Dr. Muhammed ÜÇÜNCÜ

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Education

2011- 2016	Doctor of Philosophy (PhD), Chemistry, Izmir Institute of Technology, Turkey.
2009-2011	Master of Science (M.Sc.), Chemistry, Izmir Institute of Technology, Turkey.
2004-2009	Bachelor of Science, Chemistry, Izmir Institute of Technology

Experience

2020 (Aug) – Present	**Assistant Professor** • Department of Analytical Chemistry, Faculty of Pharmacy, Izmir Katip Çelebi University
2016 (Nov) – 2019 (Dec)	**Postdoctoral Research Associate** • School of Chemistry – University of Edinburgh
2016 (Feb) – 2016 (Sept)	**Chemist** • Ministry of Customs and Trade, Chemist
2009 (Dec) – 2016 (Feb)	**Teaching and Research Assistant** • Department of Chemistry – Izmir Institute of Technology

Research Interests

- Design, synthesis, and development of fluorescent "Smart Probes" for;
  - optical imaging of cancer cells, bacteria, and fungi,
  - disease related small molecules/biomarkers including ROS/RNS
  - anions and metal cations
- Design, synthesis, and development of "bio-orthogonally activatable photosensitizer" for PDT/antimicrobial PDT applications.
- Development of new prodrugs and targeted drug delivery systems.
- Peptide chemistry (Solid Phase Peptide Synthesis)
- Development of new derivatives of fluorescent dyes including BODIPY, Rhodamine, Fluorescein and Cyanine dyes.
- Good Manufacturing Practices (GMP) / Active Pharmaceutical Ingredients (API)
- Polymer chemistry (RAFT polymerization, drug delivery)
- Transition metal catalyzed (Palladium, Rhodium and Gold) organic transformations.

Research Projects

Projects – during Postdoctoral Studies:

1. ***PROTEUS***: The Proteus Interdisciplinary Research Collaboration (IRC) (The Engineering and Physical Sciences Research Council (EPSRC)) – Proteus combines fibre optic research, sensing and imaging, signal processing, and clinical care has aimed in the design of a fully integrated system that will provide the necessary rapid and accurate diagnosis of bacterial infection. MÜ has been involved in the design and synthesizing of different types of "Smart Probes", each with distinct chemical properties that will allow them to interact with defined biological targets in the body. This interaction activates the probe, causing it to 'light up' in a way that can be detected on PROTEUS' imaging system and inform the clinician if there is a bacterial infection or an excess of enzymes which can be a marker of other problems.

2. ***ARREST TB***: Accurate, Rapid, Robust & Economical Diagnostic Technologies for Tuberculosis – The ARREST-TB project aims to develop a suite of technologies to rapidly, accurately, and economically detect, report, and monitor TB and MDR TB, and monitor response to anti-TB treatments. MÜ has been involved in the design and synthesizing of different types of "Smart Probes", which targets the metabolic pathways carried out by active mycobacteria and allows rapid and accurate diagnosis.

Projects – Current Research:

Coordinator:

1. ***TÜBİTAK 3501***: Design, Synthesis and Imaging Applications of H_2O_2 Sensitive Phenalenone-Based Chemosensors (Fenalenon Temelli H_2O_2'e Duyarlı Kemosensörlerin Tasarımı, Sentezi ve Görüntüleme Uygulamaları): Hydrogen peroxide (H_2O_2) is an important cancer biomarker found at higher levels in cancer cells than healthy cells. In our project we aim to design and synthesize phenalenone based chemosensors that can detect H_2O_2 in cancer cells and allow us to diagnose cancer at an early stage. In this context, we are planning to investigate chemosensor performances of designed "Smart Probes" towards H_2O_2 in aqueous media, cancer cells, and zebrafish models.

2. ***TÜBİTAK 2247-D***: Activatable PDT: Activation of Caged Photosensitizers by Heterogeneous Palladium Catalyst System and Their in vitro Photodynamic Therapy Applications (Aktive Edilebilir PDT: Kafesli Fotosensitizerlerin Heterojen Paladyum Katalizör Sistemleri ile Aktivasyonu ve in vitro Fotodinamik Terapi Uygulamaları): The low selectivity of the reactive oxygen derivatives poses a significant problem in the use of photodynamic therapy. Many photosensitizers can produce ROS under a suitable wavelength of light even without reaching the targeted area with their constitutively active structures and cause irrecoverable results by damaging the healthy cells with which they interact. In this proposed project, we are planning to utilize bioorthogonal organometallic reactions inside the cancer cells, our approach aims to hydrolyze the cage units of photosensitizers with quenched PDT activity by using palladium nanoparticles trapped in polystyrene microspheres and re-activate their PDT abilities.

