

Cem ÇELEBİ

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Employment

2016 – to date	Associate Professor İzmir Institute of Technology, Department of Physics, İzmir, Turkey
2012 – 2016	Assistant Professor İzmir Institute of Technology, Department of Physics, İzmir, Turkey
2009 – 2012	Postdoctoral Researcher Sabancı University, Nanotechnology Research and Application Center İstanbul, Turkey
2005 – 2009	Teaching and Research Assistant Eindhoven University of Technology, Department of Applied Physics Eindhoven, The Netherlands

Administrative Appointments

2017 – to date	Director Center for Materials Research, IZTECH
2017 – to date	Academic Board Member Department of Photonics, IZTECH
2016 – to date	Faculty Representative and Board Member Education Center, IZTECH
2015 – to date	Internship Coordinator Department of Physics, IZTECH
2014 – to date	Academic Board Member Department of Materials Science and Engineering, IZTECH

Education and Academic Degrees

- 2009 Doctoral Degree (Ph.D.)
Eindhoven University of Technology, Department of Applied Physics
Eindhoven, The Netherlands
Advisor: Prof. Dr. Paul M. Koenraad
- 2004 Master's Degree (M.Sc.)
University of Antwerp, Department of Physics
Antwerp, Belgium
Advisor: Prof. Dr. Francois M. Peeters
- 2003 Technical Training and Internship
Interuniversity Microelectronics Research Center (IMEC)
Leuven, Belgium
- 2000 Bachelor's Degree (B.Sc.)
Hacettepe University, Department of Physics Engineering
Ankara, Turkey
- 1999 Undergraduate Internship
Turkish Atomic Energy Institute (TAEK), Ankara Nuclear Research and Training
Center (ANAEM), Ankara, Turkey

Language Skills

Turkish (Native speaker)
English (Advanced level)
German (Intermediate level)
Dutch (Introductory level)

Academic

Honors and Awards

- 2011 – 2012 Postdoctoral Research Scholarship
The Scientific and Technological Research Council of Turkey (TÜBİTAK-2218)
- 2005 – 2009 Doctoral Scholarship
Foundation for Fundamental Research on Matter (FOM), The Netherlands

Teaching

General Physics, Classical Mechanics, Condensed Matter Physics, Physics of Semiconductors, Solid State Device Technology, Introduction to Nanoscale Science and Technology, Applications of Nanotechnology

Thesis Advisory

2 Doctoral Thesis (Completed)

7 Master's Thesis (Completed)

Research Interests

Experimental Condensed Matter Physics
Nanoscience and Nanotechnology
Graphene and Other 2D Materials
Semiconductor Device Physics
Scanning Probe Microscopy

Scientific Research Projects

Hybrid SiC Nanowire/Carbon Nanotube Hetero-structured Field Emission Electron Source
Project Number: TÜBİTAK-115F092
Status: Completed (2015 - 2018)

Production of ZnO Based Photodetector with Graphene Contact Electrodes
Project Number: İYTE-BAP-2015
Status: Completed (2015 - 2016)

Production of Silicene For Two-Dimensional Electronics Applications
Project Number: TÜBİTAK-113F382
Status: Completed (2014 - 2015)

Epitaxial Graphene Nanomesh Network
Project Number: TÜBİTAK-112T773
Status: Completed (2013 - 2016)

Refereeing in Journals

Applied Physics Letters (American Institute of Physics, AIP)
Physical Review B (American Physical Society, APS)
2D Materials (Institute of Physics, IOP)

