

# DEPARTMENT of PHOTONICS IZTECH



*Işık Bilimi ve Mühendisliği*



## ANNUAL REPORT 2019

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## **Preface**

Photonics is a multidisciplinary field of science and technology and it is already defined as the key enabling technology by European Union and innovative area for future by the United States. It has regarded that the 21<sup>th</sup> century will be the century of the photon much as the 20<sup>th</sup> century was the century of electron. Due to its interdisciplinary nature, photonics is always in touch with other disciplines such as physics, chemistry, materials science, electrical & electronics engineering.

Department of Photonics was established within the body of IZTECH Faculty of Science in 2015, UNESCO World Light year. One of the main objectives of Department of Photonics is to train individuals as qualified human resource for photonics industry, in addition to provide skilful researchers who could conduct scientific research.

The Department offers MSc, PhD and BSc degrees since 2017, 2018 and 2019, respectively. Currently has, 5 faculty members, 6 research assistants, an administrative staff, 30 graduate and 41 undergraduate students.

This leaflet summarizes the activities and outcomes of IZTECH-Photonics during the year of 2019 and addresses the details of 128 MM of externally supported personnel, 4.2 and 3.8, manuscripts and presentations per faculty member, respectively.

The year 2019 has been a nail biter with the decision of opening Photonics graduate program by Higher Education Council of Turkey; landing and increasing our responsibility to bright new brains of our Country. The year 2020 seems to bring heavy constructions and obstructions arising thereof. Nevertheless, IZTECH-Photonics regards this up growth as an opportunity to serve photonics community.

I wish every member and to all friends of IZTECH-Photonics a prosperous, healthy and happy 2020.

*Izmir, February 2019*

**Canan VARLIKLI, PhD**

Deputy Chair of Department of Photonics



## Publications

1. Hybrid J-Aggregate-Graphene Phototransistor, **O. Yakar**, O. Balci, B. Uzlu, **N. Polat**, O. Ari, I. Tunc, C. Kocabas, and **S. Balci**, ACS Appl. Nano Mater. (2019).
2. Vertical van der Waals Heterostructure of Single Layer InSe and SiGe, I. Eren, **S. Ozen**, **Y. Sozen**, M. Yagmurcukardes, and **H. Sahin**, J. Phys. Chem. C (2019).
3. Parametrizing nonbonded interactions between silica and water from first principles, H. G. Ozelcik, **Y. Sozen**, **H. Sahin**, and M Barisik, Appl. Surf. Sci. (2019).
4. Interaction of Ge with single layer GaAs: From Ge-island nucleation to formation of novel stable monolayers, **Y. Sozen**, I. Eren, **S. Ozen**, M. Yagmurcukardes, and **H. Sahin**, Appl. Surf. Sci. (2019).
5. Colloidal Nanodisk Shaped Plexcitonic Nanoparticles with Large Rabi Splitting Energies, F. M. Balci, S. Sarisozen, **N. Polat**, **S. Balci**, J. Phys. Chem. C 123, 26571 (2019).
6. Gd<sup>3+</sup>-Doped  $\alpha$ -CsPbI<sub>3</sub> Nanocrystals with Better Phase Stability and Optical Properties, C. M. Guvenc, Y. Yalcinkaya, **S. Ozen**, **H. Sahin**, and M. M. Demir, J. Phys. Chem. C 123, 24865 (2019).
7. Stacking-dependent excitonic properties of bilayer blue phosphorene, F. Iyikanat, E. Torun, R. T. Senger, **H. Sahin**, Phys. Rev. B 100, 125423 (2019).
8. Two-dimensional covalent crystals by chemical conversion of thin van der Waals materials, V. Sreepal, M. Yagmurcukardes, K. S. Vasu, D. J. Kelly, S. F. R. Taylor, V. G. Kravets, Z. Kudrynskyi, Z. D. Kovalyuk, A. Patanè, A. N. Grigorenko, S. J. Haigh, C. Hardacre, L. Eaves, **H. Sahin**, A. K. Geim, F. M. Peeters, and R. R. Nair, Nano Lett. 19, 6475 (2019).
9. Contribution of O<sub>2</sub> plasma treatment and amine modified GOs on film properties of conductive PEDOT: PSS: Application in indium tin oxide free solution processed blue OLED, **H. Diker**, F. Yesil, and **C. Varlikli**, Curr. Appl. Phys. 19, 910 (2019).
10. Color-Tunable All-Inorganic CsPbBr<sub>3</sub> Perovskites Nanoplatelet Films for Photovoltaic Devices, **M. Ozcan**, **S. Ozen**, G. Topcu, M. M. Demir, and **H. Sahin**, ACS Appl. Nano Mater. 2, 5149 (2019).
11. Fourier transform plasmon resonance spectrometer using nanoslit-nanowire pair, D. A. Uulu, T. Ashirov, **N. Polat**, **O. Yakar**, **S. Balci**, and C. Kocabas, Appl. Phys. Lett. 114, 251101 (2019).
12. Experimental and first-principles investigation of Cr-driven color change in cesium lead halide perovskites, **S. Ozen**, T. Guner, G. Topcu, **M. Ozcan**, M. M. Demir, and **H. Sahin**, J. Appl. Phys. 125, 225705 (2019).
13. Green fabrication of lanthanide-doped hydroxide-based phosphors: Y (OH)<sub>3</sub>: Eu<sup>3+</sup> nanoparticles for white light generation, T. Guner, A. Kus, **M. Ozcan**, A. Genc, **H. Sahin**, and M. M. Demir, Beilstein J. Nanotechnol. 10, 1200 (2019).

