

Asst. Prof. HABİBE DURMAZ SAĞIR

Personal Information

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Education Information

Doctorate, Boston University, Electrical And Computer Engineering, United States Of America 2010 - 2016

Postgraduate, Temple University, Physics And Astronomy, United States Of America 2008 - 2010

Undergraduate, Selcuk University, Fen-Edebiyat Fakultesi/ Fizik Bolumu, Turkey 2002 - 2006

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, TERAHERTZ AND MID-INFRARED PHOTODETECTORS BASED ON INTERSUBBAND TRANSITIONS IN NOVEL MATERIALS SYSTEMS , Boston University, Electrical And Computer Engineering,, Electrical Engineering, 2016

Postgraduate, Electronic Properties of Single Wall Carbon Nano-tubes with Introduction to Apertuless Near Field Scanning Optical Microscopy, Temple University, Physics And Astronomy, Physics, 2010

Research Areas

Electrical and Electronics Engineering, Electronic, Nanotechnology, Optics and Photonics, Electromagnetic, Photonic Band Spacing Structures, MEMS, Lasers and Masers, Optoelectronic Materials and Devices, Semiconducting Materials and Devices, Physics, Atomic and Molecular Physics, Theory of Atoms and Molecules, Atomic Spectra and Photon Interactions, Natural Sciences, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Recep Tayyip Erdogan University, Mühendislik Fakültesi, Elektrik Ve Elektronik Muhendisligi, 2018 - Continues

Assistant Professor, Recep Tayyip Erdogan University, Mühendislik Fakültesi, Elektrik Ve Elektronik Muhendisligi, 2017 - 2018

Research Assistant PhD, Recep Tayyip Erdogan University, Mühendislik Fakültesi, Elektrik Ve Elektronik Muhendisligi, 2016 - 2017

Research Assistant, Boston University, Electrical And Computer Engineering, Electrical Engineering, 2011 - 2016

Research Assistant, Temple University, Physics And Astronomy, Physics, 2008 - 2010

Courses

Elektromanyetik-2, Undergraduate, 2017 - 2018

Modern Fizik, Undergraduate, 2017 - 2018

Temel Bilgi Teknolojileri, Undergraduate, 2017 - 2018

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Multi-Band Plasmonic Platform Utilizing UT-Shaped Graphene Antenna Arrays**
Eksioglu Y., Cetin A. E., Durmaz H.
PLASMONICS, vol.13, no.3, pp.1081-1088, 2018 (SCI-Expanded)
- II. **Graphene Terahertz Plasmons: A Combined Transmission Spectroscopy and Raman Microscopy Study**
Tantiwanichapan K., Wang X., Durmaz H., Li Y., Swan A. K., Paiella R.
ACS PHOTONICS, vol.4, no.8, pp.2011-2017, 2017 (SCI-Expanded)
- III. **SiGe Nanomembrane Quantum-Well Infrared Photodetectors**
Durmaz H., Sookchoo P., Cuo X., Jacobson R. B., Savage D. E., Lagally M. G., Paiella R.
ACS PHOTONICS, vol.3, no.10, pp.1978-1985, 2016 (SCI-Expanded)
- IV. **Quantification of Multiple Molecular Fingerprints by Dual-Resonant Perfect Absorber**
Cetin A. E., Korkmaz S., Durmaz H., Aslan E., Kaya S., Paiella R., TÜRKMEN M.
ADVANCED OPTICAL MATERIALS, vol.4, no.8, pp.1274-1280, 2016 (SCI-Expanded)
- V. **Terahertz intersubband photodetectors based on semi- polar GaN/AlGaN heterostructures**
Durmaz H., Nothern D., Brummer G., Moustakas T. D., Paiella R.
APPLIED PHYSICS LETTERS, vol.108, no.20, 2016 (SCI-Expanded)
- VI. **Strain Engineered SiGe Multiple-Quantum-Well Nanomembranes for Far-Infrared Intersubband Device Applications**
Sookchoo P., Sudradjat F. F., Kiefer A. M., Durmaz H., Paiella R., Lagally M. G.
ACS NANO, vol.7, no.3, pp.2326-2334, 2013 (SCI-Expanded)
- VII. **Far-infrared intersubband photodetectors based on double-step III-nitride quantum wells**
Sudradjat F. F., Zhang W., Woodward J., Durmaz H., Moustakas T. D., Paiella R.
APPLIED PHYSICS LETTERS, vol.100, no.24, 2012 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

