

DEPARTMENT of PHOTONICS IZTECH



ANNUAL REPORT 2025



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Preface

The Department of Photonics at İzmir Institute of Technology has continued its education, research, and academic activities in accordance with its mission of advancing scientific knowledge and educating qualified human resources in the field of photonics. The year 2025 stands out as a period marked by steady growth, diversification of research topics, and increased academic engagement, building upon the Department's accumulated experience from previous years.

This annual report provides a comprehensive overview of the Department's activities throughout 2025, covering scientific publications, research projects, conference participations, educational programs, student achievements, academic events, and institutional responsibilities. When evaluated in comparison with previous years, the data presented in this report reflect an expansion in research output, a strengthening of externally funded projects, and a broader international presence of the Department's academic staff and students.

In 2025, the Department was further strengthened by the participation of Assoc. Prof. Dr. Oktay Aktaş, whose expertise has made valuable contributions to both educational and research activities. His inclusion has enriched the academic profile of the Department and is expected to support further development in the coming years.

Another notable development has been the increased interest shown by prospective students. The Department of Photonics experienced an approximately 23% improvement in university entrance rankings, reflecting the growing visibility of the program as well as the academic performance, creativity, and dedication of its students. Throughout the year, undergraduate and graduate students actively contributed to scientific publications, conference presentations, research projects, internships, and cooperative education programs, demonstrating the Department's strong emphasis on student-centered and research-driven education.

Scientific dissemination and community engagement remained integral components of departmental activities. The organization of Talks on Photonics Science and Technologies @IZTECH (IZPHOTECH'25), together with an extensive seminar program and numerous guest visits, fostered an active academic environment and strengthened interactions with national and international research communities.

While the Department continues to advance in many areas, certain challenges remain, particularly with respect to laboratory infrastructure, increasing student numbers, and the need for sustained financial and human resources. Addressing these issues through institutional support, strategic planning, and continued collaboration is essential for maintaining the quality and sustainability of our education and research activities.

Prepared in continuity with previous annual reports, this document aims to ensure transparency, consistency, and traceability in evaluating the Department's academic development. Looking ahead to 2026, we express our sincere hope for a year marked by peace, stability, and scientific cooperation at the global level; progress and resilience for Türkiye's higher education and research ecosystem; continued institutional support and academic excellence at İzmir Institute of Technology; and sustainable growth, productivity, and innovation for the Department of Photonics.

I would like to express my sincere appreciation to all academic and administrative staff, our students, alumni, and collaborating institutions for their valuable contributions to the Department's achievements throughout 2025 and extend my best wishes for a productive and successful year ahead.

İzmir, January 2026

Canan VARLIKLI, PhD
Chair

Publications

1. Development of Mg-Alginate Based Self Disassociative Bio-Ink for Magnetic Bio-Patterning of 3D Tumor Models, Basak Coban, Mehmet Baskurt, **Hasan Sahin**, Ahu Arslan-Yildiz, *Macromolecular Bioscience* 25 (1), 2400339.
2. Tunable Magnetism in 2D Organic-Ion-Intercalated MnPS₃ via Molecule-Dependent Vacancy Generation, Tezze, D., Pereira, J. M., Tutar, D., Ramos, M., Regner, J., Gargiani, P., Schiller, F., Casanova, F., Alegria, A., Martín-García, B. **Sahin, H.**, Zdenek Sofer, Maider Ormazza, Luis E. Hueso & Gobbi, M., *Advanced Functional Materials* 35.2 (2025): 2412771.
3. Breaking the Boundaries of the Goldschmidt Tolerance Factor with Ethylammonium Lead Iodide Perovskite Nanocrystals, C. Meric Guvenc, Stefano Toso, Yuri P. Ivanov, Gabriele Saleh, **Sinan Balci**, Giorgio Divitini, Liberato Manna, *ACS nano* 19.1 (2024): 1557-1565..
4. Magnetism in twisted triangular bilayer graphene quantum dots, Mirzakhani, M., Cetin, Z., **Yagmurcukardes, M.**, Park, H. C., Peeters, F. M., & da Costa, D. R., *Physical Review B* 111.2 (2025): 024417.
5. Lithiated single-layer holey MoS₂: Electronic, magnetic and vibrational characteristics, Tan, F., Cetin, Z., **Yagmurcukardes, M.**, & **Sahin, H.**, *Computational Materials Science* 248 (2025): 113573.
6. Two Key Substitutions in the Chromophore Environment of mKate2 Produce an Enhanced FusionRed-like Red Fluorescent Protein, Ruchkin DA, Gavrikov AS, Kolesov DV, Gorokhovatsky AY, Chepurnykh TV, Mishin AS, Maksimov EG, Pletneva NV, Pletnev VZ, Pavlova AM, Nikitin VA, **Bogdanov AM.**, *Acta Naturae*, 18(2), (2025), 118-131.
7. Novel single layers of holey crystalline structures of HfS₂ with diverse magnetic states, **Kutlu, T.**, Ercem, O., **Yagmurcukardes, M.**, & **Sahin, H.**, *Computational Materials Science* 250 (2025): 113650.
8. Gate-Controlled Photoresponse in an Individual Single-Walled Carbon Nanotube Modified with a Fluorescent Protein, Anastasiia S. Kudriavtseva, Nikita P. Nekrasov, Dmitry V. Krasnikov, Albert G. Nasibulin, **Alexey M. Bogdanov**, and Ivan Bobrinetskiy, *Adv. Electron. Mater.*, 11, (2025), 2400329.
9. Selective Growth of FAPbBr₃ Nanocrystals with Precisely Tailored Optical Properties for Advanced Optoelectronic Applications, C. Meric Guvenc, Nahit Polat, Tugce A. Arica, **Sinan Balci**, *ACS Appl. Nano Mater.* 8, 11, (2025), 5713–5720.
10. Synthesis, in vitro and in silico evaluation of indole linked carbohydrazides and 1, 3, 4-oxadiazoles as new α -glycosidase inhibitors, Kocaman, K., Bingul, M., Ceyhan, S. M., **Sahin, H.**, Saglam, M. F., Kandemir, H., & Sengul, I. F., *Journal of Molecular Structure* 1325 (2025): 141057.
11. Fluorescent protein with environmentally-sensitive fluorescence lifetime for quantitative pH measurement, Tatiana R. Simonyan, Elena A. Protasova, Anastasia V. Mamontova, Aleksander M. Shakhov, Daria V. Bodunova, Svetlana V. Sidorenk, Eugene G. Maksimov, **Alexey M. Bogdanov**, *Archives of Biochemistry and Biophysics*, 766, (2025), 110350.
12. New copper and cobalt complexes based on a fluorinated pyrazole derivative, synthesis, characterization and antibacterial activity, Mina A. Amin, Halide Diker,

Onur Şahin, **Canan Varlikli** and Ahmed A. Soliman, Applied Organometallic Chemistry, (2025), 39:e70140.

