors by RF Magnetron Sputtering**  
CAN M. M.  
MRS Proceedings, vol.1201, pp.29-31, 2010 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **Energy Stored in a Slab covered by Graphene Sheets**  
Can M. M.  
in: Carbon Related Materials, Satoru Kaneko, Masami Aono, Alina Pruna, Musa Can, Paolo Mele, Mehmet Etugrul, Tamio Endo, Editor, Springer Nature Singapore Pte Ltd., Singapore, pp.1-21, 2020

## Refereed Congress / Symposium Publications in Proceedings

- I. **Active Deep Energy Levels on Gas Sensing Performance of (Zn, Co)Ga<sub>2</sub>O<sub>4</sub> thin films**  
CAN M. M., Shawuti S., AKÇAY N., ALGÜN G.  
Science and Applications of Thin Films, Conference & Exhibition (SATF 2018), İzmir, Turkey, 17 - 21 September 2018, pp.59
- II. **The Hydrogen sensing ability of Oxide semiconductors**  
CAN M. M., Scawati S., Gülgün M. A., CERİT H., AROĞUZ A. Z.  
2nd International Hydrogen Technologies Congress, Adana, Turkey, 15 - 18 March 2017, pp.72
- III. **Understanding The Gas Sensing Ability of (Zn,Co)Ga<sub>2</sub>O<sub>4</sub> Thin Films Via Optical, Thermal Transport and DC Conductivity Measurements**  
CAN M. M., SHAWUTI S., AKÇAY N., ALGÜN G.  
2016 MRS spring Meeting&Exhibit, Phoenix, United States Of America, 28 March - 01 April 2016, pp.1-5
- IV. **Magnetic behaviour of iron nanoparticles passivated by oxidation**  
Can M. M., ÖZCAN Ş., Firat T.

## Supported Projects

- CAN M. M., TUBITAK Project, Gözenekli Yapıda Büyütülen P-Tipi Metal Galyum Oksit Yarıiletkenlerin Fotoelektro Kimyasal Yakıt Pili Performansının Geliştirilmesi, 2019 - Continues
- CAN M. M., AKBABA Y., Project Supported by Higher Education Institutions, Spinel Oksit Örgüdeki Noktasal Kusur Oluşumuna Bağlı Fotoelektrokatalitik Özelliklerindeki Değişimler, 2023 - 2024
- Can M. M., Kuruca D. S., Aktaş Z., Öncül M. O., TÜBİTAK International Bilateral Joint Cooperation Program Project, PVDF (VİNİLİDEN FLORÜR) BAZLI POLİMERLERİN SAĞLIK HİZMETİ CİHAZLARINDAN GIYİLEBİLİR SENSÖR UYGULAMALARINA UYARLANMASI, 2022 - 2024
- CAN M. M., Project Supported by Higher Education Institutions, Lityum Katkılı Oksit Yarıiletkenlerin Fotokatalitik Yakıt Pillerine Uygunluğu, 2020 - 2023
- CAN M. M., Project Supported by Higher Education Institutions, Foto Elektrokimyasal Ayrıştırma Yöntemiyle Hidrojen Üretiminde Spinel Oksit Yarıiletkenler, 2020 - 2023
- CAN M. M., Project Supported by Higher Education Institutions, Fotoelektrokimyasal Yakıt Hücrelerinin Geliştirilmesi, 2018 - 2020
- Can M. M., Algün G., Akçay N., TUBITAK Project, Katkı Atomlarının İyonik Durumlarına ve Konumlarına Bağlı Olarak Oksit Yarıiletken Heteroyapılarda Karbon Salınımı Düşük Yakıt Gazlarının Algılanması, Tutma ve Bırakma Kabiliyetinin Belirlenmesi, 2017 - 2020
- CAN M. M., CERİT H., SHAWUTİ S., AROĞUZ A. Z., Project Supported by Higher Education Institutions, Nadir Toprak Elementi Katkılı Gallate Tabanlı Oksit Yarıiletkenlerin Polimer Alttaş Üzerine İnce Film Halde Büyütülmesi ve Karakterizasyonu, 2017 - 2020
- CAN M. M., TUBITAK Project, 3 Boyutlu Hall Aygıtı Mikroskobu (3D-THAM) ile Magnetik Malzemelerin Yüzey Analizleri, 2011 - 2013