3. ***İKÇÜ – BAP***: Design, Synthesis and Metal Ion Sensing Applications of BODIPY-based Chemosensors (BODIPY Temelli Kemosensörlerin Tasarımı, Sentezi ve Metal İyon Tayini İçin Sensör Uygulamaları): In this project, we are aiming to develop an alternative approach to classical analytical methods for trace metal determination with outstanding advantages such as high analyte sensitivity and selectivity, requirements for easy sample preparation steps, and simpler instrumentation.

4. ***İKÇÜ – BAP***: Design, synthesis, and investigation of metal cation selectivity of a new phenalenone-based chemosensor (Fenalenon temelli yeni bir kemosensörün tasarımı sentezi ve metal katyonu seçiciliğinin incelenmesi): Selective determination and quantification of metal ions are of great importance in both industrial processes and biological systems. Although the developing technology has provided convenience in many areas of life, it has played an important role in environmental pollution. Human health and the future of the ecosystem have threatened by the heavy metals that may be released as waste in the industrial processes to contaminate drinking water and soil. It is well known that even trace amounts of heavy metal ions such as Hg^{2+}, Cd^{2+}, Pb^{2+}, Au^{3+}, and As^{3+}, which can accumulate in the human body as a result of environmental pollution, can cause serious fatal diseases. In this project, we will present a new chemosensor that will allow quick and easy detection and quantification of metal ions in synthetic samples and cellular media, which are harmful to humans and the environment.

Consultant:

1. ***TÜBİTAK 2218***: Synthesis, Characterization and Investigation of Photodynamic Therapy Activity on Breast Cancer Cells with Protoporphyrin IX Loaded, Folic Acid and Poly Ethylene Glycol Coated ZIF-8 (Protoporfirin IX Yüklü, Folik Asit ve Poli Etilen Glikol Kaplı ZIF-8 Sentezi, Karakterizasyonu ve Meme Kanser Hücreleri Üzerindeki Fotodinamik Terapi Aktivitesinin Araştırılması): In this study, we are aiming to develop a nanocarrier system based on a metal-organic framework (MOF) that will target the next generation of tumor tissue and be used in photodynamic diagnosis and therapy.

Publications – Papers

SCI ve SCI Expanded:

1. Sharma, R., Rajagopalan, H., Klausen, M., Jeyalatha, M. V., **Üçüncü, M.**, Venkateswaran, S., Anand, A. R. and Bradley, M. "Rapid detection of major Gram-positive pathogens in ocular specimens using a novel fluorescent vancomycin-based probe" ***Sens. Diagn.***, 2022, (Advance Article)
2. **Üçüncü, M.** "A BODIPY Based Probe for The Reversible "Turn on" Detection of Au(III) Ions" ***Turk J. Chem.***, 2022, 46: 523 – 529.
3. Zhang, S., Zhang, Y., **Üçüncü, M.**, Lilienkampf, A., Geng, J. and Bradley, M. "Light-Controlled, Living Radical Polymerisation Mediated by Fluorophore-Conjugated RAFT Agents" ***Polymer,*** 2021, 226, 123840.
4. Dartar, S., **Üçüncü, M.**, Karakuş, E., Hou, Y., Zhao, J. and Emrullahoglu, M. "BODIPY–vinyl Dibromides as Triplet Sensitisers for Photodynamic Therapy and Triplet–Triplet Annihilation Upconversion" ***Chem. Commun.***, 2021,57, 6039 – 6042.
5. **Üçüncü, M.**,* Zeybek, H., Karakuş, E., Üçüncü, C. and Emrullahoğlu, M.* "A New Fluorescent "Turn on" Probe for Rapid Detection of Biothiols" Supramol. Chem., 2021, 1 – 8. (*Corresponding author)
6. Baibek, A., **Ucuncu, M.**, Short, B., Ramage, G., Lilienkampf, A. and Bradley, M. "Dyeing Fungi: Amphotericin B Based Fluorescent Probes for Multiplexed Imaging" ***Chem. Commun.***, 2021, 57, 1899 – 1902.