13. Quantifying hydrogen bonding using electrically tunable nanoconfined water, Ziwei Wang, Anupam Bhattacharya, **Mehmet Yagmurcukardes**, Vasyi Kravets, Pablo Díaz-Núñez, Ciaran Mullan, Ivan Timokhin, Takashi Taniguchi, Kenji Watanabe, Alexander N. Grigorenko, Francois Peeters, Kostya S. Novoselov, Qian Yang & Artem Mishchenko, Nature Communications, 16, 3447, (2025).
14. Phase transition behavior in ferroelectric BaTi_{0.8}Zr_{0.2}O₃: Evidence of polar cluster reorientation above Curie temperature, **Oktay Aktas**, Francisco Javier Romero, Zhengwang He, Gan Linyu, Xiangdong Ding, José-María Martín-Olalla, María-Carmen Gallardo, Turab Lookman, J. Appl. Phys. 137, 204103 (2025).
15. Fabrication of Flexible Nanoporous Platinum Films Via One-Pot Liquid Crystal Templated Synthesis, Seren Demir, **Pelin Polat**, **Necip Ayhan Tertemiz**, Beyza Vural, Elian Melissa Babahan, **Ozan Baran Orhan**, Nahit Polat, **Sinan Balci**, Fadime Mert Balci, The Journal of Physical Chemistry C, 129, 23, (2025), 10719-10725.
16. High-temperature Bose-Einstein condensation of dark excitons in holey graphyne, Ying Yue, Qiu-Shi Huang, **Hasan Sahin**, Jun Kang, Phys. Rev. B 111, 245420.
17. Elastic and Anelastic Behavior Associated with Structural Transitions in CsPbBr₃, Pingjing Luo, Zhengwang He, Dexin Yang, **Oktay Aktas**, Xiangdong Ding, Xuefeng Zhang, J. Phys. Chem. Lett. (2025), 16, 27, 7100–7106.
18. Electrically controlled heat transport in graphite films via reversible ionic liquid intercalation, Pietro Steiner, Saeed Adnan, M. Said Ergoktas, Julien Barrier, Xiaoxiao Yu, Vicente Orts, Gokhan Bakan, Jonathan Aze, Yury Malevich, Kaiyuan Wang, Pietro Cataldi, Mark Bissett, **Sinan Balci**, Sefik Suzer, Marat Khafizov, Coskun Kocabas, Sci. Adv. 11, 30, (2025) 25.
19. Scalable growth of optically uniform MoWS₂alloys by sulfurization of ultrathin Mo/W stacks, Salvatore Ethan Panasci, Emanuela Schiliro, Antal Koos, **Tayfun Kutlu**, **Hasan Sahin**, Fabrizio Roccaforte, Bela Fecz, Filippo Giannazzo, Materials Science in Semiconductor Processing, 196, (2025), 109648.
20. Benzoxazine-linked porous organic networks for effective iodine capture, Batu Sercan Canturk, Mustafa Erdogmus, Yasmin Gecalp, **Hasan Sahin**, Onur Buyukcakir, New Journal of Chemistry 49.38 (2025): 16625-16634.
21. The Temperature Dependence of Elastic Constants and Zener Anisotropy in Single Crystal KTaO₃ below Room Temperature, C. H. Li, X. D. Ding, M. A. Carpenter, **O. Aktas**, Phys. Solid State 67, 895–904 (2025) .
22. Enabling Fluorescence Lifetime Imaging Multiplexing Using UnaG through Its Modification with Canonical and Noncanonical Amino Acids, Terekhova VV, Bodunova DV, Gorokhov ES, Tsoraev GV, Sidorenko SV, Vasilev RA, Levitskii SA, Kamenski PA, Loktyushkin AV, Kovalchuk SI, Lukashev EP, Bogdanova YA, **Bogdanov AM**, Mulashkina TI, Khrenova MG, Gvozdev DA, Yakimov BP, Shirshin EA, Friedrich T, Budisa N, Stepanov AV, Sluchanko NN, Baranov MS, Maksimov EG, Kirpichnikov MP, ACS Sens. (2025), 10, 9, 6687–6699.
23. Molecular Engineering of Exchange Bias in Fe₃GeTe₂/Molecule Heterostructures, Mayank Sharma, Junhyeon Jo, Garen Avedissian, Bertug Bayindir, Jun Kang, **Hasan Sahin**, Fèlix Casanova, Marco Gobbi, Luis E Hueso, ACS Applied Electronic Materials 7.19 (2025): 9204-9211.

24. Synthesis, characterization, crystal structure, electrochemical and photoluminescence properties, DFT and molecular docking studies, and antimicrobial activities of two mononuclear nickel (II) complexes with Pyrazole-derived ligands, Mina A. Amin, Halide Diker, Onur Şahin, **Canan Varlikli**, Ahmed A. Soliman, Journal of Molecular Structure, 1342, (2025), 142763.
25. Dimensionality Effects in Anisotropic Single Layers TiSe5 and TiTe5: A Comparative Study of 2D Sheets and 1D Nanochains, Kadir Can Can Doğan, **Ömer Kutay Tamdoğan, Yağmur Bozkurt**, Zebih Cetin, **Mehmet Yagmurcukardes**, J. Phys.: Condens. Matter 38 015307.
26. A comparative study on hydroxyl and ether functionalized ionic liquid additives for defect passivation and stability in perovskite solar cells, Sirin Siyahjani-Gultekin, Sevdije Basak Turgut, Saliha Ozdemir, Burak Gultekin, **Canan Varlikli**, Phys. Chem. Chem. Phys., 2025,27, 22637-22651.
27. Ferromagnetism above 200 K in organic-ion intercalated CrSBr, Sofia Ferreira-Teixeira, Daniel Tezze, Maria Ramos, Covadonga Álvarez-García, Bertuğ Bayındır, Junhyeon Jo, Beatriz Martín-García, Maider Ormaza, Fèlix Casanova, Samuel Mañas-Valero, Eugenio Coronado, **Hasan Şahin**, Luis E. Hueso, Marco Gobbi, ACS Nano 2025, 19, 41, 36275–36284.
28. Chloroaluminum phthalocyanine loaded bovine serum albumin nanoparticles as a dual-functional nanoplatform for sono-photodynamic cancer therapy, **Cansu Akyol-Karpuzcu**, Eylem Doga Nartas, Gizem Calibasi-Kocal, Yasar Akdogan, International Journal of Biological Macromolecules (2025): 149941.

Presentations at conferences

1. **Oktay Aktaş**, "Ferroelektriklerin Paraelektrik Fazında Elektriksel Olarak Yönlendirilmesi", XII. Yoğun Madde Fiziği (YMF) – İzmir Toplantısı, 9 May 2025, Izmir Institute of Technology, Izmir, Türkiye (O).
2. **Hasan Şahin**, "Nanomalzemelerde Simülasyondan Gerçeğe: Teorinin Gücü", XII. Yoğun Madde Fiziği (YMF) – İzmir Toplantısı, 9 May 2025, Izmir Institute of Technology, Izmir, Türkiye (O).
3. **Kübra Aras**, Merve Ekmekcioglu, Sinan Eroglu, Sevval Nazlıcan Basal, Lütfi Özyüzer, Mehtap Özdemir, "Design and Optimization of Anti-Reflection Coatings for 4.6 µm Mid-Infrared Quantum Cascade Lasers", XII. Yoğun Madde Fiziği (YMF) – İzmir Toplantısı, 9 May 2025, Izmir Institute of Technology, Izmir, Türkiye (O).
4. Sinan Eroğlu, **Kübra Aras**, Şevval Nazlıcan Başal, Yasemin Demirhan, Mehtap Özdemir, Lütfi Özyüzer, "Design and Microfabrication of Mesa Structures for Quantum Cascade Lasers", XII. Yoğun Madde Fiziği (YMF) – İzmir Toplantısı, 9 May 2025, Izmir Institute of Technology, Izmir, Türkiye (P).
5. Nurcin Karadeniz, Merve Ekmekcioglu, **Kübra Aras**, Sanem Demirbas, Hatice Eker, Metin Kaya, Mehtap Ozdemir, Lutfi Ozyuzer, "222 nm Bandpass Optical Filters for Far-UVB Dielectric Barrier Discharge Excimer Light Sources", XII. Yoğun Madde Fiziği (YMF) – İzmir Toplantısı, 9 May 2025, Izmir Institute of Technology, Izmir, Türkiye (P).
6. **M. Barbiër**, G. Makey, Ö. Yavuz, Ü. S. Nizam, S. K. Ilday, "Laser-steering of Pattern Aggregation & Configurations", 5th International Conference on Light and Light-based Technologies (ICLLT-5), 15–17 May 2025, Gazi University, Ankara, Türkiye (O).
7. **Cansu Akyol Karpuzcu**, Yasar Akdogan, "Development of ClAlPc-Loaded BSA Nanoparticles for Dual Action Against Cancer via Photodynamic and Sonodynamic

Mechanisms", 5th International Conference on Light and Light-based Technologies (ICLLT-5), 15–17 May 2025, Gazi University, Ankara, Türkiye(O).