## Metrics

- Publication: 43  
Citation (WoS): 563  
Citation (Scopus): 615  
H-Index (WoS): 12  
H-Index (Scopus): 12

## Congress and Symposium Activities

- Musa Mutlu Can, Shalima Shawuti, Satoru Kaneko, Cleva Ow-Yang, Sanapa Lakshmi Reddy, Mehmet Ali Gülgün, Tamio Endo, Magnetization in Oxide Semiconductors: Dependency to Native Defects and Impurity Atoms, 2017 ICG Annual Meeting & 32nd Şişecam Glass Symposium, 22-25. Ekim, 2017, İstanbul, Turkey- sozlu, Attendee, Turkey, 2017
- Mustafa Coşkun, Senem Çitoğlu, Musa Mutlu Can, Dimercaptosuccinic acid (DMSA) coated cubic magnetite nanoparticles: Synthesis, characterization and their potential for hyperthermia, Bio-Medical Applications of Magnetic Nano-Particles, 11. Eylül - 12.Eylül.2017, Gebze Teknik Üniversitesi, Kocaeli, Türkiye- sozlu, Attendee, Agrigento, Turkey, 2017
- Musa M. Can, Shalima Shawuti, Oxide Based ((Zn,Co)O And (Zn,Co)Ga<sub>2</sub>O<sub>4</sub>) Wide Band Gap Semiconductor for Gas Sensing Technology, Turkish Physical Society 33rd International Physics Congress – TPS33, 6 -10. Eylül.2017, Bodrum, Türkiye - poster, Attendee, Turkey, 2017
- Mustafa Coşkun, Senem Çitoğlu, Musa Mutlu Can, Tezer Fırat, Magnetic Structure of Ferrite Nanoparticles and Usefulness of Ferrites in Hipertermia Applications, Bio-Medical Applications of Magnetic Nano-Particles, 11. Eylül - 12.Eylül.2017,

Gebze Teknik Üniversitesi, Kocaeli, Türkiye- sozlu, Attendee, Turkey, 2017

Musa M. Can, Shalima Shawuti, Ionic Conduction Performance of Oxide Semiconductors, Turkish Physical Society 33rd International Physics Congress – TPS33, 6 -10. Eylül.2017, Bodrum, Türkiye - sozlu, Attendee, Muğla, Turkey, 2017

S. Kaneko, T. Endo, K. Satoh, Y. Motoizumi, T. Rachi, M. Yasui, Y. Shimizu, S. Tanaka, C. Kato, Musa Can, S. Shawuti, A. Matsuda, M. Yoshimoto, Multi-graphene Growth on Paper Drawn by 10B Pencil using Laser Annealing, The 15th International Conference on Advanced Materials- IUMRS-ICAM 2017, 27. Ağustos-1. Eylül, 2017, Kyoto, Japonya - davetli konuşma, Attendee, Kyôto, Japan, 2017

Musa Mutlu Can, Shalima Shawuti, Satoru Kaneko, Mehmet Ali Gülgün, Tamio Endo, Oxide Based ((Zn,Co)O And (Zn,Co)Ga<sub>2</sub>O<sub>4</sub>) Wide Band Gap Semiconductor For Fuel Gas Sensing Technology And Gas Holding Ability For Fuel Cells, The 15th International Conference on Advanced Materials- IUMRS-ICAM 2017, 27. Ağustos-1. Eylül, 2017, Kyoto, Japonya - davetli konuşma, Attendee, Kyôto, Japan, 2017

Musa Mutlu Can, Shalima Shawuti, Tezer Fırat, S. Ismat Shah, S. Lakshmi Reddy, Satoru Kaneko, Paolo Mele, David Hui, Tamio Endo, Magnetic Formation in Oxide Thin Films Due to Ionic States of Intrinsic and Extrinsic Point Defects, The 25th Annual International Conference on Composites or Nano Engineering, ICCE-25, 16. Temmuz - 22. Temmuz.2017, Roma, Italy- poster, Attendee, Roma, Italy, 2017

