

Prof. Hilmi Ünlü

Personal Information

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International Researcher IDs

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ScopusID: 7004520129

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Biography

Prof. Dr. Hilmi Ünlü received his PhD degree in Electrical Engineering from University of Minnesota at Twin Cities, USA in 1986. After working at Coordinated Science Laboratory of the University of Illinois at Urbana-Champaign, U.S.A. as Post Doctoral Research Associate (1986-1989) he joined the University of Miami, Florida, U.S.A. as Assistant Prof. of Electrical & Computer Engineering (1990-1992). He then started working at İstanbul Technical University as Assistant Professor of Physics Engineering, where he has been Full Professor since 2005.

Prof. Dr. Hilmi Ünlü is an expert on nanoscience and nanotechnology of semiconductor materials and devices. He has co-authored 5 international scientific and technical books, authored/co-authored 3 book chapters and edited/translated 4 internationally well recognized physics books from English to Turkish, which was awarded by the Turkish Academy of Science (TÜBA) as the best translated book in Natural Sciences. He has published 35 scientific papers in refereed international journals indexed by Science Citation Index (SCI), 20 scientific works in Conference Proceedings and 30 abstracts in Book of Abstracts in international scientific conferences.

Education Information

Doctorate, University of Minnesota-Twin Cities, Elektrik Mühendisliği, United States Of America 1982 - 1986

Postgraduate, University of Minnesota-Twin Cities, Elektrik Mühendisliği, United States Of America 1982 - 1984

Undergraduate, Istanbul University, Faculty Of Science, Department Of Physics, Turkey 1974 - 1978

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Theory of Heterojunctions, University Of Minnesota-Twin Cities, Elektrik Mühendisliği, 1986

Postgraduate, PN Junction Modelling, University Of Minnesota-Twin Cities, Elektrik Mühendisliği, 1984

Research Areas

Physics, Interdisciplinary Physics and Related Science and Technology Areas, Materials Science, Natural Sciences

Academic Titles / Tasks

Professor, Istanbul Technical University, Fen-Edebiyat Fakültesi, Fizik Mühendisliği Bölümü, 2005 - Continues

Associate Professor, Istanbul Technical University, Fen-Edebiyat Fakültesi, Fizik Mühendisliği Bölümü, 1997 - 2005

Assistant Professor, Istanbul Technical University, Fen-Edebiyat Fakültesi, Fizik Mühendisliği Bölümü, 1995 - 1997

Assistant Professor, University of Miami, College Of Engineering, Electrical And Computer Engineering, 1990 - 1992

Academic and Administrative Experience

Sarajevo Üniversitesi, 2010 - 2012

İstanbul Teknik Üniversitesi, Fen-Edebiyat Fakültesi, Fizik Mühendisliği Bölümü, 2008 - 2009

İstanbul Teknik Üniversitesi, Fen-Edebiyat Fakültesi, 2005 - 2008

Refereed Congress / Symposium Publications in Proceedings

- I. **Modelling of 1/F noise in heterostructure bipolar devices**
Unlu H.
Conference on Noise in Devices and Circuits, Maspalomas, Spain, 26 - 28 May 2004, vol.5470, pp.226-241
- II. **Modeling of current transport and 1/F noise in GaAs heterobipolar devices**
Unlu H.
2nd International Conference on Unsolved Problems of Noise and Fluctuations (UPoN 99), Adelaide, Australia, 12 - 15 July 1999, vol.511, pp.440-446
- III. **Band offsets and current transport in GaN based HBTs**
Unlu H.
International Workshop on Nitride Semiconductors (IWN 2000), Nagoya, Japan, 24 - 27 September 2000, vol.1, pp.977-980
- IV. **A quantum thermochemical modeling of band offsets and Schottky barriers of semiconductor heterostructures**
Unlu H.
1998 International Semiconductor Conference (CAS 98), SINAIA, Romania, 6 - 10 October 1998, pp.393-405

Supported Projects

Ünlü H., Turfanda A., Project Supported by Higher Education Institutions, Nanoscale Two Dimensional Materials for Computer Memories, 2022 - Continues

Ünlü H., Project Supported by Higher Education Institutions, CdSe Kuantum Noktaların Optik ve Elektronik Özellikleri ve Uygulamaları, 2011 - Continues

Ünlü H., Nabı A., Project Supported by Higher Education Institutions, SYNTHESIS AND CHARACTERIZATION OF CARBON QUANTUM DOTS BY MICROWAVE HEATING METHOD, 2021 - 2024

Ünlü H., Project Supported by Higher Education Institutions, CdSe/ZnSe Tabanlı Nano-Heteroyapı Çekirdek/Kabuk Kuantum Noktalarının Sentezi, Karakterizasyonu ve Bilgisayar Tasarımı, 2015 - 2021

Ünlü H., Project Supported by Higher Education Institutions, Çok tabakalı CdSe tabanlı Nano-Heteroyapı Kuantum Noktaların Sentezi, Karakterizasyonu ve Tasarımı, 2015 - 2021

Ünlü H., Project Supported by Higher Education Institutions, Nanoyapı Yarıiletkenlerinin Elektronik Özelliklerinin Sıkı

Bağlanım Kuramı ile Tasarımı ve Bilgisayar Benzetimi, 2011 - 2021

Ünlü H., Project Supported by Higher Education Institutions, Tight Binding Modelling of SiC/III-Nitride Heterostructures, 2016 - 2018

Ünlü H., Project Supported by Higher Education Institutions, BOND ORBITAL MODELLING OF SiGEC/Si HETEROSTRUCTURES, 2015 - 2018

Ünlü H., Project Supported by Higher Education Institutions, Nanoboyutlu Yarıiletkenlerin Yoğunluk Fonksiyoneli Kuramı ile Tasarımı ve Bilgisayar Benzetimi, 2011 - 2013

Ünlü H., TUBITAK Project, Design and analysis of Cd-based quatum dots, 2006 - 2009

Ünlü H., Project Supported by Higher Education Institutions, Heteroyapı Bipolar Tranzistörlerin Modellenmesi, 1998 - 2006

Ünlü H., Project Supported by Higher Education Institutions, Heteroyapı bipolar cihazda 1/F görüntüsünün tasarımı, 2004 - 2005

Ünlü H., Project Supported by Higher Education Institutions, Yarı İletken Heteroyapılarda Sıcaklığın ve Basıncın Yüklü Parçacıklara Etkisinin Bilgisayar Analizi, 1999 - 2001

Metrics

Publication: 90

Citation (WoS): 405

Citation (Scopus): 338

H-Index (WoS): 12

H-Index (Scopus): 10

Non Academic Experience

International University of Sarajevo