14. Soluble Cytotoxic Ruthenium (II) Complexes with 2-Hydrazinopyridine, A. A. Soliman, F. A. Attaby, O. I. Alajrawy, S. R. Majeed, C. Sahin, and **C. Varlikli**, *Russ. J. Inorg. Chem.* 64, 742 (2019).
15. Raman fingerprint of stacking order in HfS<sub>2</sub> – Ca(OH)<sub>2</sub> heterobilayer, M. Yagmurcukardes, **S. Ozen**, F. Iyikanat, F. M. Peeters, and **H. Sahin**, *Phys. Rev. B* 99, 205405 (2019).
16. Phosphor-based white LED by various glassy particles: control over luminous efficiency, H. Yuçe, T. Guner, **S. Balci**, and M. M. Demir, *Optics Letters* 44, 479 (2019).
17. Single-layer Janus-type platinum dichalcogenides and their heterostructures, **Z. Kahraman**, A. Kandemir, M. Yagmurcukardes, and **H. Sahin**, *J. Phys. Chem. C* 123, 4549 (2019).
18. Defect tolerant and dimension dependent ferromagnetism in MnSe<sub>2</sub>, I. Eren, F. Iyikanat, and **H. Sahin**, *Physical Chemistry Chemical Physics* 21, 16718 (2019).
19. Monitoring the crystal orientation of black-arsenic via vibrational spectra, A. Kandemir, F. Iyikanat, and **H. Sahin**, *Journal of Materials Chemistry C* 7, 1228 (2019).
20. Increasing solubility of metal silicates by mixed polymeric antiscalants, G. Topcu, A. Çelik, A. Kandemir, A. Baba, **H. Sahin**, and M. M. Demir, *Geothermics* 77, 106 (2019).
21. Perylene-embedded electrospun PS fibers for white light generation, T. Guner, E. Aksoy, M. M. Demir and **C. Varlikli**, *Dyes and Pigments* 160, 501 (2019).