7. Zhang, Y., **Üçüncü, M.**,[+] Gambardella, A.,[+] Baibek, A., Geng, J., Zhang, S., Clavadetscher, J., Litzen, I., Bradley, M. and Lilienkampf, A. "Bioorthogonal Swarming: In Situ Generation of Dendrimers" ***J. Am. Chem. Soc.***, 2020, 142, 52, 21615–21621. ([+]equal contribution)
8. Klausen, M.,* **Ucuncu, M.*** and Bradley, M. "Design of Photosensitizing Agents for Targeted Antimicrobial Photodynamic Therapy" ***Molecules,*** 2020, *25*(22), 5239. (*Corresponding author)
9. Ehrlich, K., Choudhary, T. R., **Ucuncu, M.**, Megia-Fernandez, A., Harrington, K., Wood, H. A. C., Yu, F., Choudhury, D., Dhaliwal, K., Bradley, M. and Tanner, M. G. "Time-Resolved Spectroscopy of Fluorescence Quenching in Optical Fibre-Based pH Sensors" ***Sensors,*** 2020, *20*(21), 6115.
10. Zhang, Y., Gambardella, A., **Ucuncu, M.**, Geng, J., Bradley, M. and Lilienkampf, A. "Multifunctional, Histidine-tagged Polymers: Antibody Conjugation and Signal Amplification" ***Chem. Commun.***, 2020, 56, 13856-13859.
11. Baibek, A., **Ucuncu, M.**,* Blackburn, E.A., Bradley, M. and Lilienkampf, A.* "Wash-free, peptide-based fluorogenic probes for microbial imaging" ***Pept. Sci.***, 2020, e24167. (*Corresponding author)
12. Mills, B.,* Megia-Fernandez, A., Norberg, D., Duncan, S., Marshall, A., Akram, A. R., Quinn, T., Young, I., Bruce, A. M., Scholefield, E., Williams, G. O. S., Krstajić, N., Choudhary, T. R., Parker, H. E., Tanner, M. G., Harrington, K., Wood, H. A. C., Birks, T. A., Knight, J. C., Haslett, C., Dhaliwal, K., Bradley, M.* **Ucuncu, M.*** and Stone, J. M. "Molecular Detection of Gram-positive Bacteria in the human lung through an optical fiber–based endoscope" 2020, ***Eur. J. Nucl. Med. Mol. Imaging***., doi:10.1007/s00259-020-05021-4. (*Corresponding author)
13. **Ucuncu, M.**;[+] Mills, B.;[+] Duncan, S.; Staderini, M.; Dhaliwal, K. and Bradley M. "Polymyxin-Based Photosensitizer for the Potent and Selective Killing of Gram-Negative Bacteria" ***Chem. Comm***. 2020, 56, 3757-3760. ([+]equal contribution)
14. Choudhary, T., Tanner, M., Megia-Fernandez, A., Harrington, K., Wood, H.A., Marshall, A., Zhu, P., Chankeshwara, S.V., Choudhury, D., Monro, G., **Ucuncu, M.**, Yu, F., Duncan, R., Thomson, R., Dhaliwal, K. and Bradley, M. "High Fidelity Fibre-Based Physiological Sensing Deep In Tissue" ***Sci. Rep.*** 2019, 9, 7713.
15. **Üçüncü, M.**, Karakuş, E., Demirci, E.K., Sayar, M., Dartar, S. and Emrullahoğlu, M. "BODIPY−Au(I): A Photosensitizer for Singlet Oxygen Generation and Photodynamic Therapy" ***Org. Lett***. 2017, 19, 2522−2525.
16. Bor, G., **Üçüncü, M.**, Emrullahoğlu, M., Tomak, A. and Şanlı-Mohamed, G." BODIPY-conjugated chitosan nanoparticles as a fluorescent probe" ***Drug Chem Toxicol***., 2017, 40, 375–382.
17. Akdogan, Y., Emrullahoglu, M., Tatlidil, D., **Ucuncu M.** and Cakan-Akdogan, G. "EPR Studies of Intermolecular Interactions and Competitive Binding of Drugs In A Drug–BSA Binding Model" ***Phys. Chem. Chem. Phys.***, 2016, *18*, 22531-22539.
