DEPARTMENT of PHOTONICS
IZTECH

photonics
Fotonik Bölümü
Department of Photonics

Işık Bilimi ve Mühendisliği

ANNUAL REPORT
2020

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URLA/İZMİR

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Preface

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 the Department of Photonics is to train individuals as qualified human resources for photonics industry, in addition to providing skillful researchers who could conduct scientific research. The department offers MSc, PhD and BSc degrees since 2017, 2018 and 2019, respectively. It currently has 5 faculty members, 7 research assistants, an administrative staff, 28 graduate and 78 undergraduate students.

This leaflet summarizes the activities and outcomes of our department in 2020 and addresses the details of our educational, academic and scientific achievements and administrative responsibilities.

This year we established our undergraduate laboratory that will serve undergraduate courses of PHOT 211, PHOT 212 and PHOT 321 with the project support funds of 2020IYTE-2-0003 and the private sector contributions. I'd like to take this opportunity to thank EAE Electric firm once again for their generous contributions.

The COVID-19 pandemic, which started early 2020, has changed our routine just like it did in all over the world. We continue our studies knowing the pandemic will eventually come to an end.

In 2021, I wish every member and colleague of IZTECH-Photonics a healthy, prosperous and enhanced collaboration with the Photonics sector.

İzmir, February 2021

Canan VARLIKLI, *PhD*
Chair

Publications

1. Navigating CIE Space for Efficient TADF Downconversion WOLEDs, **E. Aksoy,** A. Danos, **C. Varlikli,** A. Monkman, Dyes and Pigments 183, pp.108707-108713 (2020)
2. Kagome-like silicene: a novel exotic form of two-dimensional epitaxial silicon, Y. Sassa, F. O. L. Johansson, A. Lindblad, M. G. Yazdi, K. Simonov, J. Weissenrieder, M. Muntwiler, F. Iyikanat, **H. Sahin**, T. Angot, E. Salomong, G. Le Layg, Applied Surface Science, 530, pp. 147195 (2020).
3. Prevalence of oxygen defects in an in-plane anisotropic transition metal dichalcogenide, R. Plumadore, **M. Baskurt**, J. Boddison-Chouinard, G. Lopinski, M. Modarresi, P. Potasz, P. Hawrylak, **H. Sahin**, F. M. Peeters, A. Luican-Mayer, The Physical Review B 102 (20), pp. 205408 (2020).
4. Strong plasmon–exciton coupling in colloidal halide perovskite nanocrystals near a metal film, C. M. Guvenc, **N. Polat**, **S. Balci**, The Journal of Physical Chemistry C, 46, (2020).
5. Large Rabi splitting of mixed plasmon–exciton states in small plasmonic moiré cavities, S. Ates, E. Karademir, **S. Balci**, C. Kocabas, A. Aydinli, Optics Letters 45 (20), 5824-5827 (2020).
6. Novel ultra-thin two-dimensional structures of strontium chloride, **C. Akyol**, **M. Baskurt**, **H. Sahin**, Journal of Materials Chemistry C, 36 (8), pp. 12527-12532 (2020).
7. Reducing the efficiency roll off and applied potential induced color shifts in CdSe@ZnS/ ZnS based light emitting diodes, **S. Ozguler, H. Diker,** S. Sevim, S. Ozcelik, **C. Varlikli**, J. Phys. Chem. C, 124, pp. 14847−14854 (2020).
8. Enhanced capacitive behaviour of graphene based electrochemical double layer capacitors by etheric substitution on ionic liquids, S. Siyahjani, S. Oner, **H. Diker**, B. Gultekin, **C. Varlikli**, Journal of Power Sources, 467, pp. 228353 (2020).
9. Strain tunable band structure of a new 2D carbon allotrope C568, Q. Gao, **H. Sahin**, J. Kang, Journal of Semiconductors 41 (8), pp. 082005 (2020).
10. Multispectral Electro-Optical Surfaces: from Visible to Microwave, M Said Ergoktas, Gokhan Bakan, Evgeniya Kovalska, Lewis W Le Fevre, Richard P Fields, Pietro Steiner, Xiaoxiao Yu, Omer Salihoglu, Sinan Balci, Kostya Novoselov, Robert AW Dryfe, Coskun Kocabas, arXiv preprint arXiv:2007.08385, (2020).
11. Orthorhombic CsPbI3 Perovskites: Thickness-Dependent Structural, Optical and Vibrational Properties **S. Ozen**, F. Iyikanat, **M. Ozcan**, G. E. Tekneci, I. Eren, **Y. Sozen**, **H. Sahin**, Computational Condensed Matter, 23, pp. e00453 (2020).
12. Fabrication of post-functionalizable, bio-repellent, electroactive polyurethane interface on gold surface by Surface-Assisted (SurfAst) polymerization, S. Ozenler, **Y. Sozen**, **H. Sahin**, U. H. Yildiz, Langmuir, 36 (24), pp. 6828–6836 (2020).
13. Structural Stability of Physisorbed Air-Oxidized Decanethiols on Au (111), Ö. Kap, N. Kabanov, M. Tsvetanova**, C. Varlikli,** A. L. Klavsyuk, H. J. W. Zandvliet, K. Sotthewes, The Journal of Physical Chemistry C (2020).