## Presentations at conferences

1. **Y. Oyun**, **Ö. Çakır**, **S. Sevinçli**, Electromagnetically Induced Transparency (EIT) via Three Photon Excitation in Cold Rydberg Atoms, KOBİT-3 Kuantum Optiği ve Bilişim Toplantısı, Ankara University, 31 Jan – 1 Feb 2019, Ankara, Turkey (Poster).
2. **H. Sahin**, Experimental and Theoretical Investigation of Dopant-Driven Color Change in Perovskite Crystals, Colloquium, Dept. of Physics, Bilkent University, 27 Feb 2019, Ankara, Turkey.
3. **H. Sahin**, Two Dimensional Materials, Aydoğan Yağcı Center of Science and Art, 9 March 2019, İzmir, Turkey.
4. **Y. Oyun**, **Ö. Çakır**, **S. Sevinçli**, Electromagnetically Induced Transparency (EIT) via Three Photon Excitation in Cold Rydberg Atoms, VII. Condensed Matter Physics Meeting, IZTECH, 19 April 2019, İzmir, Turkey (Poster).
5. **S. Ozen**, T. Guner, G. Topcu, **M. Ozcan**, M. M. Demir, and **H. Sahin** VII. Condensed Matter Physics Meeting, Experimental and First Principles Investigation of Cr-Driven Color Change in Cesium Lead Halide Perovskites, IZTECH, 19 April 2019, İzmir, Turkey (Poster).
6. **S. Ozen**, F. Iyikanat, **M. Ozcan**, G. E. Tekneci, I. Eren, **Y. Sozen**, and **H. Sahin** VII. Condensed Matter Physics Meeting, Orthorhombic CsPbI<sub>3</sub> Perovskites: Thickness-Dependent Structural, Optical and Vibrational Properties, IZTECH, 19 April 2019, İzmir, Turkey (Poster).
7. **Y. Sozen**, I. Eren, **S. Ozen**, M. Yagmurcukardes, and **H. Sahin** VII. Condensed Matter Physics Meeting, Interaction of Ge with Single Layer GaAs: From Ge-Island Nucleation to Formation of Novel Stable Monolayers, IZTECH, 19 April 2019, İzmir, Turkey (Poster).
8. **M. Başkurt** and **H. Sahin** VII. Condensed Matter Physics Meeting, Investigating Structures of Germanene on Bulk MgB<sub>2</sub> Surface, IZTECH, 19 April 2019, İzmir, Turkey (Poster).
9. **M. Ozcan**, **S. Ozen**, G. Topcu, M. M. Demir, and **H. Sahin** VII. Condensed Matter Physics Meeting, Color Tunable All-Inorganic CsPbBr<sub>3</sub> Nanoplatelet films for Photovoltaic Devices, IZTECH, 19 April 2019, İzmir, Turkey (Poster).
10. **H. Diker**, C. Sahin, **S.S. Unluturk**, A. Battal, **C. Varlikli**, Photophysical Properties of Some Amide Based Ir(III) Complexes and Their Application as an Emissive Layer Component in White Organic Light Emitting Diodes, 8th International Conference on Advanced Technologies (ICAT'19), 26-30 August 2019, Sarajevo, BOSNIA (Oral).
11. **H. Bozkurt**, **H. Diker**, **C. Varlikli**, Fabrication and Characterization of a Solution Processed Flexible Thermal Sensor by Using Chemically Synthesized GO and rGO, Innovations in Intelligent Systems and Applications Conference (ASYU), 31 October-02 November 2019, İzmir, Turkey (Oral).
12. **H. Sahin**, Two-Dimensional Covalent Crystals by Chemical Conversion of Thin van der Waals Materials, 15<sup>th</sup> Nanoscience and Nanotechnology Conference, Ankara University, 3-6 November 2019, Antalya, Turkey (Oral).
13. **G. Dönmez**, **A. Yanılmaz**, and C. Celebi, Stability of CVD Graphene/Silicon Schottky Junction Photodiode, 15<sup>th</sup> Nanoscience and Nanotechnology Conference, Ankara University, 3-6 November 2019, Antalya, Turkey (Oral).
14. **O. Yakar**, **S. Balci**, and C. Celebi, Stability of CVD Graphene/Silicon Schottky Junction Photodiode, 15<sup>th</sup> Nanoscience and Nanotechnology Conference, Ankara University, 3-6 November 2019, Antalya, Turkey (Poster) .