Musa Mutlu Can, Shalima Shawuti, Mehmet Ali Gülgün, Ayşe Zehra Aroğuz, Harun Cerit, "Grain Boundaries Contribution on Ionic Conductivity of Oxide Semiconductors ", the Second International Hydrogen Technologies Congress (IHTEC-2017), 15-18. Mart.2017 (Sözlü Sunum), Attendee, Adana, Turkey, 2017

Understanding The Gas Sensing Ability of (Zn,Co)Ga<sub>2</sub>O<sub>4</sub> Thin Films Via Optical, Thermal Transport and DC Conductivity Measurements, Attendee, Arizona, United States Of America, 2016

Shalima Shawuti, Musa Mutlu Can, Mehmet Ali Gülgün, "Katı Hal Reaksiyonu ile Sentezlenen (x=0.01, 0.05 ve 0.10) Zn<sub>1-x</sub>CoxO Elektrolit Malzemelerin Yakıt Pili Olarak Kullanımı", 21. Ankara Yoğun Madde Fiziği, Ankara, Türkiye, 25. Aralık.2015, Attendee, Turkey, 2015

II. International Conference on Microwave and Photonics-ICMAP2015 / Graphen Growth: 10B Lead Pencil, Print Paper, and Femtosecond Laser, Attendee, Dhanbad, India, 2015

Mustafa Coşkun, Özer Çelik, Senem Kurtoğlu, Musa Mutlu Can, Tezer Fırat, "Ferrite Nanoparçacıkların Parçacık Büyüklüğü Bağımlı Manyetik Alana Karşı Tepkileri ve Hipertermia Uygulamalarına Uygunluğu", 21. Ankara Yoğun Madde Fiziği, Ankara, Türkiye, 25. Aralık.2015, Attendee, Ankara, Turkey, 2015

Shalima Shawuti, Musa Mutlu Can, M. A. Gulgun, 26th international conference on amorphous and nano crystalline semiconductors-ICANS26, "Suitability of oxide based semiconductor materials for low temperature solid oxide fuel cell as potential electrolyte", Aachen, Almanya, 13-18. September.2015. (Oral), Attendee, Aachen, Germany, 2015

Shalima Shawuti, Musa Mutlu Can, M. A. Gulgun, 22nd Electron Microscopy Conference, "Complex Impedance analysis in oxide semiconductor for fuel cell", Sabanci University, Istanbul, Turkey, 2-4. September.2015. (Poster), Attendee, Turkey, 2015

Musa Mutlu Can, 9th Balkan Physic Union, "Intrinsic Defect Dependent Magneto – Electrical Analyses Of ZnO And (Zn,W)O Thin Films ", Istanbul University, Istanbul, Türkiye, 24-27. August. 2015. (Oral), Attendee, Turkey, 2015

Musa Mutlu Can, Co doped (Zn<sub>1-x</sub>Cox)Ga<sub>2</sub>O<sub>4</sub> (x=0.05, 0.10 and 0.20) diluted magnetic semiconductors, Middle East Technical University, Nanotr 11, 22-25. June. 2015. (Oral), Attendee, Turkey, 2015

Musa Mutlu Can, Akif Safeen, Amit Khare, Emiliano Di Gennaro, U. Scotti di Uccio, F. Miletto Granozio, Gate-Voltage-Dependent Electrical Transport Properties of 2DEGs at Oxide Heterostructures, Materials Research Society Fall Meeting, Boston, USA, 30. November – 5. December, 2014. (Poster), Attendee, Massachusetts, United States Of America, 2014

Musa M. Can. T. Fırat, S. Ismat Shah, Ahmet Oral, "Magneto-electrical Analyses of ZnO Thin Films Depending on Cobalt Amount in Lattice", 24th International Conference on Amorphous and Nanocrystalline Semiconductors (ICANS 25), Toronto, ON, Canada, August 18-23, 2013 (Oral), Attendee, Toronto, Canada, 2013

Musa M. Can, T. Fırat, S. I. Shah, "Intrinsic Defect Dependent Electrical and Magnetic Properties of ZnO and (Zn,W)O Thin Film", 27th International Conference on Defects in Semiconductors 2013, Bologna, Italy, 21 – 26. July. 2013 (POSTER), Attendee, Bologna, Italy, 2013