- I. **Terahertz Intersubband Photodetectors based on GaN/AlGaN materials**
DURMAZ SAĞIR H., Nothern D., Brummer G., Moustakas T. D., Paiella R.
International Congress on Engineering and Life Science (ICELIS), Kastamonu, Turkey, 26 - 29 April 2018, pp.1
- II. **Graphene Plasmonics for Terahertz Applications**
DURMAZ SAĞIR H., Tantiwanichapan K., Wang X., Li Y., Swan A. K., Paiella R.
IMSMATEC, İzmir, Turkey, 10 - 12 April 2018, pp.1-3
- III. **III-nitride terahertz photodetectors for the reststrahlen gap of intersubband optoelectronics**
Paiella R., DURMAZ H., Sudradjat F. F., Nothern D., Brummer G., Zhang W., Woodward J., Moustakas T. D.
SPIE, California, United States Of America, 6 - 10 August 2017, pp.1-2
- IV. **GaN Terahertz Photodetectors for the Reststrahlen Gap of Intersubband Optoelectronics**
DURMAZ H., Nothern D., Brummer G., Moustakas T., Paiella R.
CLEO, California, United States Of America, 15 - 21 May 2017, pp.1-2
- V. **Strain-Engineered SiGe Nanomembrane Quantum-Well Infrared Photodetectors**
DURMAZ H., Sookchoo P., Cui X., Jacobson R., Savage D. E., Lagally M. G., Paiella R.
CLEO, California, United States Of America, 15 - 21 May 2017, pp.1-2
- VI. **Terahertz Surface Plasmons in Grating-Coupled Graphene**
Tantiwanichapan K., Wang X., DURMAZ H., Li Y., Swan A., Paiella R.

CLEO, California, United States Of America, 15 - 21 May 2017, pp.1-2

- VII. **Dual-Resonant Perfect Absorber for Multiple Molecular Fingerprints**
DURMAZ H., Cetin A. E., Korkmaz S., Aslan E., Kaya S., Paiella R., Turkmen M.
MRS Meeting, Arizona, United States Of America, 17 - 20 April 2017, pp.1
- VIII. **Dual-Resonant Perfect Absorber for Multiple Molecular Fingerprints**
DURMAZ H., Cetin A. E., Korkmaz S., Aslan E., Kaya S., Paiella R., Turkmen M.
MRS Meeting, Arizona, United States Of America, 17 - 20 April 2017, pp.1-2
- IX. **Terahertz Quantum Well Infrared Photodetectors Based on Semi-Polar GaN/AlGa_N Heterostructures**
DURMAZ H., Nothorn D., Brummer G., Moustakas T., Paiella R.
MRS Meeting, Arizona, United States Of America, 17 - 20 April 2017, pp.1-2
- X. **Photodetector based on GaN/AlGa_N heterostructures grown on semi-polar (20-2-1) GaN plane**
DURMAZ H., Northern D., Brummer G., Moustakas T. D., Paiella R.
ICAT International Conference on Advanced Technology and Sciences, Konya, Turkey, 1 - 04 September 2016, pp.1
- XI. **SiGe Nanomembrane Active Materials for Far-Infrared Intersubband Devices**
DURMAZ H.
OSA Topical Meeting on Integrated Photonics Research (IPR), Boston, United States Of America, 27 June - 01 July 2015, pp.2
- XII. **SiGe Multiple-Quantum-Well Nanomembranes for Far-Infrared Intersubband Devices**
Sudradjat F. F., DURMAZ H., Sookchoo P., Kiefer A. M., Lagally M. G., Paiella R.
International Conference on Intersubband Transitions in Quantum Wells, New York, United States Of America, 16 - 20 September 2013
- XIII. **Far-Infrared Intersubband Photodetectors Based on GaN/AlGa_N Double-Step Quantum Wells**
Sudradjat F. F., Zhang W., DURMAZ H., Woodward J., Moustakas T. D., Paiella R.
International Conference on Intersubband Transitions in Quantum Wells, New York, United States Of America, 16 - 20 September 2013
- XIV. **Strain-Engineered SiGe Quantum-Well Nanomembranes for Far-Infrared Intersubband Device Applications**
DURMAZ H., Sudradjat F. F., Sookchoo P., Kiefer A. M., Lagally M. G., Paiella R.
IEEE Conference on Lasers and Electro-Optics, San Jose, United States Of America, 9 - 14 June 2013