15. **C. Varlikli**, Utilization of graphene derivatives in blue OLEDs and perovskite solar cells, İstanbul International Organic Electronic Symposium, 2-4 December 2019, İstanbul, Turkey (Invited).
16. **S. Özgüler, H. Diker, C. Varlikli**, Modified Graphene Oxide:PEDOT-PSS Composite as Hole Transport Layer in P3HT:PCBM based Organic Solar Cells, İstanbul International Organic Electronic Symposium, 2-4 December 2019, İstanbul, Turkey (Oral).
17. **V. Bozkuş**, E. Aksoy, **C. Varlikli**, The Use of Bay Functionalized Perylene Dyes as Electron Acceptor Materials in Organic Solar Cells, İstanbul International Organic Electronic Symposium, 2-4 December 2019, İstanbul, Turkey (Oral).
18. **V. Bozkuş**, Erkan Aksoy, **C. Varlikli**, Utilization of Acetylene Bridged Perylene Derivatives in Emission Layer of Solution Processed OLED, İstanbul International Organic Electronic Symposium, 2-4 December 2019, İstanbul, Turkey (Poster).
19. **H. Bozkurt, H. Diker, Ş. Özgüler, S.S. Ünlütürk, S. Özçelik, C. Varlikli**, Design and Fabrication of Solution-Processed Red Quantum Dot Based PMQLED, İstanbul International Organic Electronic Symposium, 2-4 December 2019, İstanbul, Turkey (Poster).

## Guest visits

### *Visits at other institutions*

National Nanotechnology Research Center (UNAM), Türkiye	2 *1 day/month
Kalekim, Türkiye	March 26, 2019,
Pamukkale Üniversitesi, Türkiye	May 13, 2019
DYO Paints, Türkiye	July 3, 2019
Setaş Color Center, Türkiye	August 23, 2019
Polisan Kansai, Türkiye	September 25, 2019
AtomQT (COST Action CA16221) MC Meeting, Sarajevo	October30-31, 2019

### *Visitors in Department*

Kemal YORULMAZ, Advanced Materials Science and Engineering, Imperial College, UK  
December 23, 2019 – February 14, 2020

### *Interns*

Khalid KUMAR, Optical & Acoustical Engineering, Gaziantep University	2018-2019 Spring
Ömer Faruk KURT, Physics Engineering, Gaziantep University	2019-2020 Fall

## Diploma thesis-dissertations

### *Thesis in preparation*

#### PhD

*Alper Yanılmaz; The Production and Characterization of Graphene-Dielectric-Graphene p-i-n Photodiode Sensor, 2018 – Present*

*Dilce Özkendir; Epitaxial Graphene Field Effect Transistor for Biosensor Applications, 2018 - Present*

*Hakan Bozkurt; Effect of LED Indoor Lighting on the Circadian Rhythms and Sleep-Wake Regulations of Elderly People, 2018 - Present*

*Hazan Özkan; Simulations of novel strongly- correlated electronic systems, 2018 – Present*

*Nahit Polat; Light matter interaction in microcavities, 2018 - Present*

#### MSc

*Ahmed Aydın; Development of a Colorimetric bio-assay Method, 2018 – Present*

*Ali Aslan Demir; Multiwavelength phase imaging in digital holographic microscope, 2018 – Present*

*Mehmet Başkurt; Theoretical Investigation of Structural, Electronic, and Vibrational Properties of Calcium Halides, 2019 - Present*

*Metin Tan; Plasmonic Enhancements of Perovskite Emitters, 2018 – Present*

*Necip Ayhan Tertemiz; Graphene Based Optical Modulator, 2018 – Present*

*Ozan Bıyıklı; Manufacturing and Characterization of Perovskite Thin Films Using Novel Methods, 2018-*

*Ozan Yakar; Graphene Enabled Optoelectronic Devices, 2018 - Present*

*Sercan Özen; Experimental and Theoretical Investigation of Functionalized Perovskites, 2018-*