14. Stable single-layers of calcium halides (CaX2), **M. Baskurt,** M. Yagmurcukardes**,** F. M. Peeters, **H. Sahin**, The Journal of Chemical Physics, 152 (16), pp. 164116 (2020).
15. Vanadium dopant-and strain-dependent magnetic properties of single-layer VI3, **M. Baskurt**, I. Eren, M. Yagmurcukardes, **H. Sahin**, Applied Surface Science, 508, pp. 144937 (2020).
16. Colloidal Bimetallic Nanorings for Strong Plasmon Exciton Coupling, C. M. Guvenc, **F. M. Balci**, S. Sarisozen, **N. Polat**, **S. Balci**, The Journal of Physical Chemistry C, 124 (15), pp. 8334–8340 (2020).
17. Quantum properties and applications of 2D Janus crystals and their superlattices, M. Yagmurcukardes, Y. Qin, **S. Ozen**, M. Sayyad, F. M. Peeters, S. Tongay, **H. Sahin**, Applied Physics Reviews, 7 (1), pp. 011311 (2020).
18. Functionalization of single-layer TaS 2 and formation of ultrathin Janus structures, **Z. Kahraman**, M Yagmurcukardes, **H. Sahin**, Journal of Materials Research,35, pp. 1397–1406 (2020).
19. The effect of DOPA hydroxyl groups on wet adhesion to polystyrene surface: An experimental and theoretical study R. Yildiz, **S. Ozen, H. Sahin,** Y. Akdogan, Materials Chemistry and Physics, 243, pp. 122606 (2020).
20. 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, **H. Sahin**, Applied Surface Science, 505, pp. 144218 (2020).
21. Parametrizing nonbonded interactions between silica and water from first principles, G. H. Ozcelik, **Y. Sozen**, **H. Sahin**, M. Barisik, Applied Surface Science, 504, pp. 144359 (2020).
22. Radiative Transitions and Relaxation Pathways in Plasmon-Based Cavity Quantum Electrodynamics Systems, D. Finkelstein-Shapiro, P. A. Mante, S. Sarisozen, L. Wittenbecher, I. Minda, **S. Balci**, T. Pullerits, D. Zigmantas, arXiv preprint arXiv:2002.05642 (2020).
23. Enhancing the efficiency of mixed halide mesoporous perovskite solar cells by introducing amine modified graphene oxide buffer layer, Ç. Şahin**, H. Diker,** D. Sygkridou, **C. Varlikli**, E. Stathatos, Renewable Energy,146, pp. 1659–1666 (2020).
24. Dispersion stability of amine modified graphene oxides and their utilization in solution processed blue OLED, **H. Diker**, **H. Bozkurt**, **C. Varlikli**, Chemical Engineering Journal, 381, pp. 122716 (2020).
25. Octahedrally Coordinated Single Layer CaF2: Robust Insulating Behaviour, **M. Baskurt,** J. Kang, **H. Sahin,** Physical Chemistry Chemical Physics (2020).
26. Structural, electronic and vibrational properties of ultra-thin octahedrally coordinated structure of EuO2, **M. Ozcan**, **S. Ozen**, M. Yagmurcukardes, **H. Sahin**, Journal of Magnetism and Magnetic Materials, 493, pp. 165668 (2020).