Musa M. Can. T. Fırat, S. Ismat Shah, "The magnetic and electrical effects of W impurities in the ZnO thin films", 24th International Conference on Amorphous and Nanocrystalline Semiconductors (ICANS 24), Nara, Japan, August 21-26, 2011 (Oral), Attendee, Nara, Japan, 2011

Musa M. Can, T. Fırat, Ş. Özcan, "Structural, Optic and Magnetic Investigation of the Synthesized ZnO and Zn<sub>0.99</sub>Co<sub>0.01</sub>O

Semiconductors via Solid State Reaction”, 11th Joint MMM-Intermag Conference, Washington DC, USA, January 18-22, 2010 (Poster), Attendee, Washington, United States Of America, 2010

Musa M. Can, T. Fırat, Ş. Özcan, “Growing Zn<sub>0.90</sub>Co<sub>0.10</sub> Diluted Magnetic Semiconductors by r. f. Magnetron Sputtering”, 2009 MRS Fall Meeting, Boston, MA, USA, November 30 – December 5, 2009 (Poster), Attendee, Massachusetts, United States Of America, 2009

Musa M. Can, Ş. Özcan, A. Ceylan, T. Fırat, “Determination of Milling Parameters to Obtain Magnetite Nanoparticles from Iron Metal by Wet-Milling”, 2009 MRS Fall Meeting, Boston, MA, USA, November 30 – December 5, 2009 (Oral), Attendee, Massachusetts, United States Of America, 2009

Musa M. Can, T. Ünsal, S. Özcan, T. Fırat, “Structural and Magnetic Properties of Mechanochemically Synthesized Co:ZnO Nanoparticles”, Condensed Matter Physics Conference of Balkan Countries - CMPC BC2008, Mugla University, Mugla - Turkey, 26 – 28 May 2008 (Poster), Attendee, --Seçiniz--, Turkey, 2008

Musa M. Can, Ş. Özcan, T. Fırat, “Fabrication and Magnetic Properties of  $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> (Hematite) Nanoparticles”, XIXth International School on Physics and Chemistry of Condensed Matter-Physics and Chemistry of Magnetic Materials - The Basics, Bialowieza, Poland, July 7-14, 2007 (Poster), Attendee, Bialystok, Poland, 2007

Ö. F. Öztürk, B. Zümreöglü-Karan, Ş. Özcan, B. Kaynar, Musa M. Can, T. Fırat, “Effect of Preparation Conditions (Precursor Type and Methodology) on the Homogeneity and Magnetic Properties of Chromium Borate Materials”, International workshop on nanostructured materials-NANOMAT2006, Antalya-Turkey, July 21-23, 2006. (Poster), Attendee, Antalya, Turkey, 2006

Musa M. Can, M. Coşkun, Ş. Özcan, T. Fırat, M. Korkmaz, “Magnetic Difference of nanosized magnetite (Fe<sub>3</sub>O<sub>4</sub>), maghemite ( $\gamma$ -Fe<sub>2</sub>O<sub>3</sub>) and hematite ( $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>) particles determined by Magnetic Resonance”, International workshop on nanostructured materials-NANOMAT2006, Antalya-Turkey, July 21-23, 2006 (Oral), Attendee, Turkey, 2006

Musa M. Can, S. Ozcan, T. Fırat, “The Magnetic Behaviour of The Iron Nanoparticles Passivated by Oxygen”, International Conference on Nanoscale Magnetism (ICNM-2005), Gebze-Turkey, July 3-7, 2005 (Oral), Attendee, Kocaeli, Turkey, 2005

## Awards

CAN M. M., Ferrite Nanoparçacıkların Parçacık Büyüklüğü Bağımlı Manyetik Alana Karşı Tepkileri ve Hipertermia Uygulamalarına Uygunluğu, 21. Yoğun Madde Fiziği - Ankara Toplantısı (Poster Birincilik Ödülü), December 2015

## Non Academic Experience

CNR-SPIN, İtalya

Sabancı Üniversitesi

Hacettepe Üniversitesi

University of Delaware