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1. Education

2009 Doctoral Degree (Ph.D.)
Eindhoven University of Technology, Department of Applied Physics
Eindhoven, The Netherlands

2004 Master Degree (M.Sc.)
University of Antwerp, Department of Physics, Antwerp, Belgium

2000 Undergraduate Degree (B.Sc.)
Hacettepe University, Department of Physics Engineering, Ankara, Turkey

2. Work Experience

2022 – Professor
Izmir Institute of Technology, Department of Physics, Izmir, Turkey

2016 – 2022 Associate Professor
Izmir Institute of Technology, Department of Physics, Izmir, Turkey

2012 – 2016 Assistant Professor
Izmir Institute of Technology, Department of Physics, Izmir, Turkey

2009 – 2012 Postdoctoral Researcher
Sabancı University, Nanotechnology Research and Application Center,
Istanbul, Turkey

2005 – 2009 Research Assistant
Eindhoven University of Technology, Department of Applied Physics
Eindhoven, The Netherlands

3. Administrative Duties

2021 – Board Member

Nuclear Magnetic Resonance Research Center, Izmir Institute of Technology

2020 – Vice Chairperson

Physics Department, Izmir Institute of Technology

2020 – Board Member

School of Foreign Languages, Izmir Institute of Technology

2019 – Board Member

Integrated Research Centers (IRC), Izmir Institute of Technology

2017 – Director

Center for Materials Research (CMR), Izmir Institute of Technology

2017 – Academic Board Member

Department of Photonics, Izmir Institute of Technology

2015 – 2017 Board Member

Center for Materials Research (CMR), Izmir Institute of Technology

2014 – 2021 Academic Board Member

Department of Materials Science and Engineering, Izmir Institute of Technology

4. Academic Activities

4.1. Research Fields

Experimental Condensed Matter Physics

Nanoscience and Nanotechnology

Device Physics

Graphene and Other 2-D Materials

Scanning Probe Microscopy

4.2. Teaching

General Physics I-II, Condensed Matter Physics I-II, Classical Mechanics I-II, Physics of Semiconductors, Solid-state Device Technology, Radiation Photodetectors, Introduction to Nanoscience and Technology, Applications of Nanotechnology

4.3. Thesis Advisory

Doctoral Thesis

- 1-** Performance Enhancement of Graphene/Silicon based Near-infrared Schottky Photodiodes, Mehmet FİDAN
- 2-** Fabrication and Characterization of SOI based Photodetectors with Graphene Electrode, Alper YANILMAZ
- 3-** Developing Graphene-organic Hybrid Electrodes for Silicon based Schottky Devices, Hasan AYDIN (Completed, 2018)
- 4-** Functionalized CVD Grown Graphene for Gas Sensing Applications, Nesli YAĞMURCUKARDEŞ (Completed, 2017)

Master Thesis

- 1-** The Impact of Adsorbates on the Optoelectronic Properties of Graphene/Silicon Based Schottky Barrier Photodiodes, Nusret ŞAHAN (Completed, 2020)
- 2-** Fabrication and Characterization of Graphene/Silicon Based Schottky Photodiode, Gülçin DÖNMEZ (Completed, 2019)
- 3-** Nanotribological Properties of Epitaxial Graphene Grown on Silicon Carbide Semiconductor, Yasemin KESKİN (Completed, 2018)
- 4-** The Effect of Atmospheric Gases on the Electrical Stability of Graphene, Sırrı Batuhan KALKAN (Completed, 2018)
- 5-** Field Emission Electron Source Based on Silicon Carbide Nanopillars, Damla YEŞİLPINAR (Completed, 2017)
- 6-** Self-organized Network of Silicon Oxide on Epitaxial Graphene, Dilce ÖZKENDİR (Completed, 2017)
- 7-** Synthesis and Nitrogen Doping of Graphene by Chemical Vapor Deposition Alper YANILMAZ (Completed, 2017)
- 8-** Developing Epitaxial Graphene Electrodes for Silicon Carbide Based Optoelectronic Devices, Erdi KUŞDEMİR (Completed, 2015)
- 9-** Growth of Epitaxial Graphene for Two-dimensional Electronics, Alnazir İBRAHİM (Completed, 2015)

4.4. Research Projects

- 1- Investigation of Nanotribological Properties of Twisted Bilayer Graphene Structures (Researcher, TÜBİTAK 1001, Continue)
- 2- Production of Graphene Micro-membranes and Investigating Their Usability for Micro-bio-particle Detection (Researcher, TÜBİTAK 1001, 2020)
- 3- Advanced Functional Materials for Critical Technologies Center of Excellence: Advanced and Innovative Technological Sensors (Project Manager, TÜBİTAK 1004, 2019)
- 4- Silicon Carbide Nanowire/Carbon Nanotube Heterostructure Field Emission Electron Source (Project Manager, TÜBİTAK 1001, 2018)
- 5- IZTECH R&D Strategy Document Nanotechnology Researches (Researcher, TÜBİTAK 1000, 2017)
- 6- Epitaxial Graphene Nanoribbon Network (Project Manager, TÜBİTAK 3501, 2016)
- 7- Production of Silicene for Two-Dimensional Electronic Applications (Project Manager, TÜBİTAK 1002, 2015)
- 8- Improving the Charge Mobility in SiC-based Epitaxial Graphene (Bursary, TÜBİTAK 2218, 2012)

4.5. Scientific and Organizing Committees

- 2022** Organizing Committee Member
Condensed Matter Physics Izmir Meeting (YMF)
- 2022** Scientific Committee Member
Nanoscience & Nanotechnology Conference (NanoTR-16)
- 2021** Organizing Committee Member
National Electron Microscopy Congress (EMK 2021)
- 2020** Organizing Committee Member
Condensed Matter Physics Istanbul-Ankara-Izmir Meeting (YMF)
- 2019** Organizing Committee Member
Condensed Matter Physics Izmir Meeting (YMF)
- 2019** Scientific Committee Member
Nanoscience & Nanotechnology Conference (NanoTR-15)
- 2018** Organizing Committee Chair
Nanoscience & Nanotechnology Conference (NanoTR-14)

2018 Organizing Committee Member
Condensed Matter Physics Izmir Meeting (YMF)

2018 Scientific and Organizing Committee Member
Science and Applications of Thin Films, SATF-2018

2017 Organizing Committee Member
Condensed Matter Physics Izmir Meeting (YMF)

2016 Scientific and Organizing Committee Member
Graphene and Related Materials Workshop (GRM-2016)

2016 Organizing Committee Member
Condensed Matter Physics Izmir Meeting (YMF)

2015 Scientific Committee Member
International Symposium on Porous and Powder Materials, PPM-2015

2015 Organizing Committee Member
Condensed Matter Physics Izmir Meeting (YMF)

2014 Organizing Committee Chair
Graphene and Related Materials Workshop (GRM-2014)

2014 Organizing Committee Member
Condensed Matter Physics Izmir Meeting (YMF)

2013 Organizing Committee Member
Condensed Matter Physics Izmir Meeting (YMF)

4.6. Scientific Journal Refereeing

Applied Physics Letters (AIP)

Journal of Physics: Condensed Matter (IOP)

Nanotechnology (IOP)

2D Materials (IOP)

Materials Science & Engineering B (Elsevier)

Journal of Molecular Structure (Elsevier)

4.7. Scientific Publications

<https://qdl.iyte.edu.tr/yayinlar/>