Presentations at conferences

1. **Canan Varlikli**, Islak Kaplama Süreçleri İçeren Organik ve Hibrit Işık Yayan Diyotlarda Dayanım, Yoğun Madde Fiziği (YMF) 2020 Ankara-İstanbul-İzmir Toplantısı, 25-26 Aralık 2020, Online (invited).
2. **Canan Varlikli**, Organik ve Hibrit Fotonik Aygıtlar ile Görünür Bölge Işımasını Taklit Etmek, ELECO2020, Elektrik-Elektronik ve Biyomedikal Mühendisliği Konferansı, 26-28 November 2020, Bursa, Online (invited).
3. **Hasan Şahin**, "Combining Experiments and Density Functional Theory to Study Perovskites", Turkey-Israel Nanomeeting2020, 26 November 2020, Bilkent University, Online (invited).
4. **Hasan Şahin**, "Combining Experiments and Density Functional Theory", ICSN8, Sharif University of Technology, 11 November 2020, Iran, Online (invited).
5. **Hatice Ilhan, Halide Diker**, Gamze Belkis Durmaz Cayci, **Canan Varlikli**, A Comparative Study on the Photocatalytic Activity of Graphene Oxide-TiO2 Composites Under Simulated and Direct Sunlight, ICMATSE (International Conference on Advanced Materials Science & Engineering and High Tech Device Applications), 2-4 October 2020, Online (oral).
6. **Volkan Bozkus, Erkan Aksoy, Canan Varlikli**, Perylene Based Solution Processed WOLED with Daylight Features, ICMATSE (International Conference on Advanced Materials Science & Engineering and High Tech Device Applications), 2-4 October 2020, Online (oral).
7. **Hatice Ilhan, Erkan Aksoy, Halide Diker, Canan Varlikli**, Photocatalytic Activity of Dye-Sensitized TiO2 Composites Under Simulated and Direct Sunlight, ICMATSE (International Conference on Advanced Materials Science & Engineering and High Tech Device Applications), 2-4 October 2020, Online (oral).
8. **Hakan Bozkurt, Erkan Aksoy, Canan Varlikli**, Electroluminescence and Solar Energy Conversion to Electricity from a Perylene Based Device, ICMATSE (International Conference on Advanced Materials Science & Engineering and High Tech Device Applications), 2-4 October 2020, Online (oral).

Guest visits

Visits/Online Visits at other institutions

SİM Aydınlatma Sistemleri Elektronik Araştırma ve Geliştirme San. Tic. Lim. Şirketi	07.04.2020
DYO Boya Fabrikaları San. Tic. A.Ş.	06.05.2020
Vestel Elektronik San ve Tic. A.Ş.	21.10.2020

Diploma thesis-dissertations

Thesis in preparation

PhD

Cansu Akyol; Photonic Applications of Graphene-Like Ultra-Thin Materials, 2020 – Present.

Zeynep Kahraman; Optical and Electronic Investigation of Antimony-Based Lead-Free Perovskites via Theoretical and Experimental Methods, 2020 – Present.

Hakan Bozkurt; Investigation of VOLET Stability Induced by Dielectric and Semiconductor Materials Used in the Structure, 2020 – Present.

Hazan Özkan; Quantum Transport Regime in Quartic Materials, 2020 – Present.

Mehmet Kıvanç; Optical TIR and Lens Design and Simulation, 2019 – Present.

Nahit Polat; Light Matter Interaction in Microcavities, 2018 – Present.

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

Dilce İnanç; Epitaxial Graphene Field Effect Transistor for Biosensor Applications, 2018 – Present.

MSc

Ayşe Gül Yiğit; Strain Engineering of Electronic Properties of Novel 2D Crystals, 2020 – Present.

Enes Bursa; Development of an Energy Management Software, Integrated with Photovoltaic Panels and Energy Storage Units and Its Applications to an Off-Grid Desalination System, 2020 – Present.

Mehmet Başkurt; Graphene-Like Materials for Optoelectronic Applications, 2020 – Present.

Ali Aslan Demir; Multiwavelength Phase Imaging in Digital Holographic Microscope, 2019 – Present.

Ahmed Aydın; Design and Fabrication of a Wearable, Flexible Pulse Oximeter, 2018 – Present.

Necip Ayhan Tertemiz; Flexible Transparent Conducting Electrodes Based on Silver Nanowires, 2018 – Present.

Volkan Bozkuş; Emission Characteristics of a Solution Processed, Single Layer White Organic Light Emitting Diode, 2018 – Present.