8. **Cansu Akyol Karpuzcu**, Yasar Akdogan, "Synthesis of CIAIPc-Loaded BSA Nanoparticles with Dual Photodynamic and Sonodynamic Effects on Cancer Cells", 11th World Congress on New Technologies (NewTech'25), August 2025, Paris, France (O).
9. **K. Aras**, S. Eroglu, S. N. Basal, Y. Demirhan, M. Ozdemir and L. Ozyuzer, "Etching-Based Mesa Formation for Quantum Cascade Laser Waveguides", X International School and Conference on Photonics, 25-29 August 2025, Institute of Physics Belgrade, Belgrade, Serbia (O).
10. M. Ozdemir, **K. Aras**, S. Eroğlu, M. Ekmekcioglu and L. Ozyuzer, "Optimized AR Facet Coatings for 4.6 μm QCLs in Directed Infrared Countermeasures ", X International School and Conference on Photonics, 25-29 August 2025, Institute of Physics Belgrade, Belgrade, Serbia (O).
11. Y Demirhan, **NA Tertemiz**, **S Balcı**, H Altan, G Aygün, L Özyüzer, "Graphene Based Plasmon-Induced Terahertz Metamaterial for High-Performance Multispectral Detecting", " , X International School and Conference on Photonics, 25-29 August 2025, Institute of Physics Belgrade, Belgrade, Serbia (O).
12. **Umut Baran Gunduz**, **Hakan Bozkurt**, **Canan Varlikli**, "Plasmon-Enhanced Light Extraction in OLEDs by Silver Nanoparticle Interlayers at Anode-HTL Interfaces", 19th Nanoscience & Nanotechnology Conference (NANOTR-19), 26-29 August 2025, Middle East Technical University, Ankara, Türkiye (P).
13. **Bugra Sen**, Halide Diker, **Canan Varlikli**, "ZnO Nanorod Arrays Hybridized with Amine Modified Graphene Oxide for Photonic Application Platforms", 19th Nanoscience & Nanotechnology Conference (NANOTR-19), 26-29 August 2025, Middle East Technical University, Ankara, Türkiye (P).
14. **Irem Sacin**, **Hakan Bozkurt**, Erkan Aksoy, **Canan Varlikli**, "Fabrication and Characterization of Photodetectors Based on P3HT:Perylenediimide:PCBM Active Layer", 19th Nanoscience & Nanotechnology Conference (NANOTR-19), 26-29 August 2025, Middle East Technical University, Ankara, Türkiye (O).
15. **Umut Baran Gunduz**, **Hakan Bozkurt**, **Canan Varlikli**, "Preliminary Experimental Results on the Use of Silver Nanoparticle Interlayers in OLEDs", Talks on Photonics Science and Technology @IZTECH (IZPHOTECH'25), 21-22 October 2025, Izmir Institute of Technology, Izmir, Turkey (P).
16. **Uğur Cem Gürses**, **Hakan Bozkurt**, **Canan Varlikli**, "Light Manipulation in PMMA Metasurface Waveguides: A Simulation-Based Study", Talks on Photonics Science and Technology @IZTECH (IZPHOTECH'25), 21-22 October 2025, Izmir Institute of Technology, Izmir, Turkey (P).
17. **Irem Sacin**, **Hakan Bozkurt**, Erkan Aksoy, **Canan Varlikli**, "Enhanced Broadband Organic Photodetectors Based on a P3HT:PDI:PCBM Ternary Bulk Heterojunction", Talks on Photonics Science and Technology @IZTECH (IZPHOTECH'25), 21-22 October 2025, Izmir Institute of Technology, Izmir, Turkey (O).
18. **Alexey Bogdanov**, "How to Write a Good Abstract?", Talks on Photonics Science and Technology @IZTECH (IZPHOTECH'25), 21-22 October 2025, Izmir Institute of Technology, Izmir, Turkey (O).
19. **Cem Demir**, **Alexey Bogdanov**, "Fluorescence Lifetime Variations of Blue and Green Fluorescent Proteins upon 'Stokes' and 'Anti-Stokes' Excitation/Detection", Talks on Photonics Science and Technology @IZTECH (IZPHOTECH'25), 21-22 October 2025, Izmir Institute of Technology, Izmir, Turkey (O).
20. **Rabia Nur Bilgin**, **Michael Barbiër**, "Developing a Machine Learning System for Cough Detection and Humidity Optimization Based on Circadian Time", Talks on Photonics Science and Technology @IZTECH (IZPHOTECH'25), 21-22 October 2025, Izmir Institute of Technology, Izmir, Turkey (P).

21. **Bedri Hızkan, Alexey Bogdanov**, Targeting Distinct Photodegradation Pathways in OLED Materials with Antifader Additives, Talks on Photonics Science and Technology @IZTECH (IZPHOTECH'25), 21-22 October 2025, Izmir Institute of Technology, Izmir, Turkey (O).
22. **Doğukan Tutar, Mehmet Yağmurdokardeş**, "Identification of Monolayer Cu-Sc-S Phases via Electronic and Optical Properties", Talks on Photonics Science and Technology @IZTECH (IZPHOTECH'25), 21-22 October 2025, Izmir Institute of Technology, Izmir, Turkey (P).
23. **Eylül Çağla Ersöz, Hakan Bozkurt, Canan Varlıkl, Gonyofotometre Düzenegi Geliştirilmesi ve LED Fotometrik Karakterizasyonu Ölçümü, VIII. Elektrik Tesisleri Ulusal Kongre ve Sergisi – XII. Ulusal Aydınlatma Sempozyumu, Tepekule Kongre ve Sergi Merkezi, İzmir, 23 Ekim 2025 (O).**

Academical Awards

- In a bibliometric study conducted by *Stanford University in collaboration with Elsevier*, covering 22 main fields and 174 subfields, **Prof. Dr. Hasan ŞAHİN** and **Assoc. Prof. Dr. Mehmet Yağmurdokardeş** were included in the **World's Top 2% Scientists list**, which ranks researchers based on standardized citation indicators.
- **Assoc. Prof. Dr. Mehmet Yağmurdokardeş** was awarded the **49th Sedat Simavi Award in Natural Sciences**, one of Türkiye's most prestigious scientific honors.
- **Assoc. Prof. Dr. Mehmet Yağmurdokardeş** became a **Türkiye Finalist** in the **Ten Outstanding Young Persons (TOYP) program** organized by the Junior Chamber International (JCI).
- **Assoc. Prof. Dr. Mehmet Yağmurdokardeş** was awarded the "**Prof. Dr. Engin Arık Scientist Award**" within the scope of the Turkish Physical Society (TFD) Science Awards 2025.
- **Prof. Dr. Canan Varlıkl** and **Assoc. Prof. Dr. Mehmet Yağmurdokardeş**, who are among the **most prolific academic staff members** of IZTECH-Faculty of Science, received **Certificates of Appreciation** from Rector Prof. Dr. Yusuf Baran
- **Res. Assist. Metin Tan** received **first place in the IZTECH Sustainable Green Campus: Nature Photography Contest**.

Meetings and Social Activities

DATE	PERSON	ACTIVITY
JAN 20-24	Canan Varlıklı, Hakan Bozkurt, Metin Tan	High School Science Camp
APR 27	Canan Varlıklı, Hakan Bozkurt, Buğra Şen, Umut Baran Gündüz, Metin Tan, Sena Kavas, Ilgın Şerifoğlu, Ozan Deniz Ağuş, Ömer Faruk Yiğit, Velican Ege Koç, İclal Arabacıoğlu, Tuğçe Aytaş	İYTE Çocuk Şenliği
JULY 21 - AUG 1	Canan Varlıklı, Metin Tan	High School Science Camp on Entrepreneurship and Innovation
SEP 15-19	Ilgın Şerifoğlu, Ozan Deniz Ağuş	Geleceğin Işığı: Bilimle Tanışma (Çiğli Yunus Emre İlkokulu, Karşıyaka Fatma Neşe Kaya İlkokulu)
SEP 17-21	Mehmet Yağmucukardeş	Teknofest İstanbul
OCT 21-22	Canan Varlıklı, Hasan Kılınç, Sümeyye Meryem Çöpür, Michael Barbiër, Oktay Aktaş, Kuvılcım Yüksel Aldoğan, Metin Tan, Hakan Bozkurt, Yağız Oyun, Buğra Şen, Umut Baran Gündüz, Ilgın Şerifoğlu, Ozan Deniz Ağuş, Velican Ege Koç, Mehmet Akın Akyüz, Ömer Özdoğan, Ege Köseoğlu, Ayşe Sema Sandal, Ömer Faruk Yiğit, Efe Konuk	Celebration of Day of Photonics: Talks on Photonics Science and Technologies@IZTECH (IZPHOTECH)'25
DEC 11	Canan Varlıklı	Işığın Maddeyle Dansı: Fotonik Bilimi ve Mühendisliği, İYTE Bilgelik Akademisi (Dance of Light with Matter: Photonics Science and Eng., IZTECH Academy of Wisdom)
DEC 11-12	Cansu Akyol-Karpuzcu, Eray Ceyhan, Metin Tan, Yağız Oyun	İYTE Tanıtım Günleri