18. **Üçüncü, M.**, Cantürk, C., Karakuş, E., Zeybek, H., Bozkaya, U., Soydaş, E., Şahin, E. and Emrullahoğlu, M. "A Rare γ-Pyranopyrazole Skeleton: Design, One-Pot Synthesis and Computational study" ***Org. Biomol. Chem.,*** 2016, 14, 7490-7494.
19. **Üçüncü, M.**, Karakuş, E. and Emrullahoğlu, M. "A BODIPY-Based Fluorescent Probe for Ratiometric Detection of Gold Ions: Utilization of *Z*-Enynol as The Reactive Unit" ***Chem. Commun.***, 2016, 52, 8247-8250.
20. Çetintaş, C., Karakuş, E., **Üçüncü M**. and Emrullahoğlu M. "A Fluorescein-Based Chemodosimeter for Selective Gold(III) Ion Monitoring in Aqueous Media and Living Systems" ***Sensors Actuat B-Chem.***, 2016, *234*, 109-114.
21. Horzum, N., Mete, D., Karakuş E., **Üçüncü, M.**, Emrullahoğlu, M. and Demir. M. M. "Rhodamine-Immobilized Electrospun Chitosan Nanofibrous Mat as A Fluorescence Turn-On Hg^{2+} Sensor" ***ChemistrySelect***, 2016, *5*, 896–900.
22. Karakuş, E., **Üçüncü M.** and Emrullahoğlu M. "An Electrophilic Cyanate as A Recognition Motif for Reactive Sulphur Species: Selective Fluorescence Detection of H_2S" ***Anal. Chem.***, 2016, *88*, 1039–1043.
23. Tatlıdil, D., **Üçüncü, M.** and Akdoğan, Y. "Physiological Concentrations of Albumin Favor Drug Binding" ***Phys. Chem. Chem. Phys.***, 2015, *17*, 22678-22685.
24. **Üçüncü, M.**, Karakuş, E. and Emrullahoğlu, M. "A BODIPY/Pyridine Conjugate for Reversible Fluorescence Detection of Gold(III) Ions" ***New J. Chem.***, 2015, *39*, 8337-8341.
25. **Üçüncü, M.**, Karakuş, E. and Emrullahoğlu, M. "A Ratiometric Fluorescent Probe for Gold and Mercury Ions" ***Chem. Eur. J.***, 2015, *21*, 13201–13205.
26. Cantürk, C., **Üçüncü, M.** and Emrullahoğlu, M. "A BODIPY-Based Fluorescent Probe for The Differential Recognition of Hg(II) and Au(III) Ions" ***RSC Adv.***, 2015**,** ***5*****,** 30522-30525. (Citations: 27) (impact factor:3.049)
27. Kurtulus I., Yilmaz G., **Ucuncu M.**, Emrullahoglu M., Becer C.R. and Bulmus V. "A New Proton Sponge Polymer Synthesized by RAFT Polymerization for Intracellular Delivery of Biotherapeutics" ***Polym. Chem.***, 2014, *5*, 1593-1604.
28. **Üçüncü, M.** and Emrullahoğlu, M. "A BODIPY-Based Reactive Probe for The Detection of Au(III) Species and Its Application to Cell Imaging" ***Chem. Commun.***, 2014, *50*, 5884-5886.
29. Karakuş, E.[+] **Üçüncü, M.**[+] and Emrullahoğlu, M. "A Rhodamine/BODIPY- Based Fluorescent Probe for The Differential Detection of Hg(II) and Au(III)" ***Chem. Commun.***, 2014, *50*, 1119-1121. ([+]equal contribution)
30. Karakuş, E., **Üçüncü M.**, Eanes, R. and Emrullahoğlu, M. "The Utilization of pH Sensitive Spirocyclic Rhodamine Dyes for Monitoring D-Fructose Consumption During A Fermentation Process" ***New J. Chem.,*** 2013, 2632-2635.
31. Emrullahoğlu, M., **Üçüncü, M.** and Karakuş, E. "A BODIPY Aldoxime-Based Chemodosimeter for Highly Selective and Rapid Detection of Hypochlorous Acid" ***Chem. Commun.***, 2013, *49*, 7836-7838. (*Top 10 most accessed articles July-September 2013)*
32. Emrullahoğlu, M., Karakuş, E. and **Üçüncü, M.** "A Rhodamine Based "Turn-on" Chemodosimeter for Monitoring Gold Ions In Synthetic Samples and Living Cells" ***Analyst***, 2013, *138*, 3638–3641.