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

Thesis completed

MSc

Şahika Özgüler; Photophysical Characterization of Green and Blue Quantum Dots and Their Application in QD-LEDs, Supervisor: Prof. Dr. Canan Varlikli

Metin Tan; Plasmonic Enhancements of Perovskite Emitters, Supervisor: Assist. Prof. Dr. Emre Sari

Ozan Bıyıklı; Manufacturing and Characterization of Perovskite Thin Films Using Novel Methods, Supervisor: Assist. Prof. Dr. Emre Sari

Ozan Yakar; Graphene Enabled Optoelectronic Devices, Supervisor: Assoc. Prof. Dr. Sinan Balci

Sercan Özen; Experimental and Theoretical Investigation of Functionalized Perovskites, Supervisor: Prof. Dr. Hasan Sahin

Hatice İlhan; A Comparative Study on the Photocatalytic Activity of Dye-Sensitized and Non-Sensitized Graphene Oxie-TiO2 Composites Under Simulated and Direct Sun Light, Supervisor: Prof. Dr. Canan Varlikli

Teaching

Graduate

2019-2020 Spring

Course	*Name of Lecturer*	*Credit/ECTS*
PHOT 501 Seminar	Hasan Şahin	(0-2) NC / 8
PHOT 502 Fundamentals of Photonics I	Sinan Balci	(3-0) 3 / 9
PHOT 503 Fundamentals of Photonics II	Emre Sarı	(3-0) 3 / 9
PHOT 504 Quantum Photonics I	Sevilay Sevinçli	(3-0) 3 / 9
PHOT 505 Applied Photonics	Emre Sarı	(0-6) 3 / 7
PHOT 508 Mathematical Methods in Photonics	Hasan Şahin	(3-0) 3 / 7
PHOT 510 Ethical Issues in Research Methods	Sevilay Sevinçli	(0-2) NC / 7
PHOT 511 Photophysics	Canan Varlıklı	(3-0) 3 / 7
PHOT 513 Molecular Electronics and Devices	Canan Varlıklı	(3-0) 3 / 7
PHOT 518 Low-Dimensional Materials	Hasan Şahin	(3-0) 3 / 7

2020-2021 Fall

Course	*Name of Lecturer*	*Credit/ECTS*
PHOT 504 Quantum Photonics I	Sevilay Sevinçli	(2-2) 3 / 9
PHOT 505 Applied Photonics	Sevilay Sevinçli	(0-6) 3 / 7
PHOT 508 Mathematical Methods in Photonics	Hasan Şahin	(3-0) 3 / 7
PHOT 511 Photophysics	Canan Varlıklı	(3-0) 3 / 7
PHOT 517 Organic Light Emitting Devices	Canan Varlıklı	(3-0) 3 / 7
PHOT 518 Low-dimensional Materials	Hasan Şahin	(3-0) 3 / 7
PHOT 521 Quantum Photonics II	Sevilay Sevinçli	(3-0) 3 / 7
PHOT 522 Optical Spectroscopy	Sinan Balci	(3-0) 3 / 7
PHOT 541 Lasers	Emre Sarı	(3-0) 3 / 7

Undergraduate

2019-2020 Spring

Course	*Name of Lecturer*	*Credit/ECTS*
PHOT 110 Introduction to Programming	Sevilay Sevinçli	(2-2) 3 / 6
PHYS 102 General Physics II	Gürcan Aral	(2-2) 3 / 6
PHYS 112 General Physics Laboratory II	Gürcan Aral	(0-2) 1 / 2
CHEM 122 General Chemistry II	Serdar Özçelik	(3-0) 3 / 5
CHEM 142 General Chemistry Lab. II	Serdar Özçelik	(0-2) 1 / 2
MATH 142 Basic Calculus II	Fatih Erman	(3-2) 4 / 5
ENG 102 Development of Reading and Writing Skills I	Şeval Şentürk & Ceren Tütüncüoğlu	(3-0) 3 / 3

2020-2021 Fall

Course	*Name of Lecturer*	*Credit/ECTS*
PHOT 100 Introduction to Photonics	Emre Sarı	(3-0) 3 / 7
PHYS 101 General Physics I	Gürcan Aral	(2-2) 3 / 6
PHYS 111 General Physics Laboratory I	Gürcan Aral	(0-2) 1 / 2
CHEM 121 General Chemistry I	Hürriyet Polat	(3-0) 3 / 5
CHEM 141 General Chemistry Lab. I	Hürriyet Polat	(0-2) 1 / 2
MATH 141 Basic Calculus I	İsmail Aslan	(3-2) 4 / 5
ENG 101 Development of Reading and Writing Skills I	Oya Özay	(3-0) 3 / 3