Seminars

<i>Date</i>	<i>Speaker</i>	<i>Title</i>
<i>Feb 22</i>	Uğur Teğın	Karmaşık ve Doğrusal Olmayan Dinamikler ile Yeni Nesil Fotonik Sinir Ağları
<i>Mar 11</i>	Sezin Galiolu Özaltuğ	Ultrahızlı Lazerler ile Nanogözenekli Malzemelerin Sentezi
<i>Mar 22</i>	Ali Özgür	Holografi ne değıildir?
<i>Mar 13</i>	Fırat Es	Silisyum Tabanlı FV Teknolojiler
<i>Apr 8</i>	Ozan Aktaş	Laser processing of semiconductor materials for integrated photonics
<i>Apr 14</i>	Murat Aydemir	Hyperfluorescent OLEDs: A New Paradigm in Light Emission
<i>Apr 21</i>	Ali Rostami	Integrated Optical Quantum Technology: Quantum Full Adder
<i>May 6</i>	Çağlar Çetinkaya	Fotonik ve Optoelektronik Aygıtlarda Işık Yönetimi Tabanlı Tasarımlar için Yeni Bir Yöntem: Pekiştirmeli Öğrenme Yaklaşımı
<i>Jun 14</i>	Begüm Kabagöz	Kesinlik Arayışı: LIGO Kuantum Gürültüsü
<i>Aug 26</i>	Babak Olyaeefar	Materials to Devices in Photonics: A journey from modulators to sensors, concentrators, and diode lasers
<i>Sep 15</i>	Olcaı Üzenı Aktürk	Defects and Quantum Phenomena in Low-Dimensional Materials
<i>Oct 15</i>	M. Barış Düzgün	Following the Change
<i>Oct 21</i>	Koray Aydın	New Horizons in Photonics with Metasurfaces: Imaging, Sensing, and Quantum Applications
<i>Oct 21</i>	Liangcai Cao	Intelligent Photonics: A Disruptive Technology to Shape the Present and Redefine the Future
<i>Oct 21</i>	Ümit Demirbaş	Periodically Poled, Precisely Tuned: Building Better Narrowband THz Sources for Guiding Lattice Motion
<i>Oct 21</i>	Yalçın Ata	From Writing to Publication: Preparing and Navigating the Research Article Process
<i>Oct 21</i>	Alexey Bogdanov	On the Ethical Aspects of Scientific Publication
<i>Oct 22</i>	Yashar A. Kalandaragh	Advances in Super-Resolution Optical Microscopy and Tunable Microlens Array (Tunable MLA) Fabrication
<i>Oct 22</i>	Mehmet Berkay Ön	Optics Enable Future Neuromorphic Computings
<i>Oct 22</i>	Sezin Galiolu Özaltuğ	Engineering Zeolites with Ultrafast Lasers: Insights into Gas Adsorption and Titanium Substitution
<i>Oct 22</i>	Cahit Yeşilyaprak	Space Sciences Ecosystem: Türkiye National Observatories
<i>Oct 22</i>	Kadir Durak	Entanglement-Enabled Quantum Timing and Navigation
<i>Oct 22</i>	Ozan Arı	Nonlinear Quantum Light Sources for Quantum Technology Applications
<i>Oct 22</i>	Sercan Özen	Understanding Performance and Stability of Perovskite-based Multi-Junction Solar Cells for Space Applications

Oct 22	Alper Yanılmaz	Future-Ready Display Solutions: From Lab to Market
Nov 25	Ferda Canbaz	Akıllı Cerrahi Uygulamalar İçin Lazer Işığının Şekillendirilmesi
Dec 13	Natali Sözüdoğru	Lazer-Madde Etkileşimi: Temel Kavramlar, Örnekler ve Gelişmekte Olan Teknolojiler
Dec 23	Tunçer Baykaş	IEEE Türkiye ve Işıklı Haberleşme Standartları

Guest Visits

Visits/Online Visits at IZTECH

- Fırat Es, MEM Solar, Mar 13
- Ozan Aktaş, University of Cambridge, UK, Apr 8
- Murat Aydemir, Erzurum Technical University, Türkiye Apr 14
- Ali Rostami, University of Tabriz, Iran, Apr 21
- Denizli Nalan Kaynak Anadolu Lisesi, May 21
- Salih Çepni, Umut Aydemir and Azize Malay, Bursa Uludağ University, Türkiye, Aug 6
- Babak Olyaeefar, Bilkent University, Türkiye, Aug 26
- Olcay Üzengi Aktürk, Adnan Menderes University, Türkiye, Sep 15
- Barış Düzgün, Asisguard, Oct 15
- Zübeyde Hanım Lisesi, Oct 17
- Koray Aydın, Northwestern University, Evanston, IL, USA, Oct 21-22
- Ümit Demirbaş, Antalya Bilim University, Türkiye / Paul Scherrer Institute, Switzerland, Oct, 21-22
- Liangcai Cao, Tsinghua University, China, Oct 21
- Ozan Arı, Hacettepe University, Türkiye, Oct 22
- Sezin Galioglu Özaltuğ, Bilkent University, UNAM, Türkiye, Oct 21-22
- Yashar Azizian-Kalandaragh, Gazi University, Türkiye, Oct 21-22
- Cahit Yeşilyaprak, Türkiye National Observatories, Oct 22
- Mehmet Berkay Ön, Hewlett Packard Enterprise, Oct 22
- Kadir Durak, Ozyegin University, Türkiye, Oct 22
- Sercan Özen, Potsdam University, Germany, Oct 21-22
- Alper Yanılmaz, Vestel, Oct 22
- Yann Amouroux, OPTICA, Oct 21-22
- Yalçın Ata, OSTIM Technical University, Türkiye, Oct 21

Visits/Online Visits at other institutions

- EGE Career Fair 2025 Launch and Preparation Workshop Meeting, Manisa Celal Bayar University, Manisa, Jan 17
- Center for Solar Energy Research and Applications, Middle East Technical University, Ankara, Feb 22-25
- APS Joint March Meeting and April Meeting: Global Physics Summit 2025, California, USA, Mar 14 – 23
- Instituto de Ciencia de los Materiales de Madrid, Madrid, Spain, Mar 28 – Apr 8
- Trabzon University, Trabzon, Apr 25 – 27
- ICLLT 2025, Gazi University, Ankara, May 15-17
- University of Antwerp, Antwerp, Belgium, Jun 15 – 23
- Humboldt University of Berlin, Berlin, Germany, Jun 22 – 28
- National Nanotechnology Research Center, Bilkent University, Ankara, Jun 23
- ICNFA 2025, Paris, France, Aug 20-23
- X International School and Conference on Photonics, Belgrad, Serbia, Aug 24 – 28
- NanoTR19, Middle East Technical University, Ankara, Aug 26-29
- TEKNOFEST, İstanbul, Sep 17 – 21
- BOSCH Home Comfort Group, Manisa, Sep 29
- Department of Physics & Materials Research Center, American University of Sharjah, Sharjah, UAE, Sep 27, 2025 – Sep 26, 2026
- Optica Student Leadership Program and Frontiers in Optics, Denver, USA, Oct 26
- HAVELSAN, Ankara, Türkiye, Dec 26
- TUSAŞ, Ankara, Türkiye, Dec 26