33. Akpınar, G.E., Kuş, M., **Üçüncü, M.**, Karakuş, E. and Artok, L. "Palladium-Catalyzed Alkoxycarbonylation of (*Z*)-2-En-4-yn Carbonates Leading to 2,3,5-Trienoates" ***Org. Lett.,*** 2011, *13*, 748–751.

34. **Üçüncü, M.**, Karakuş, E., Kuş, M., Akpınar, G.E., Aksın-Artok, Ö., Krause, N., Karaca, S., Elmacı, N. and Artok, L. "Rhodium- and Palladium-Catalyzed 1,5-Substitution Reactions of 2-En-4-yne Acetates and Carbonates with Organoboronic Acids" ***J. Org. Chem.,*** 2011, *76* (15), 5959–5971.

Conference papers:

1. Tanner, M.G., Choudhary, T.R., Ehrlich, K., Megia-Fernandez, A., Harrington, K., Wood, H.A.C., Marshall, A., Zhu, P., Chankeshwara, S.V., Choudhury, D., Monro, G., **Ucuncu, M.**, Yu, F., Duncan, R.R., Thomson, R.R., Dhaliwal, K. and Bradley, M. "Fibre Platform for Multiplexed Physiological Sensing in the Distal Lung with Fluorescent Probes on Multicore Fibres" 2020, TTu2B.2 Clinical and Translational Biophotonics (Translational)

Sum of Times Cited:939, **h index**: 18 (from Google scholar, 25-08-2022)
Sum of Times Cited:761, **h index**: 15 (from Web of Science, 25-08-2022)
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Publications – Thesis and Proceedings

Thesis:

1. **Üçüncü, M.** "Palladium catalyzed reactions of 2-EN-4-YNE carbonates with organoboronic acids" M.Sc. Thesis – Supervisor: Prof. Dr. Levent ARTOK – İYTE, İzmir, 2011.
2. **Üçüncü, M.** "Design and Synthesis of Boron-Dipyrromethene (Bodipy) Based Fluorescent and Colorimetric Sensors for The Detection of Gold and Mercury Ions" Ph.D. Thesis – Supervisor: Prof. Dr. Mustafa Emrullahoğlu – İYTE, İzmir, 2016

Proceedings:

1. **Üçüncü, M.** "Optical molecular imaging: fluorescent smart probes for pathogen detection" 2020- International Conference on New Trends in Chemistry, *E-Conference*. [Oral Presentation]
2. Tanner, M.G., Choudhary, T.R., Ehrlich K., Megia-Fernandez, A., Harrington, K., Wood, H. A., Marshall, A., Zhu, P., Chankeshwara, S.V., Choudhury, D., Monro, G., **Ucuncu, M.**, Yu, F., Duncan, R., Thomson, R., Dhaliwal, K. and Bradley, M. "Fibre Platform for Multiplexed Physiological Sensing in the Distal Lung with Fluorescent Probes on Multicore Fibres" 2020- Clinical and Translational Biophotonics**,** [Oral Presentation]
3. Karakuş, E., **Üçüncü, M.**, Demirci E. and Emrullahoğlu, M. "Yeni Bir Bodipy-Altin Türevinin Fotodinamik Terapi Etkisinin İncelenmesi'' 2018- 6. Uluslararasi İlaç Kimyasi: İlaç Etkin Maddesi Tasarimi, Sentezi, Üretimi ve Standardizasyonu Kongresi, Antalya, Türkiye [Oral Presentation]
4. **Üçüncü, M.**, Mills, B., Dhaliwal, K. and Bradley M. "Bacterial Imaging and Photodynamic Therapy (PDT) Using BODIPY-Polymyxin Conjugates" 2017- EaStChem Early Career Researchers Conference at University of St. Andrews, St. Andrews, Scotland. [Poster]
5. Mete, D., Horzum, N., Karakuş E., **Üçüncü, M.**, Emrullahoğlu, M. and Demir. M.M. "Rhodamine-immobilized electrospun chitosan nanofibrous mat as a fluorescence turn-on Hg^{2+} sensor" 2015- 1st International Conference on Green Chemistry and Sustainable Technologies at İzmir Katip Çelebi University, İzmir Turkey [Poster](*Best Poster Award*)
6. Zeybek, H., Çetintaş, C., **Üçüncü, M.** and Emrullahoğlu, M. "Copper Catalyzed Synthesis of Benzo-Bimane Compounds" 2015- Turkey Symposium Series: Catalysis and Sensing for Health Symposium at İzmir Institute of Technology, İzmir, Turkey [Poster]
7. Çetintaş, C., Karakuş, E., **Üçüncü, M.** and Emrullahoğlu, M. "Development of Gold Ion Sensitive and Selective Fluorescein Based Chemosensors and Monitoring the Presence of Gold Ions In Living Cells" 2015- Turkey Symposium Series: Catalysis and Sensing for Health Symposium at İzmir Institute of Technology, İzmir, Turkey [Poster]
8. Cantürk, C., **Üçüncü, M.** and Emrullahoğlu, M. "A BODIPY-based fluorescent probe for the differential recognition of Hg(II) and Au(III) ions" 2015- Turkey Symposium Series: Catalysis and Sensing for Health Symposium at İzmir Institute of Technology, İzmir, Turkey [Poster]
9. **Üçüncü, M.**, Karakuş, E. and Emrullahoğlu, M. "A Ratiometric Fluorescent Probe for Gold and Mercury Ions" 2015- Turkey Symposium Series: Catalysis and Sensing for Health Symposium at İzmir Institute of Technology, İzmir, Turkey [Poster] (*Best Poster Award*)
10. Karakuş, E., **Üçüncü, M.** and Emrullahoğlu, M. "A Guanidinium modified Rhodamine-based fluorescent probe for in-vitro/vivo imaging of gold ions" 2015- Turkey Symposium Series: Catalysis and Sensing for Health Symposium at İzmir Institute of Technology, İzmir, Turkey [Poster]