Course	Name of Lecturer	Credit/ECTS
PHOT 201 Fundamentals of Optics & Photonics	Sinan Balci	(4-0) 4 / 7
PHOT 211 Fundamentals of Optics & Photonics Lab. L	Sinan Balci	(0-4) 2 / 6
PHOT 231 Mathematical Methods in Photonics	Hasan Şahin	(3-0) 3 / 7

Seminars

Date	*Speaker*	*Title*
11.12.2020	Dr. Hasan Göktaş	Building State-of-The-Art CMOS Compatible Sensors and Devices
11.12.2020	Dr. Mehmet Yağmurcukardeş	Vibrational Properties of Materials Through The Raman Spectra At Atomic Scale
01.12.2020	Dr. Erhan Sağlamyürek	Engineering light-matter interfaces for quantum networks
23.10.2020	Dr. Mustafa Balcı	Solution Based Synthesis of Si Quantum Dots and Down-Shifting Layers
21.10.2020	Dr. Mustafa Kemal Ruhi	Targeted photodynamic therapy to overcome chemoresistance in ovarian cancer
19.10.2020	Dr. Can Kerse	New Era in Laser Processing: From Micro Surgery to 3D Photonic Integrated Circuits
27.05.2020	Dr. Mehdi Saedi	Nanostructure formation using electrochemical methods
02.01.2020	Dr. Hasan Yılmaz	Coherent Control of Light Transport Through Complex Photonic Systems

Personnel

Staff

University paid personnel (Full time)

Name - Surname	*2020 (Man month)*
Ahmed AYDIN	12
Ali Aslan DEMİR	10
Canan VARLIKLI	12
Emre SARI	12
Hakan BOZKURT	12
Hasan ŞAHİN	12
Hazan ÖZKAN	12
Metin TAN	12
Ozan YAKAR	8
Sercan ÖZEN	12
Sevilay SEVİNÇLİ	12
Sinan BALCI	12
Total	**138**

Externally Funded Personnel

Name-Surname	*Source*	*2020 (Man month)*
Alper YANILMAZ	YÖK 100/2000	12
Cansu AKYOL	YÖK 100/2000	8
Dilce İNANÇ	YÖK 100/2000	12
Nahit POLAT	YÖK 100/2000	12
Hatice İLHAN	YÖK 100/2000	8
Halide DİKER	115F616/ TÜBİTAK 1003	7
Seçil Sevim ÜNLÜTÜRK	115F616/ TÜBİTAK 1003	7
Şahika ÖZGÜLER	115F616/ TÜBİTAK 1003	7
Yigit SÖZEN	117F095/ TÜBİTAK 1001	9
Mehmet BAŞKURT	117F095/ TÜBİTAK 1001	9
Fadime Mert BALCI	118F523/ TÜBİTAK 1001	12
Sema SARISÖZEN	118F523/ TÜBİTAK 1001	12
Volkan BOZKUŞ	119F031/ TÜBİTAK 1001	12
Erkan AKSOY	119F031/ TÜBİTAK 1001	12
Ozan BIYIKLI	119f095/ TÜBİTAK 1001	7
	Total	**146**

Students

Registered Students to Photonics Science and Engineering Graduate Program

PhD		
Alper YANILMAZ	Mehmet KIVANÇ	Sercan ÖZEN
Cansu AKYOL	Metin TAN	Yağız OYUN
Dilce İnanç ÖZKENDİR	Nahit Polat	Zeynep KAHRAMAN
Gülcan SÖM	Hakan BOZKURT	Hatice İLHAN
Hazan ÖZKAN		

MSc		
Ahmed AYDIN	Nazlı ÖZTOPRAK	Şahika ÖZGÜLER
Ali Aslan DEMİR	Necip Ayhan TERTEMİZ	Ümit PURÇAK
Ayşe Gül YİĞİT	Süleyman Emre KONAN	Volkan BOZKUŞ
Elif YALÇIN	Enes BURSA	Yigit SÖZEN
Eray CEYHAN	Mehmet BAŞKURT	Emre ÇOLAK