*Şahika Özgüler; Photophysical Characterization of Red, Blue and Green Emitting Quantum Dots and Their Application in QD-LEDs, 2018 - Present*

*Volkan Bozkuş; Emission Characteristics of Solution Processes Stacked Organic Light Emitting Diodes, 2018 - Present*

*Yiğit Sözen; Synthesis and Characterization of Graphene-Like Ultrathin Structures, 2018 - Present*

### *Thesis completed*

#### MSc

*Hatice İlhan; A Comparative Study on the Photocatalytic Activity of Dye-sensitized and Non-sensitized Graphene Oxide-TiO<sub>2</sub> Composites Under Simulated and Direct Sun Light, 2019*

*Gülçin Dönmez; Fabrication and Characterization of Graphene/Silicon Based Schottky Photodiode, 2019*

*Zeynep Kahraman; Functionalization and Thickness Dependent Properties of Single Layer Dichalcogenides, 2019*

*Mehmet Özcan; Experimental and Theoretical Investigation of Cs-Perovskite Crystals, 2019*

*Yağız Oyun; Three - Photon Electromagnetically Induced Transparency in Rydberg Atoms, 2019*

## Teaching

### Graduate

2018-2019 Spring

<b>Course</b>	<b>Name of Lecturer</b>	<b>Credit/ECTS</b>
<i>PHOT 502 Fundamentals of Photonics I</i>	Sinan Balcı	(3-0) 3 / 9
<i>PHOT 503 Fundamentals of Photonics II</i>	Emre Sarı	(3-0) 3 / 9
<i>PHOT 504 Quantum Photonics I</i>	Sevilay Sevinçli	(3-0) 3 / 9
<i>PHOT 505 Applied Photonics</i>	Sinan Balcı	(0-6) 3 / 7
<i>PHOT 506 Photonic Devices and Applications</i>	Emre Sarı	(3-0) 3 / 7
<i>PHOT 508 Mathematical Methods in Photonics</i>	Hasan Şahin	(3-0) 3 / 7
<i>PHOT 510 Ethical Issues in Research Methods</i>	Sevilay Sevinçli	(0-2) NC / 7
<i>PHOT 511 Photophysics</i>	Canan Varlıklı	(3-0) 3 / 7
<i>PHOT 513 Molecular Electronics and Devices</i>	Canan Varlıklı	(3-0) 3 / 7
<i>PHOT 518 Low-Dimensional Materials</i>	Hasan Şahin	(3-0) 3 / 7
<i>PHOT 521 Quantum Photonics II</i>	Sevilay Sevinçli	(3-0) 3 / 7
<i>PHOT 531 Biophotonics</i>	Ümit Hakan Yıldız	(3-0) 3 / 7

2019-2020 Fall

<b>Course</b>	<b>Name of Lecturer</b>	<b>Credit/ECTS</b>
<i>PHOT 501 Seminar</i>	Emre Sarı	(0-2) NC / 7
<i>PHOT 502 Fundamentals of Photonics I</i>	Emre Sarı	(2-2) 3 / 9
<i>PHOT 503 Fundamentals of Photonics II</i>	Sinan Balcı	(3-0) 3 / 7
<i>PHOT 504 Quantum Photonics I</i>	Sevilay Sevinçli	(2-2) 3 / 9
<i>PHOT 505 Applied Photonics</i>	Canan Varlıklı	(0-6) 3 / 7
<i>PHOT 507 Computational Photonics</i>	Sevilay Sevinçli	(3-0) 3 / 7
<i>PHOT 508 Mathematical Methods in Photonics</i>	Hasan Şahin	(3-0) 3 / 7
<i>PHOT 511 Photophysics</i>	Canan Varlıklı	(3-0) 3 / 7
<i>PHOT 516 Radiation Detectors</i>	Cem Çelebi	(3-0) 3 / 7
<i>PHOT 518 Low-dimensional Materials</i>	Hasan Şahin	(3-0) 3 / 7
<i>PHOT 522 Optical Spectroscopy</i>	Sinan Balcı	(3-0) 3 / 7
<i>PHOT 541 Lasers</i>	Emre Sarı	(3-0) 3 / 7
<i>PHOT 601 Seminar</i>	Emre Sarı	(0-2) NC / 7