Agreements

<i>Organization</i>	<i>Country</i>	<i>Title</i>
Gazi University Department of Photonics	Türkiye	Cooperation Agreement
Johannes Kepler Universität Linz	Austria	Erasmus Agreement
Politecnico di Bari	Italia	Erasmus Agreement
University of Peloponnese	Greece	Erasmus Agreement
Vrije Universiteit Brussel	Belgium	Erasmus Agreement

Diploma thesis-dissertations

Thesis in preparation

PhD

- C**** A**** K*****, Preparation of Photosensitizer Loaded Nanoparticles and Monitoring Radical Forming by EPR, Supervisor: Prof. Dr. Yaşar Akdoğan, 2021 –
- E*** C*****, Plasmonic Nanoparticle-Two Dimensional (2D) Material Coupling for Next Generation Field-Effect Devices, Supervisor: Prof. Dr. Cem Çelebi, 2025 –
- H***** İ*****, Development of Standards for Some Emerging Photovoltaic Mini Modules Used in Internet of Things Applications, Supervisor: Prof. Dr. Canan Varlıklı, 2021 –
- K**** A****, Novel Antireflective Coatings for High Power Quantum Cascade Lasers, Supervisor: Prof. Dr. Lütfi Özyüzer, 2023 –
- M**** T**, Nonlinear Optical Properties of Plexcitonic Systems, Supervisor: Prof. Dr. Sinan Balcı, 2023 –
- V**** B*****, Light-Matter Interaction in Plasmonic Cavities, Supervisor: Prof. Dr. Sinan Balcı, 2022 –
- Y**** O****, Inverse Optical Design in Low Dimensional Materials, Supervisor: Prof. Dr. Canan Varlıklı, 2025 –
- Y***** B*****, Effect of Dimensional Reduction on Electronic, Magnetic, and Vibrational Properties of Low Dimensional Materials, Supervisor: Assoc. Prof. Dr. Mehmet Yağmucukardeş, 2023 –

MSc

- B**** Ş**, Solution Processed Carbon-Based Broadband Photodetector, Supervisor: Prof. Dr. Canan Varlıklı, 2024 –
- B**** B*****, Mechanical Properties of Two-Dimensional Single Layer, Supervisor: Assoc. Prof. Dr. Mehmet Yağmucukardeş, 2025 –
- D***** T****, Elastic and Optical Properties of Multiferroic Oxides, Supervisor: Assoc. Prof. Dr. Oktay Aktaş, 2025 –
- E*** K*****, Fabrication and Analysis of Quantum Dot-Doped Fibers, Supervisor: Prof. Dr. Canan Varlıklı, 2024 –
- E**** B*****, Optimization of FMCW LiDAR Systems for Autonomous Vehicles Using Quantum Dot Based Photodetectors, Supervisor: Asst. Prof. Dr. Michael Barbiër, 2025 –
- E***** Y*****, Piezoelectric and Luminescent Properties of Lead-Free Bismuth-Containing Piezoelectrics, Supervisor: Assoc. Prof. Dr. Oktay Aktaş, 2025 –
- P**** P****, Light-Matter Interaction in Optical Cavity, Supervisor: Prof. Dr. Sinan Balcı, 2022 –
- Ş*** B*****, Strain Dependent Electronic and Vibrational Properties of MX₃ (M=Cr, V, X=Cl, Br, I) Metal Halides, Supervisor: Assoc. Prof. Dr. Mehmet Yağmucukardeş, 2024 –
- V***** P*****, Fano Resonances in Plexciton Interactions, Supervisor: Prof. Dr. Sinan Balcı, 2024 –
- U*** B**** G*****, Enhancing OLED Performance with Plasmonic Effect of Silver Nanoparticles, Supervisor: Prof. Dr. Canan Varlıklı, 2025 –

Thesis completed

BSc

- A**** M**** Ö****, Defect Effects in α -Tilted Bismuthene: A First-Principles Study, Supervisor: Assoc. Prof. Dr. Mehmet Yağmucukardeş

- A***** B*****, *Tyson Shadow: Real-Time Reflex and Blocking Training System for Combat Sports*, Supervisor: Prof. Dr. Canan Varlıklı
- A** Y***, *Nocturnal Cough Monitoring and Treatment System Integrating Humidity and Lighting Conditions of the Patient's Environment*, Supervisor: Asst. Prof. Dr. Michaël Barbier
- B***** J*****, *Simulation of Lift-Off via Laser Ablation in Metal-on-Substrate Thin Films Using the Two-Temperature Model*, Supervisor: Asst. Prof. Dr. Michaël Barbier
- B***** E*****, *Designing a nanotool for cancer theranostics based on organism-wide immune tolerome mapping*, Supervisor: Assoc. Prof. Dr. Alexey Bogdanov
- C** D*****, *Fluorescence lifetime variations of blue and green fluorescent proteins upon 'Stokes' and 'Anti-Stokes' excitation/detection*, Supervisor: Assoc. Prof. Dr. Alexey Bogdanov
- D***** T*****, *Identification of Monolayer Cu-Sc-S Phases via Electronic and Vibrational Properties*, Supervisor: Prof. Dr. Hasan Şahin
- E***** Y*****, *Numerical Simulation of Spectral Hong–Ou–Mandel Interference in Stratified Optical Media*, Supervisor: Asst. Prof. Dr. Michaël Barbier
- J*** S*****, *Fabrication and Characterization of Photodetectors Based on P3HT:PCBM and P3HT:Perylene:PCBM Active Layers*, Supervisor: Prof. Dr. Canan Varlıklı
- Ö*** K**** T*****, *Dimensionality Effects in TiX₅: A Comparative Study of 2D Sheets and 1D Nanochains*, Supervisor: Assoc. Prof. Dr. Mehmet Yağmırkardaş
- R**** N** B*****, *Personalized Real-Time Humidity Optimization for Respiratory Diseases Based on Cough Detection and Circadian Time*, Supervisor: Asst. Prof. Dr. Michaël Barbier
- S***** Ö*****, *Simulation-Based Optimization of LED Arrangement and Diffuser Configuration in a Multi-Spectral Display for Home Light Therapy*, Supervisor: Prof. Dr. Canan Varlıklı
- U*** C** G*****, *Simulation of Light Propagation in Metasurface-Integrated PMMA Waveguides Using Tidy3D*, Supervisor: Prof. Dr. Canan Varlıklı
- Y***** D**** A*****, *Volume Grating-Based Simulation and Optimization for AR Waveguides*, Supervisor: Asst. Prof. Dr. Michaël Barbier
- Y**** G*****, *Grid-Search-Based Optimization for Designing Single-Layer Broadband Achromatic Metalenses*, Supervisor: Asst. Prof. Dr. Michaël Barbier
- Z***** E***, *Optoelectronic Properties of Strain-Tunable NbOCl₂ Monolayers*, Supervisor: Assoc. Prof. Dr. Mehmet Yağmırkardaş
- Z***** K***, *Design and Synthesis of Palladium-BODIPY Complex as Efficient Photosensitizer for Photodynamic Therapy*, Supervisor: Prof. Dr. Mustafa Emrullahoğlu
- Z***** S*****, *Predicting Laser-Induced Graphene Properties: A Machine Learning and Deep Learning Approach*, Supervisor: Prof. Dr. Canan Varlıklı

MSc

- O** B**** O*****, *Plasmonic Nanocavity Engineering for Weak and Strong Light-Matter Interaction*, Supervisor: Prof. Dr. Sinan Balcı, 2024 – 2025
- T***** K****, *Inorganic Layered van Der Waals Materials: A First-Principles Investigation*, Supervisor: Prof. Dr. Hasan Şahin, 2024 – 2025

PhD

- H***** B*****, *Investigation of VOLET Stability Induced by Dielectric and Semiconductor Materials Used in the Structure*, Supervisor: Prof. Dr. Canan Varlıklı, 2020 – 2025
- N**** A**** T*****, *Design, Fabrication, and Optical Characterization of Thin Film Devices Based on MoS₂, MoO₃, WO₃*, Supervisor: Prof. Dr. Sinan Balcı, 2021 – 2025