Registered Students to Photonics Undergraduate Program

BSc

Second Grade		
Aygün ATEŞOĞLU	Can TORUN	İlgim EFETÜRK
Berkant ÖZGÜR	Efsa KARAKURT	Ömer SAĞLAM
Buğra ŞEN	Görkem URUK	
First Grade		
Ahmethamdi AKSU	Ender KURTULUŞ	Rüya SANVER
Alperen BEKLEN	Eylül ERSÖZ	Sezer KABADAYI
Atay YURT	Görkem ÖMERCA	Solmaz BAYRAKTAR
Bedirhan ÖZDEMİR	Görkem YALÇIN	Umut GÜNDÜZ
Bensu DERELİ	Hasan ALTUNKALEM	Umut YÜCEL
Berk İNCEKARA	Ilgın YAĞCI	Ulviye AKGÜL
Cem DEMİR	İlayda ÇİÇEK	Yağmur ARSLAN
Çisem TOPKAYA	Kutay DOĞRU	Yiğit GÜVEN
Ece TEKER	Melike İNANDI	Zahit KARATAŞ
Ege ALTINOL	Ömer CAN	Zeynep EMER
Elvin BEĞEN	Ömer SARI	Zeynep SAATCI
Emirhan YILMAZ	Öykü ŞENSU	Zişan ATEŞKAN

Prep. Class		
Adahan AYDIN	Ekin FINCAN	Ömer TAMDOGAN
Ahmet OZER	Elifşan HAZAR	Rabia BILGIN
Aslınur SAHIN	Emircan YILMAZ	Seha KIRCA
Aybala KALE	Erol BOZTEPE	Serdar OLMEZ

Barış ALTUNTAŞ	Furkan ALTUNTAŞ	Muhammet ÖZKAYA
Barkın JURNAL	Gürdal TANRIVERDI	Sıraç YONEY
Buğra Yorulmaz	Hilal TOKMAK	Uğur GURSES
Bülent MIZGALI	Hüseyin KÜÇÜKSEVİNDİ	Ulviye YILMAZ
Çağdaş ERDOĞAN	Işıtan TOPEL	Utku ILBEYLI
Doğukan TUTAR	İrem SAÇIN	Yusuf SOYLU
Ece LOŞ	Mehmet Barış ELMACI	Zeynep KURU
Efe YILDIZ		

Awards

Canan Varlıklı and Erkan Aksoy awarded third prize in Paints and Adhesives category of 9th Chemicals and Products Sector R&D Market Event organized by İstanbul Chemicals and Products Exporters' Association with the project title of "Organic Semiconductor Based Light Absorber, Emitter and Frequency Down Converter Materials for Photonic Technologies".

Activities in the University administration

Canan Varlıklı	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
	Executive Board Member of The Graduate School of Eng. & Sci.
	Executive Board Member of Environmental Development, Application and Research Center
	Member of Disability Support Office
	Faculty Board Member of Science Faculty
	Executive Board Member of University
Hasan Şahin	Vice Dean of Science Faculty
	Director of ICTP-ECAR
	Executive Board Member of Eurasian Center of Advanced Research
	Executive Board Member of Material Research Center
	Executive Board Member of Integrated Research Centers
	Member of University Ranking Commission
	Member of Internationalization Committee
Sinan Balcı	Executive Board Member of Science Faculty
	Executive Board Member of Material Research Center
Sevilay Sevinçli	Member of Science Faculty Institutive Accreditation Unit
Emre Sarı	Vice Chair of Department of Photonics
	Erasmus Coordinator of Department of Photonics
	Executive Board Member of National Mass Spectroscopy Application and Research Centre
	Faculty Board Member of Science Faculty

Funding *(Budget)*

University funding

Ordinary allocation (2020)	*0*
Undergraduate infrastructure (2020IYTE-2-0003)	*150.000*
Total	150.000 TL

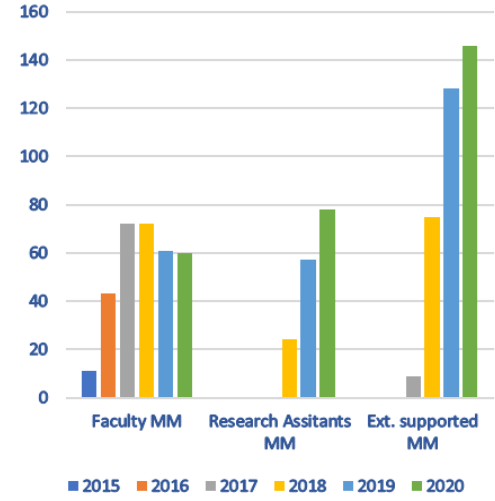
Project funds (university)