### Undergraduate

2019-2020 Fall

<b>Course</b>	<b>Name of Lecturer</b>	<b>Credit/ECTS</b>
<i>PHYS 101 General Physics I</i>	Gürcan Aral	(2-2) 3 / 6
<i>PHYS 111 General Physics Laboratory I</i>	Gürcan Aral	(0-2) 1 / 2
<i>CHEM 121 General Chemistry I</i>	Serdar Özçelik	(3-0) 3 / 5
<i>CHEM 141 General Chemistry Lab. I</i>	Serdar Özçelik	(0-2) 1 / 2
<i>MATH 141 Basic Calculus I</i>	Berkant Ustaoglu	(3-2) 4 / 5
<i>ENG 101 Development of Reading and Writing Skills I</i>	Medine Türkmen & Sema Şentürk	(3-0) 3 / 3
<i>PHOT 100 Introduction to Photonics</i>	Emre Sarı	(3-0) 3 / 7

## Seminars

<i>Date</i>	<i>Speaker</i>	<i>Title</i>
18.01.2019	Dr. Günnur Güler	Applications of Biomolecular Spectroscopy under the Scope of Biophotonics and Medical Photonics
18.04.2019	Dr. Ömer Pars Kocaoğlu	Adaptive optics optical coherence tomography at 1 MHz
21.10.2019	Dr. Hasan Şahin	Two-Dimensional Covalent Crystals by Chemical Conversion of Thin van der Waals Materials
28.10.2019	Dr.Emre Sarı	Solvent engineering for high-performance inorganic–organic hybrid perovskite solar cells
04.11.2019	Dr. Sinan Balcı	Colloidal Nanodisk Shaped Plexcitonic Nanoparticles with Large Rabi Splitting Energies
11.11.2019	Dr. Canan Varlıklı	Utilization of Graphene derivatives in blue OLEDs and perovskite solar cells
25.11.2019	Dr. Sevilay Sevinçli	Three-photon Rydberg EIT: a new tool for nonlinearity
27.11.2019	Dr. Işınsu Baylam	Development of near-infrared solid-state lasers with femtosecond pulse durations
02.12.2019	Hazan Özkan	Quantum Interference of Electromechanically Stabilized Emitters in Nanophotonic Devices
09.12.2019	Hakan Bozkurt	High efficient $\text{CH}_3\text{NH}_3\text{PbI}_{3-x}\text{Cl}_x$ mixed halide perovskite solar cells prepared by re-dissolution and crystal grain growth via spray coating
23.12.2019	Dilce İnanç	Raman Spectrum of Graphene and Graphene Layers

## Personnel

### Staff

#### University paid personnel (Full time)

Name - Surname	<u>2019 (Man month)</u>
Ahmed AYDIN	12
Canan VARLIKLI	12
Emre SARI	12
Hakan BOZKURT	7
Hasan ŞAHİN	12
Hazan ÖZKAN	7
Metin TAN	7
Ozan YAKAR	12
Sercan ÖZEN	12
Serdar ÖZÇELİK	1
Sevilay SEVINÇLİ	12
Sinan BALCI	12
<b>Total</b>	<b>118</b>