Publications

1. Epitaxial graphene thermistor for cryogenic temperatures
S. B. Kalkan, S. Yiğen, and C. Çelebi
Sensors and Actuators A: Physical, vol.280 (2018)
2. P3HT-graphene bilayer electrode for Schottky junction photodetectors
H. Aydın, S. B. Kalkan, C. Varlikli, and C. Çelebi
Nanotechnology 29, 145502 (2018)
3. The effect of adsorbates on the electrical stability of graphene studied by transient photocurrent spectroscopy
S. B. Kalkan, H. Aydın, D. Özkendir, and C. Çelebi
Appl. Phys. Lett. 112, 013103 (2018)
4. Few-Layer MoS₂ as Nitrogen Protective Barrier
B. Akbali, A. Yanilmaz, A. Tomak, S. Tongay, C. Çelebi, and H. Sahin
Nanotechnology 28, 415706 (2017)
5. Electron field emission from SiC nanopillars produced by using nanosphere lithography
D. Yeşilpınar and C. Çelebi
J. Vac. Sci. Technol. B 35(4), 041801 (2017)
6. Epitaxial graphene contact electrode for silicon carbide based ultraviolet photodetector
E. Kuşdemir, D. Özkendir, V. Fırat, and C. Çelebi
J. Phys. D: Appl. Phys. 48, 095104 (2015)
7. Cleavage Induced Rows of Missing Atoms on ZnTe(110) Surface
C. Çelebi, O. Arı, and R. T. Senger
Phys. Rev. B, 87, 085308 (2013)
8. Control of the graphene growth rate on capped SiC surface under strong Si confinement
C. Çelebi, C. Yanık, A. G. Demirkol, and İsmet İ. Kaya
Appl. Surf. Sci., 264, 56 (2013)
9. The effect of a SiC cap on the growth of epitaxial graphene on SiC in ultra-high vacuum
C. Çelebi, C. Yanık, A. G. Demirkol, and İsmet İ. Kaya
Carbon, 50, 3026 (2012)
10. Surface Induced Asymmetry of Acceptor Wave Functions
C. Çelebi, J. K. Garleff, A. M. Yakunin, A. Yu. Silov, W. Van Roy, J. -M. Tang, M. E. Flatté, and P. M. Koenraad
Phys. Rev. Lett., 104, 086404 (2010). (Cover article)
11. Spatial Distribution of a Hole Localized on Acceptor in Deformed Crystal
A. M. Monakhov, N. I. Sablina, N. S. Averkiev, C. Çelebi, and P. M. Koenraad
Solid State Comm., 146, 416 (2008)

12. Atomically Precise Impurity Identification and Modification on the Mn Doped GaAs(110) Surface with Scanning Tunneling Microscopy
J.K.Garleff, C. Çelebi, W. Van Roy, J. -M. Tang, M. E. Flatté, and P. M. Koenraad
Phys. Rev. B, 78, 075313 (2008)
13. Anisotropic Spatial Structure of Deep Acceptor States in GaAs and GaP
C. Çelebi, P. M. Koenraad, A. Yu. Silov, W. Van Roy, A. M. Monakhov, J. -M.Tang, and M. E. Flatté,
Phys. Rev. B, 77, 075328 (2008)
14. Atomic Scale Study of the Impact of Strain and Composition of the Capping Layer on the Formation of InAs Quantum Dots
J. M. Ulloa, C. Çelebi, P. M. Koenraad, A. Simon, E. Gapihan, A. Letoublon, N. Bertru, I. Drouzas, D. Mowbray, M. J. Steer, and M. Hopkinson,
J. Appl. Phys., 101, 081707 (2007)
15. Cross-sectional Scanning Tunneling Microscopy Study on II-VI Multilayer Structures
A. Wiertz, J. M. Ulloa, C. Çelebi, P. M. Koenraad, H. Boukari, L. Maingault, R. André, and H. Mariette,
Appl. Phys. Lett., 91, 161907 (2007)
16. Capping of InAs Quantum Dots Grown on (311)B InP Studied by Cross-sectional Scanning Tunneling Microscopy
C. Çelebi, J. M. Ulloa, P. M. Koenraad, A. Simon, A. Letoublon, and N. Bertru,
Appl. Phys. Lett., 89, 02311 (2006)
17. Electronic and Optical Properties of InAs/InP Quantum Dots on InP(100) and InP(311)B Substrates
C. Cornet, A. Schliwa, J. Even, F. Doré, C. Çelebi, A. Letoublon, E. Macé, C. Paranthoën, A. Simon, P.M. Koenraad, N. Bertru, D. Bimberg, and S. Loulaiche,
Phys. Rev. B, 74, 035312 (2006)