BSc Graduates

A**** M**** Ö***	I*** S****	Y***** D**** A*****
B**** E*****	Ö*** K**** T*****	Z***** K***
D***** T****	S***** Ö****	Z***** S*****
E***** Y*****	S***** E** B*****	Z**** A*****
E**** Ç**** E****	U*** B**** G*****	

Teaching

Graduate

2024-2025 Spring Course	Name of Lecturer	Credit/ ECTS
PHOT 501 Seminar	C. Varlıkl	(0-2) NC / 7
PHOT 502 Fundamentals of Photonics I	S. Balcı	(2-2) 3 / 9
PHOT 504 Quantum Photonics I	H. Şahin	(2-2) 3 / 9
PHOT 508 Mathematical Methods in Photonics	M. Yağmırcukardeş	(3-0) 3 / 7
PHOT 510 Ethical Issues in Research Methods	A. Bogdanov	(0-2) NC / 7
PHOT 518 Low-dimensional Materials	H. Şahin	(3-0) 3 / 7
PHOT 531 Biophotonics	A. Bogdanov	(3-0) 3 / 7
PHOT 601 Seminar	C. Varlıkl	(0-2) NC / 7
2025-2026 Fall Course	Name of Lecturer	Credit/ ECTS
PHOT 501 Seminar	C. Varlıkl	(0-2) NC
PHOT 502 Fundamentals of Photonics I	S. Balcı	(2-2)3
PHOT 503 Fundamentals of Photonics II	S. Balcı	(3-0)3
PHOT 504 Quantum Photonics I	M. Barbiér	(2-2)3
PHOT 508 Mathematical Methods in Photonics	M. Yağmırcukardeş	(3-0)3
PHOT 522 Optical Spectroscopy	O. Aktaş	3-0)3
PHOT 532 Medical Photonics	A. Bogdanov	(3-0)3
PHOT 534 Principles and Applications of Photochemical Biosensors	A. Bogdanov	(3-0)3

Undergraduate

2024-2025 Spring Course	Name of Lecturer	Credit/ ECTS
PHOT 110 Introduction to Programming	M. Barbier	(3-0) 3 / 5
PHYS 102 General Physics II	G. Aral	(2-2) 3 / 6
PHYS 112 General Physics Laboratory II	G. Aral	(0-2) 1 / 2
CHEM 122 General Chemistry II	Y. E. Göl	(3-0) 3 / 5
CHEM 142 General Chemistry Lab. II	Y. E. Göl	(0-2) 1 / 2
MATH 142 Basic Calculus II	B. Çiçek	(3-2) 4 / 6
GCC 101 Career Planning and Development	E. Çallıoğlu	(2-0) 2 / 2
ENG 102 Dev. of Reading and Writing Skills II	S. Başar,	(3-0) 3 / 3
	İ. M. Karabulut,	
	T. Karaulutaş	
PHOT 202 Fund. of Optics and Photonics II	S. Balcı	(4-0) 4 / 7
PHOT 212 Fund. of Optics and Photonics Lab. II	S. Balcı	(0-4) 2 / 6
PHOT 222 Fund. of Quantum Photonics	M. Barbier	(2-2) 3 / 7
PHOT 232 Mathematical Methods in Photonics II	M. Yağmırcukardeş	(2-2) 3 / 7
HIST 202 Principles of Atatürk II	M. İter	(2-0) NC/ 2
TURK 202 Turkish Language II	Y. Gönülal	(2-0) NC/ 2
PHOT 304 Solid State Optics	H. Şahin	(3-0) 3 / 5
PHOT 320 Optoelectronics	K. Y. Aldoğan	(3-0) 3 / 5
PHOT 322 Optoelectronics Lab.	C. Varlıkl	(0-4) 2 / 5
PHOT 332 Molecular Photonics II	M. Emrullahoğlu	(3-0) 3 / 5

PHOT 411 Numerical Methods in Photonics	M. Barbier	(3-0) 3 / 5
PHOT 444 Photonics in Nanotechnologic Energy Applications	C. Varlıklı	(3-0) 3 / 5
PHOT 449 Density Functional Theory for Photonics	H. Şahin	(3-0) 3 / 5
PHOT 498 Graduation Project	C. Varlıklı	(0-6) 3 / 10
	M. Barbier	
	H. Şahin	
	A. Bogdanov	
	M. Yağmırcukardeş	
PHOT 499 Cooperative Education Course	C. Varlıklı	(0-6) 3 / 5

2025-2026 Fall Course

Course	Name of Lecturer	Credit/ECTS
PHOT 100 Introduction to Photonics	M. Yağmırcukardeş	(3-0) 3 / 5
PHOT 100 Introduction to Photonics	M. Yağmırcukardeş	(3-0) 3 / 6
PHYS 101 General Physics I	E. Tarhan	(4-0) 4 / 5
PHYS 111 General Physics Laboratory I	G. Güler	(0-2) 1 / 2
CHEM 121 General Chemistry I	A. Çağır	(3-0) 3 / 5
CHEM 141 General Chemistry Lab. I	A. Çağır	(0-2) 1 / 2
MATH 101 Precalculus	B. Çiçek	(2-0) NC/2
MATH 141 Calc. for Engineering and Science I	B. Çiçek	(3-2) 4 / 5
ENG 101 Dev. of Reading and Writing Skills I	M. Çalışkan,	(3-0) 3 / 3
	C. A. Calabria	
PHOT 201 Fund. of Optics & Photonics I	S. Balcı	(4-0) 4 / 5
PHOT 211 Fund. of Optics & Photonics Lab I	H. Özkan	(0-4) 2 / 5
MATH 241 Calculus III	G. Şahan	(3-2) 4 / 5
MATH 255 Differential Equations	G. Şahan	(4-0) 4 / 6
HIST 201 Principles of Atatürk I	M. İler	(2-0) NC/2
TURK 201 Turkish Language I	Y. Gönülal	(2-0) NC/2
PHOT 301 Quantum Photonics	M. Barbiër	(2-2) 3 / 5
PHOT 313 Electromagnetic Waves for Photonics	M. Yağmırcukardeş	(3-0) 3 / 5
PHOT 321 Applied Electronics	K. Y. Aldoğan	(2-2) 3 / 5
PHOT 331 Molecular Photonics I	C. Varlıklı	(3-0) 3 / 5
PHOT 400 Summer Internship I	C. Varlıklı	(0-2) 1 / 5
PHOT 401 Internship II	C. Varlıklı	(0-2) 1 / 5
PHOT 412 Introduction to Biophotonics	A. Bogdanov	(3-0) 3 / 5
PHOT 421 Introduction to Lasers	S. Balcı	(3-0) 3 / 5
PHOT 431 Modern Methods in Spectroscopy	O. Aktaş	(3-0) 3 / 5
PHOT 451 Microscale Optical System Design	M. Barbiër	(2-2) 3 / 5
PHOT 490 Research Project	O. Aktaş,	(3-0) 3 / 5
	S. Balcı,	
	M. Barbiër,	
	A. Bogdanov,	
	C. Varlıklı,	
	M. Yağmırcukardeş	

Students

Photonics Science and Engineering Graduate Program

PhD

C**** A**** K*****	K**** A***	Y**** O***
E** C*****	M**** T**	Y***** B*****
H***** I****	V***** B*****	

MSc

B**** Ş**	E**** B****	S**** D****
B**** B*****	E***** Y*****	Ş*** B****
D***** T****	O*** B**** O****	U*** B**** G*****
E*** K*****	P**** P****	V***** P*****

Photonics Undergraduate Program

Prep Class

A**** E** A****	E**** Y****	M*** D****
A**** K**	E** K*****	M*** E** I**
A** E*****	E** C*****	M* I***** A*****
A** E****	E**** A*****	M***** U**
A** M**** A**	I*** G**	O*** K*****
A** H*****	I***** K**** Ö****	P**** M** B****
B**** T*****	I***** S**** G****	S**** A**** D*****
B**** Ş***** Y*****	I*** Ç**** Y****	T***** K*** K*****
B**** T****	K***** K****	U*** D*** S****
B**** Ş****	M**** A** E****	U***** Ö**
D**** Ü**	M**** A** T*****	Y*** E** G****
D**** G*****	M**** E** B**	Z**** K*****
E*** A**		