#### Externally Funded Personnel

Name-Surname	<u>Source</u>	<u>2019 (Man month)</u>
Alper YANILMAZ	YÖK 100/2000	12
Dilce İNANÇ	YÖK 100/2000	12
Fehime Mert BALCI	118F523/ TÜBİTAK 1001	12
Halide DİKER	115F616/ TÜBİTAK 1003	12
Hazan ÖZKAN	YÖK 100/2000	5
Hakan BOZKURT	YÖK 100/2000	5
İsmail EREN	117F095/ TÜBİTAK 1001	3
Mehmet ÖZCAN	117F095/ TÜBİTAK 1001	6
Nahit POLAT	YÖK 100/2000	12
Necip Ayhan TERTEMİZ	117F172/ TÜBİTAK 1001	2
Seçil Sevim ÜNLÜTÜRK	115F616/ TÜBİTAK 1003	12
Şahika ÖZGÜLER	115F616/ TÜBİTAK 1003	12
Yigit SÖZEN	217M460/ TÜBİTAK 1001	8
Zeynep KAHRAMAN	117F095/ TÜBİTAK 1001	3
Yağız OYUN	117F372/ TÜBİTAK 1001	8
Volkan BOZKUŞ	119F031/ TÜBİTAK 1001	4
<b>Total</b>		<b>128</b>



## Students

### Registered Students to Photonics Science and Engineering Graduate Program PhD

Alper YANILMAZ
Dilce İNANÇ
Eren VARDARLI
Gülcan SÖM
Hakan Bozkurt
Hazan ÖZKAN
Mehmet KIVANÇ
Nahit Polat
Sabuhı BADALOV
Yağız OYUN

### MSc

Ahmed AYDIN	Ozan BIYIKLI
Ali Aslan DEMİR	Ozan YAKAR
Enes BURSA	Sercan ÖZEN
Eray CEYHAN	Süleyman Emre KONAN
Gülçin DÖNMEZ	Şahika ÖZGÜLER
Hatice İLHAN	Tülin ÇELİKBAŞ
Mehmet BAŞKURT	Ümit PURÇAK
Mehmet ÖZCAN	Volkan BOZKUŞ
Metin TAN	Yigit SÖZEN
Nazlı ÖZTOPRAK	Zeynep KAHRAMAN
Necip Ayhan TERTEMİZ	

### Registered Students to Photonics Undergraduate Program

### BSc

Ali Eren ÇINAR	Eylül Çağla ERSÖZ	Melike İNANDI
Alperen BEKLEN	Furkan ALTUNTAŞ	Ömer SAĞLAM
Aygün A. ATEŞOĞLU	Görkem URUK	Ömer CAN
Bedirhan ÖZDEMİR	Görkem YALÇIN	Öykü ŞENSU
Bensu DERELİ	Görkem Ege ÖMERCA	Solmaz Erva BAYRAKTAR
Berkant Özgür ÖZTÜRK	Hakan BÜLBÜL	Ulviye AKGÜL
Buğra ŞEN	Hasan ALTUNKALEM	Umut Baran GÜNDÜZ
Can TORUN	Hüzeyfe B. ARSLAN	Umut Kaan YÜCEL
Cem DEMİR	İlgın YAĞCI	Yağmur Damla ARSLAN
Çisem Nur TOPKAYA	İlayda ÇİÇEK	Zahit Yılmaz KARATAŞ
Efsa KARAKURT	İlgim EFETÜRK	Zeynep SAATCI
Ege ALTINOL	Karya KARASOYLU	Zeynep EMER
Elvin BEĞEN	Kutay Emre DOĞRU	Zişan ATEŞKAN
Emirhan YILMAZ	Mehmet Barış ELMACI	

## Activities in the University administration

<i>Canan Varlıklı</i>	Deputy Chair of Department of Photonics Chair of Photonics Science and Engineering Graduate Program Executive Board Member of Children's Education Application and Research Centre Member of Committee of Education Executive Board Member of Unit for Research and Best Practices in Learning and Teaching Erasmus Coordinator of Department of Photonics Member of Disability Support Office Executive Board Member of University Faculty Board Member of Science Faculty Executive Board Member of The Graduate School of Eng. & Sci.
<i>Hasan Şahin</i>	Vice Dean of Science Faculty Director of ICTP-ECAR Executive Board Member of ICTP-ECAR Executive Board Member of IYTE-TAM Member of University Ranking Commission Member of Internationalization Committee
<i>Sinan Balcı</i>	Executive Board Member of Science Faculty
<i>Sevilay Sevinçli</i>	Member of Science Faculty InSTITUTE Accreditation Unit
<i>Emre Sarı</i>	Vice Chair of Department of Photonics Head of Publicity Commission of University Executive Board Member of National Mass Spectroscopy Application and Research Centre Faculty Board Member of Science Faculty