11. **Üçüncü, M.** and Emrullahoğlu, M. "BODIPY Temelli Reaktif Bir Floresan Sensör İle Au(III) İyonlarının Tayin Edilmesi ve Hücre Görüntülemesinde Kullanılması" 2015- 27. National Chemistry Congress at Çanakkale 18 Mart University, Çanakkale, Turkey [Poster]
12. Çetintaş, C., Karakuş, E., **Üçüncü, M.** and Emrullahoğlu, M. "Altın İyonlarına Duyarlı Floresein Yapısında Kemosensörlerin Geliştirilmesi ve Hücre İçerisinde Altın İyonlarının Görüntülenmesi" 2015- 27. National Chemistry Congress at Çanakkale 18 Mart University, Çanakkale, Turkey [Poster]
13. Zeybek, H., Çetintaş, C., **Üçüncü, M.** and Emrullahoğlu, M. "Benzo-Biman Yapısındaki Bileşiklerin Bakır Katalizörü Kullanılarak Sentezi" 2015- 27. National Chemistry Congress at Çanakkale 18 Mart University, Çanakkale, Turkey [Poster]
14. Karakuş, E., **Üçüncü, M.** and Emrullahoğlu, M. "Altın İyonlarına Duyarlı BODIPY Yapısında Floresan Sensörler" 2015- 27. National Chemistry Congress at Çanakkale 18 Mart University, Çanakkale, Turkey [Oral Presentation]
15. **Üçüncü, M.** and Emrullahoğlu, M. " Bodipy temelli reaktif bir floresan sensör ile Au(III) iyonlarının tayin edilmesi ve hücre görüntülemesinde kullanılması" 2014- 2. National Organic Chemistry Congress at Bilkent University, Ankara, Turkey [Poster]
16. Karakuş, E., **Üçüncü, M.** and Emrullahoğlu, M. " Rodamin/Bodipy temelli floresan sensör ile Altın(III) ve Cıva(II) İyonlarının farklı şekilde tayin edilmesi" 2014- 2. National Organic Chemistry Congress at Bilkent University, Ankara, Turkey [Poster]
17. **Üçüncü, M.**, Karakuş, E. and Emrullahoğlu, M. "A BODIPY aldoxime-based chemodosimeter for highly selective and rapid detection of hypochlorous acid" 2013- Advanced Materials World Congress at Çeşme Altınyunus, İzmir, Turkey [Poster]
18. Karakuş, E., **Üçüncü, M.** and Emrullahoğlu, M. "A rhodamine based "turn-on" chemodosimeter for monitoring gold ions in synthetic samples and living cells" 2013- Advanced Materials World Congress at Çeşme Altınyunus, İzmir, Turkey [Poster]
19. **Üçüncü, M.**, Karakuş, E. and Emrullahoğlu, M. "A Bodipy Based Flourescent Probe for Highly Selective and Rapid Detection of Hypochlorous Acid" 2013- XIV European Symposium on Organic Reactivity- Prague, Czech Republic [Poster]
20. Karakuş, E., **Üçüncü, M.** and Emrullahoğlu, M. "A rhodamine based "turn-on" chemodosimeter for monitoring gold ions in synthetic samples and living cells" 2013- XIV European Symposium on Organic Reactivity- Prague, Czech Republic [Poster] (*Best Poster Award*)