Scientific Refereeing

Material Research Society Proceeding, SCI Journal, May 2017

Applied Physics Letters, SCI Journal, September 2016

Metrics

Publication: 21

Citation (WoS): 149

Citation (Scopus): 161

H-Index (WoS): 6

H-Index (Scopus): 6

Congress and Symposium Activities

Graphene Plasmonics for Terahertz Applications, Attendee, İzmir, Turkey, 2018

Terahertz Intersubband Photodetectors based on GaN/AlGa_N Materials, Attendee, Kastamonu, Turkey, 2018

III-nitride terahertz photodetectors for the reststrahlen gap of intersubband optoelectronics (invited talk), Attendee,

California, United States Of America, 2017

Strain-Engineered SiGe Nanomembrane Quantum-Well Infrared Photodetectors, Attendee, California, United States Of America, 2017

Terahertz Surface Plasmons in Grating-Coupled Graphene, Attendee, California, United States Of America, 2017

GaN Terahertz Photodetectors for the Reststrahlen Gap of Intersubband Optoelectronics, Attendee, California, United States Of America, 2017

Dual-Resonant Perfect Absorber for Multiple Molecular Fingerprints (Poster), Attendee, Arizona, United States Of America, 2017

Dual-Resonant Perfect Absorber for Multiple Molecular Fingerprints (Davetli konusma), Attendee, Arizona, United States Of America, 2017

Terahertz Quantum Well Infrared Photodetectors Based on Semi-Polar GaN/AlGaIn Heterostructures, Attendee, Arizona, United States Of America, 2017

Terahertz Intersubband Photodetector based on GaN/AlGaIn heterostructures grown on semi-polar (20-2-1) GaN plane, Attendee, Konya, Turkey, 2016

SiGe Nanomembrane Active Materials for Far-Infrared Intersubband Devices, Attendee, Massachusetts, United States Of America, 2015

Far-Infrared Intersubband Photodetectors Based on GaN/AlGaIn Double-Step Quantum Wells, Attendee, New York, United States Of America, 2013

SiGe Multiple-Quantum-Well Nanomembranes for Far-Infrared Intersubband Devices, Attendee, New York, United States Of America, 2013

Strain-Engineered SiGe Quantum-Well Nanomembranes for Far-Infrared Intersubband Device Applications, Attendee, California, United States Of America, 2013

Scholarships

2007 YLSY Bursu (Recep Tayyip Erdogan Universitesi adina), University, 2007 - Continues

Selcuk Universitesi Fen Edebiyat Fakultesi Bolum Birinciligi Odulu, University, 2006 - Continues

Awards

DURMAZ SAĞIR H., Best Presentation, ICAT, September 2016

DURMAZ SAĞIR H., Dean Fellowship, Selcuk Universitesi, September 2007