## Funding (Budget)

### University funding

Ordinary allocation (2019)	0 TL
Total	0 TL

### Project funds (university)

Name	Deposited/ Total Budget (TL)	Start-Finish Date
<i>Photophysical characterization of red, blue and green emitting quantum dots and their application in QD-LEDs, 2019IYTE0186</i>	2.500 /2.500	2019-2020
<i>Emission Characteristics of Solution Processed Stacked Organic Light Emitting Diodes, 2019IYTE0188</i>	2.500 /2.500	2019-2020
<i>Plasmonic enhancement of the emission intensity of perovskite nanowires, 2019IYTE0193</i>	5.000 /5.000	2019-2020
<i>Plasmonic cavities, 2019IYTE0222</i>	8.000 /8.000	2019-2020
<i>Functionalization Dependwnt Mechanical Properties of Transition Metal Dichalcogenides, 2019IYTE0239</i>	8.000/ 8.000	2019-2020

### Project funds (extraneous)

Name	Deposited/ Total Budget (TL)	Start-Finish Date
<i>Plasmonic Photoswitch, 112T091-TUBITAK</i>	499.150	2019
<i>Synthesis of New Acetyl Bridged Perylenediimides as Alternatives to Fullerenes and Investigation of Their Acceptor Features Through Photophysical Processes, 217Z280-TUBITAK</i>	30.000	2019
<i>Quantum Dot Manufacturing in Flow Reactor and Fabrication of New Generation Photonic Devices/ 115F616-TUBITAK</i>	1.223.500 /1.542.036	2017-2020
<i>Optical Properties of Graphene-like Crystals and their Heterostructures, 117F095-TUBITAK</i>	175.000 /408.565	2017-2020
<i>Electrically Switchable Two Dimensional Hybrid Optoelectronic Devices, 117F172-TUBITAK</i>	429.600 /536.100	2018-2020
<i>Three-photon Electromagnetically Induced Transparency, Absorption (EIT/EIA) with Rydberg Atoms, 117F372-TUBITAK</i>	94.000 /268.950	2018-2020
<i>Strong light matter interaction in microcavities, 118F066-TUBITAK</i>	326400 /521.550	2018-2020
<i>Strong coupling of surface plasmon polaritons of metals and excitons of inorganic perovskites, 119F095-TUBITAK</i>	89.700 /287.450	2019-2021
<i>Synthesis of Acetyl Bridged Perylenediimides and Perylene tetraesters and their Utilization in White Light Emitting Diodes, 119F031-TUBITAK</i>	514.800 /738.300	2019-2022
<b>Concluded</b>	<b>Continued</b>	<b>TOTAL</b>
2	7	2.423.400
		5.332.101

## Announcement

### Seeking applicants for faculty positions

Department of Photonics at Izmir Institute of Technology (IYTE) is seeking for faculty members at the assistant professor level. The candidates should have a **postdoctoral experience, a solid experimental research background and preferably experienced in university-industry joint projects**, in especially one of the first two main research areas of the department listed below:

- ✓ **Laser engineering and photonic integrated circuits.**
- ✓ **Biophotonics and mediphotonics**
- ✓ Molecular photonics and photonic devices
- ✓ Quantum photonics and optical spectroscopy

The application package should include a Curriculum Vitae, research and teaching statements that contain future research interests and possible collaborations within faculty. The names and contact details of two referees should be sent via e-mail. The shortlisted candidates will be requested to visit IYTE campus. During their visit at IYTE campus, the candidates will be called upon to lead a seminar during an allocated time.

The recruitment starts now until the positions are filled.

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