Publications – Meetings, Workshops and Scientific Activities

1. Üçüncü, M. "Kemosensörler: Tasarım ve Uygulamaları" – Biyomühendislikte Güncel Yaklaşımlar I – 2021, Ege University, İzmir, Turkey
2. Pandeminin E Hali -Eczacılıkta Güncel Gelişmeler, 2020. (*E*-konferans)
3. 17th International Photodynamic Association World Congress, 2019, Boston, USA.
4. Japon-Türk Organometal Katalizör Mini Sempozyumu, 2012, İzmir Yüksek Teknoloji Enstitüsü, Kimya Bölümü, İzmir, Türkiye
5. UHPLC-Kromatografiye Giriş, HPLC, Kolonlar ve İleri Uygulama Teknikleri GCMS-Son Teknolojiler ve Uygulama Alanları Eğitimi, Ant Teknik, 2012, İzmir, Türkiye
6. 2011- 1. Turkish Bruker Magnetic Resonance Workshop: NMR & EPR, İzmir, Turkey.
7. 2010 Japan-Turkish Organometallic Catalyst Mini Symposium, İzmir, Turkey..
8. ISO 9001:2000 Kalite Yönetimi Eğitimi, 2009, İzmir, Türkiye
9. OHSAS 18001:2007 İş Sağlığı ve Güvenliği Eğitimi, Lloyd's Register, 2009, İzmir, Türkiye
10. X. Ulusal Spektroskopi Kongresi, 2007, İzmir, Türkiye

Teaching Activities

- General Chemistry 1&2 Laboratory (İzmir Institute of Technology – Research and Teaching Assistant)
- Organic Chemistry 1&2 Laboratory (İzmir Institute of Technology – Research and Teaching Assistant)
- Inorganic Chemistry Laboratory (İzmir Institute of Technology – Research and Teaching Assistant)
- Chemistry 1A and Chemistry 1B Tutorial (University of Edinburgh)
- Analytical Chemistry 1&2 (İzmir Katip Celebi University)
- Analytical Chemistry 1&2 Laboratory (İzmir Katip Celebi University)
- Biomimicry: Designs from Nature (İzmir Katip Celebi University)
- Pharmaceutical Calculations (İzmir Katip Celebi University)

Supervised Students

- Dr. Derya Mete – Postdoctoral Research Associate (TÜBİTAK 2218, 2022 (May) – present)
- Dr. Ecem Saygılı – Postdoctoral Research Associate (TÜBİTAK 2247-D, 2022 (Aug) – present)
- Dr. Fatma Rabia Karaduman– Postdoctoral Research Associate (TÜBİTAK 2247-D, 2022 (Nov) – present)
- Berna Ceren Özcan (İKÇÜ – Faculty of Pharmacy – Undergrad, 2021 (Dec) – 2022 (July))
- Simge Kalmaz (İKÇÜ – Faculty of Pharmacy – Undergrad, 2021 (Dec) – 2022 (July))

Awards & Highlights

2009 (June)	High Honor Student of Izmir Institute of Technology
2009 (June)	Highest Ranking Student of the Department
2009 – 2011	TUBITAK National Scholarship Program for M.Sc. Students
2013 – 2015	TUBITAK National Scholarship Program for Ph.D. Students
2013	European Symposium on Organic Reactivity, Czech Republic, Prague, Best Poster
2015	Turkey Symposium Series: Catalysis and Sensing for Health Symposium, Best Poster
2015	1st International Conference on Green Chemistry and Sustainable Technologies, Best Poster
2017	Seal of Excellence, Marie Skłodowska-Curie Actions

Professionel/Editorial Activities

Peer reviewing on following journals

2017 – present	Materials
2017 – present	Molecules
2018 – present	Crystals
2021 – present	Letters in Drug Design & Discovery
2022 – present	Biosensors and Bioelectronics
2022 – present	Journal of Fluorescence
2022 – present	Chemical Papers