1st Grade

A***** S*****	E** K**	M*** A** C*****
A***** A****	E** K*****	M**** E*** E**
A***** Y*****	E***** D****	M***** E*** K*****
A** D*** A*****	E**** A** K*****	M***** E*** L**
A** E** A**	E** S****	M***** K*****
B**** A*** Ç****	F**** K*****	N** D*** Ö*****
B**** A*****	G***** Y****	N**** Y*****
B**** A****	G**** Y****	O*** P****
B** T****	H*** S**** Ç****	O***** G****
B** S*****	H*** S*****	Ö*** K*****
C**** Ö*****	H**** B*****	Ö**** Ö*****
C** M****	H***** A**	R**** Ç*****
Ç**** A**	H**** B**	R** A*****
D**** K****	H***** A*****	S*** M** S***
D**** S*****	H***** K****	S**** S* U**
D**** S*****	I**** T****	S** N** O**
D**** Ö**	I**** Ç****	U*** T*****
D**** Ş****	K*** U*****	U*** Ü**
D**** Ö**	K**** D*****	Y*** A****
E** I****	M**** D****	Y*** D*****
E** K****	M**** A** A****	Y*** B***** A****
E** S** D*****		

2nd Grade

A *** E***** Ö*****	E** K*****	N**** K*****
A *** E****	E** T*****	O***** K***
A**** B*****	E*** Ö***	O*** Y****
A***** T*****	E*** A** Ç*****	Ö*** Y***** B****
B*** E*** Ç*****	E*** Ç****	Ö*** F**** Y****
B**** B*****	F**** K*****	Ö*** Ö*****
B**** E** U***	H**** K*****	S*** K****
B**** E** Y*****	H**** B*****	S**** B**** Y*****
C**** B*****	İ**** Ş**** O*****	T**** A****
D**** S*****	İ*** Ö*****	Y**** S***** K**
D** A*****	K**** İ***	Y***** E** B*****
D***** A**	M**** A***** D*****	Y**** D**
D***** B*****	M**** Z*** Ç*****	Y**** E** G****
E** Ö****	M*** Ö****	Z***** G*****
E** G*****	N*** Ü****	Z***** Ş*****
E** K****	N**** Ç*****	

3rd Grade

A**** T*****	H**** K*****	R**** F***** A*****
A** T**	İ**** Ş*****	S**** T*** E*****
A** S*** S*****	İ**** A*****	S***** C*** Ö*****
B*** Ö***	M***** A****	S**** B*****
B*** K****	M**** A***** Ş*****	S*** S*****
D**** D****	M***** T****	U*** D****
E** H***** Ç*****	O***** D*****	V***** E** K**
F***** D*** Ş*****	O*** D**** A**	Y**** K**** İ***

4th Grade

A***** B*****	E** A*****	O*** B**** K*****
A***** Ş****	E***** H****	R**** N** B*****
A*** Y***	E*** T***** B*****	S**** K**** L****
A**** K**	E***** Y*****	S*** K****
B**** J*****	E** Y**** B*****	S**** K*****
B*** H*****	E** B**	S***** M***** Ç****
B**** D*****	G***** T*****	U*** C** G*****
B**** M*****	İ*** Y****	U*** K*** Y****
C** D****	İ***** U***	Y**** E** S****
D**** M***	İ** Ç*****	Z***** E**
E** L**	M***** İ*****	Z***** G*****
E** D**** Y*****	N**** E** D****	

Internships & COOP

PHOT400 Intern	Employer	Dates
A*** Y***	Adaptive & Integrated Photonics Laboratory - Iztech	21.07.2025 – 29.08.2025
B**** J****	Jena, Günter-Köhler-Institut für Fügetechnik und Werkstoffprüfung GmbH	06.10.2025 – 05.12.2025
B**** H****	İzmir Biyotıp ve Genom Merkezi	01.07.2025 – 12.08.2025
B**** M****	MYK Research Group - Iztech	28.07.2025 – 30.08.2025
D**** M****	3E Elektro Optik Sistemler	21.07.2025 – 29.08.2025
E** L**	Rekrom Optoelektronik	21.07.2025 – 29.08.2025
E** D**** Y****	Fotonik Teknolojiler Uygulama ve Araştırma Merkezi – DPÜ	11.08.2025 – 19.09.2025
E** A****	EMR Research Lab	25.08.2025 – 27.09.2025
E** T**** B****	Ferled	07.07.2025 – 18.08.2025
E**** Y****	Adaptive & Integrated Photonics Laboratory - Iztech	23.08.2025 – 27.09.2025
E** Y**** B****	Alp Aviation	25.08.2025 – 27.09.2025
I**** U**	MYK Research Group - Iztech	14.07.2025 – 22.08.2025
I** Ç****	MEM Panel Solar Enerji Sanayi ve Ticaret A. Ş.	23.08.2025 – 27.09.2025
N**** E** D****	Nanooptics Research Laboratory - METU	25.08.2025 – 27.09.2025
O** B**** K*****	MYK Research Group - Iztech	14.07.2025 – 22.08.2025
S**** K**** L****	Aktaş Lab	21.07.2025 – 29.08.2025
S**** K****	Photonics Integrated Circuits and Bio-Applications Group - Vrije Universiteit	08.07.2025 – 30.09.2025
Z**** E**	MEM Solar	22.08.2025 – 26.09.2025
PHOT401 Intern	Employer	Dates
E**** H****	Institute of Physical Chemistry and Linz Institute for Organic Solar Cells	30.06.2025 – 28.09.2025
E**** B**	Fotoniks Askeri Elektronik ve Elektro Optik Sis. San. Tic. A. Ş.	25.08.2025 – 19.09.2025
H**** K****	Oz Optics	27.07.2025 – 26.08.2025
S**** K**** L****	GenlSys	12.08.2025 – 23.09.2025

PHOT499		
Student	Employer	Semester
I***** U***	Vestel	2025-2026 Fall
S*** K****	Vestel	2025-2026 Fall
Z***** E***	HSA Enerji A.Ş.	2025-2026 Fall
S***** Ö****	Vestel	2024-2025 Spring
Y***** D*** A*****	Vestel	2024-2025 Spring

Student Projects

Project	Funding	Start-Finish Date	Student
Mavi Floresan Organik Işık Yayan Diyotların Kullanım Ömrünün Uzatılması: DABCO ile Florofoor Stabilizasyonu	Tübitak 2209-A	2025-2026	B**** H*****
Gonyofotometri Düzeneği İçeren Karanlık Oda Tasarımı, Üretimi ve LED'lerin Fotometrik Karakterizasyonlarının Üretilen Düzenek ile Eldesi	Tübitak 2209-A	2024-2025	E**** Ç**** E****
Lazerle Üretilen Grafen (LIG) Türevlerinin Üretim Optimizasyonu: Elektriksel ve Yapısal Karakterizasyonu ve Yapay Zekâ Destekli Tasarım	Tübitak 2209-A	2024-2025	Z***** S*****
Nanoparçacıkların Plazmonik Etkisiyle OLED Performansının İyileştirilmesi	Tübitak 2209-A	2024-2025	U*** B**** G*****

Personnel

Staff

University Paid Personnel (Full time)

<u>Faculty</u>		<u>Research Assist.</u>	
<u>Name - Surname</u>	<u>Man month</u>		<u>Man month</u>
Alexey M. BOGDANOV	12	Buğra ŞEN	9
Canan VARLIKLI	12	Cansu Akyol KARPUZCU	12
Emre SARI	1	Eray CEYHAN	12
Hasan ŞAHİN	12	Hakan BOZKURT	12
Mehmet YAĞMURCUKARDEŞ	12	Hazan ÖZKAN	12
Michaël BARBIER	12	Kübra ARAS	12
Mustafa EMRULLAHOĞLU	2	Metin TAN	12
Oktay AKTAŞ	10	Ozan Baran ORHAN	12
Sevilay SEVİNÇLİ	8	Pelin POLAT	12
Sinan BALCI	12	Volkan BOZKUŞ	12
		Yağız OYUN	12
Total	93	Total	129