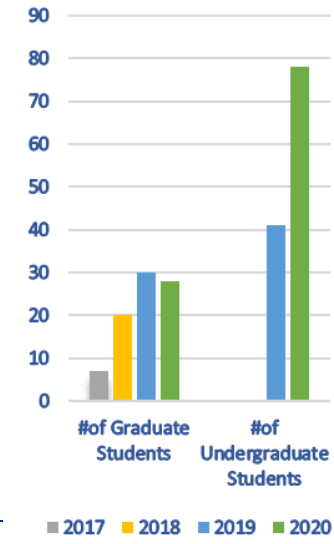
Name	*Budget (TL)*	*Start-Finish Date*
Photophysical characterization of red, blue and green emitting quantum dots and their application in QD-LEDs, 2019IYTE0186	2.500	2019-2020
Emission Characteristics of Solution Processed Stacked Organic Light Emitting Diodes, 2019IYTE0188	2.500	2019-2020
Plasmonic enhancement of the emission intensity of perovskite nanowires, 2019IYTE0193	5.000	2019-2020
Plasmonic cavities, 2019IYTE0222	8.000	2019-2020
Functionalization Dependent Mechanical Properties of Transition Metal Dichalcogenides, 2019IYTE0239	8.000	2019-2020
Synthesis and Characterization of Lead-Free Perovskite Materials, 2020IYTE0110	10.000	2020-2021
Colloid Plexcitonic Nanoparticles 2020IYTE0045	10.000	2020-2021
Fabrication of perovskite solar cell active layers by ultrasonic spray coating method 2020IYTE0104	5.000	2020-2021

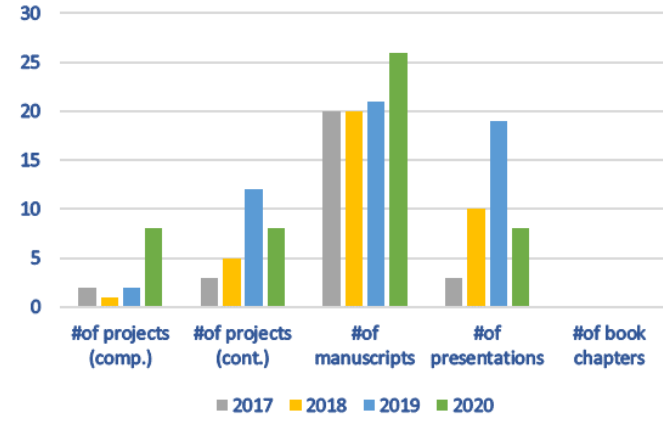
Project funds (extraneous)

Name	*Budget (TL)*	*Start-Finish Date*
Optical Properties of Graphene-like Crystals and their Heterostructures, 117F095-TUBITAK	436.690	2017-2020
Quantum Technologies with Ultra-Cold Atoms COST Action CA16221		2017-2021
Electrically Switchable Two-Dimensional Hybrid Optoelectronic Devices, 117F172-TUBITAK	555.000	2018-2020
Three-photon Electromagnetically Induced Transparency, Absorption (EIT/EIA) with Rydberg Atoms, 17F372-TUBITAK	199.300	2018-2021
Strong light matter interaction in microcavities, 118F066-TÜBİTAK	439.950	2018-2020
Strong coupling of surface plasmon polaritons of metals and excitons of inorganic perovskites, 119F095-TÜBİTAK	374.750	2019-2021
Synthesis of Acetyl Bridged Perylenediimides and Perylene tetraesters and their Utilization in White Light Emitting Diodes, 119F031-TUBITAK	738.300	2019-2022
Graphene Plasmons in Visible-118F523-TUBİTAK	478.000	2020-2021

Summary Charts (over the years)







Announcement

Seeking applicants for faculty positions

We are seeking for colleagues at the assistant professor level. The candidates who have **a postdoctoral experience, a solid experimental research background and experienced in university-industry joint projects**, in especially one of the first two main research areas of the department listed below, will be given precedence,

- ✓ **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.

Contact:

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