Externally Funded Personnel

<u>Name-Surname</u>	<u>Source</u>	<u>Man month</u>
A***** E** Y*****	124F246	8
A***** M*** D*****	2024IYTE-2-0029	3
B**** Y*****	124F264	8
B***** B*****	221N401	7
B**** Ş**	2210-C	12
B**** B*****	124F264	12
B***** M*****	124F264	3
D***** T****	124C512	2
E***** Y*****	124C512	3
H***** İ****	21GRD03 PaRaMetric	12
H***** Y*****	124F264	4
N**** E** D****	124F264	4
S**** D****	123F014	2
T**** K***	124F246	8
T**** M****	124C512	1
U*** B**** G*****	2024IYTE-2-0029	3
Y***** B*****	124F264	12
Z**** Ç****	122F140	10
Total		114

Funding (Budget)

University funding

Ordinary allocation	20.000
Occupational Health and Safety	216.950
Extra-Ordinary allocation for undergrad.	1.000.000
Total	1.236.950
	TL

University Project Funds

Name	Budget (TL)	Start-Finish Date
Otonom Araçlarda kullanılan FMCW LiDAR ... 2025/32	25.000	2025-2026
Geçiş Metali Dikalkojenit (TMD) Malzemelerde ve ... 2024IYTE-2-0011	2.000.000	2025-2026
Farklı Plazmonik Kayıplara Sahip Plekzitonik Nanoparçacıklar 2024IYTE-2-0017	2.000.000	2025-2026
Yalıtkan üstü silisyum (SOI) tabanlı pasif matris ... 2024IYTE-2-0029	2.000.000	2025-2028
Atık Şeker Pancarından Hidrokömür-Bazlı Fotokatalizör... 2023IYTE-2-0012	695.000	2024-2026
Kara Fosforun Titreşimsel Özelliklerinin Malzemenin... 2024IYTE-1-0017	20.000	2024-2025
Islak Kaplama Süreçleri ile Hazırlanan Karbon Bazlı... 2024IYTE-1-0052	20.000	2024-2025
Ayarlanabilir Optik Kovukların Hiperspektral... 2024IYTE-1-0058	40.000	2024-2025
Nesnelerin İnterneti Uygulamalarında Kullanılan ... 2023IYTE-1-0051	20.000	2023-2025

Project funds (extraneous)

Name	Budget (TL)	Start-Finish Date
Ferroik Malzemelerin Yüksek Sıcaklıklı ... 124C512 - TÜBİTAK	11.106.000	2025-2028
Bir Boyutlu Manyetik MX3 (M= V, Cr, veya Mn ve... 124F264 - TÜBİTAK	2.862.000	2024-2027
Sıvı Kristal İçerisinde Kuantum Nokta Temelli ... 123F014 - TÜBİTAK	1.330.640	2023-2025
İki Boyutlu Tek Katmanlı Düzlem İçi ve Düzlem Dışı ... 122F140 - TÜBİTAK	777.800	2022-2025
Molecular Engineering of Layered Magnetic Materials... 221N401 - TÜBİTAK	972.000	2022-2025

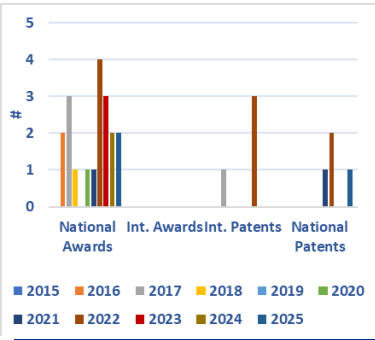
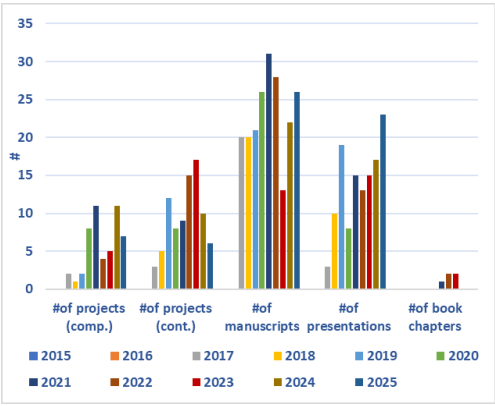
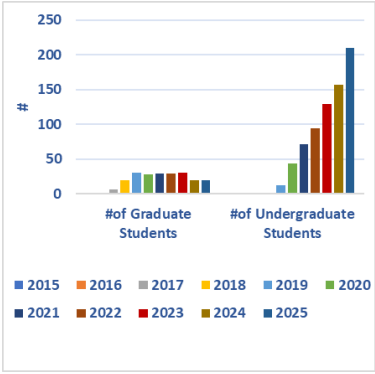
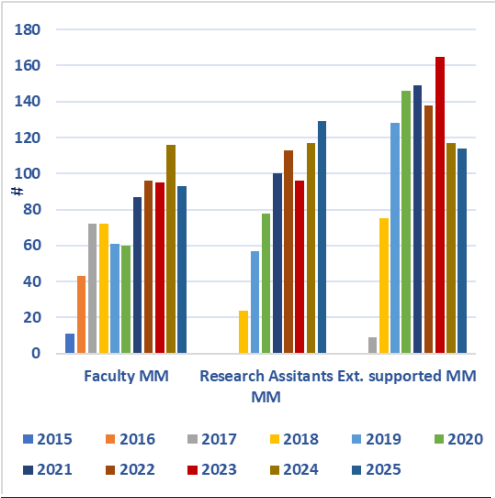
Activities in the University Administration

<i>OKTAY AKTAŞ</i>	Faculty Board Member
	Deputy Head of Department
	Deputy Director of AVILAR Center
	Department Quality Team
<i>SINAN BALCI</i>	Departmental ECTS-DS Erasmus Coordinator
	Double Major – Minor Commission
	Preliminary Evaluation Commission
	Doctoral Qualification Commission
<i>MICHAEL BARBIÉR</i>	Doctoral Qualification Commission
<i>ALEXEY BOGDANOV</i>	Jury Member of the Graduate Student Admission Committee
	Committee for Determining Course Transfer Principles
<i>HASAN ŞAHİN</i>	None
<i>CANAN VARLIKLI</i>	Advisor to the Rector (on Career, Alumni, and Scholarships)
	Quality Commission, Chair of the Leadership, Governance, and Quality Working Group
	HRS4R - WP2 Group, Group Leader
	ISKUR Youth Program Commission, Commission Chair
	Izmir Institute of Technology Administrative Board, Board Member
	Academic Promotion Preliminary Evaluation Committee, Committee Member
	Education Directorate Executive Board, Board Member
	Teaching and Learning Application and Research Commission, Commission Member
	Child Education Application and Research Center, Vice Director
	Child Education Application and Research Center Executive Board, Board Member
	Environmental Development Application and Research Center Executive Board, Board Member
	Science and Engineering Sciences Scientific Research and Publication Ethics Board, Board Member
	Behavioral Ethics Board, Board Member
	Institute Disciplinary Board, Board Member
	Member of the Barrier-Free IYTE Unit (or Accessible IYTE Unit)
	Optics and Photonics Student Society, Faculty Advisor
	Chair of the Department of Photonics
	Faculty of Science Faculty Board, Board Member

MEHMET
YAĞMURCUKARDEŞ

Faculty Infrastructure Committee, Committee Member
Faculty Education Committee, Committee Member
Head of the Department of Photonics Science and Engineering
Graduate Program
Graduate School Institute Board, Board Member
Departmental PhD Qualifying Committee, Committee Member
Vice Dean
Director of AVILAR Center
Faculty of Science Board Member
IT Commission Member
Department Accreditation Coordinator
Institutional Teknofest Representative
Department Transfer Commission Member
Department Doctoral Qualification Commission

Summary Charts (over the years)



Announcement

Seeking applicants for faculty positions

The candidates who have **postdoctoral experience** and a **solid experimental research background**, especially one of the first 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 and research and teaching statements that contain future research interests. The shortlisted candidates will be requested to give a seminar summarizing their background and future research plans.

Recruitment continues until the positions are filled.

Contact:

fotonik at iyte.edu.tr

cananvarlikli at iyte.edu.tr