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EDUCATION

Postgraduate August 2012
Yale University New Haven, CT
Department of Chemical and Environmental Engineering
Advisor: Jordan Peccia

Doctor of Philosophy March 2010
University of California-Riverside Riverside, CA
Department of Chemical and Environmental Engineering
Dissertation Title: Transport and Pathogenicity of *Salmonella enterica* Subspecies in Groundwater:
In vitro, *in vivo*, and *in silico*
Dissertation Advisor: Sharon L. Walker

Master of Science May 2005
Villanova University Villanova, PA
Department of Civil and Environmental Engineering
Thesis Title: Fatty Acid Methyl Ester (FAME) Profiling of Indicator Organisms for Microbial Source
Tracking
Thesis Advisor: Metin M. Duran

Bachelor of Science June 2003
Middle East Technical University Ankara, TÜRKIYE
Department of Biological Sciences
Major: Biology

JOURNAL PUBLICATIONS (Total citations: 3062, h-index: 27, i10-index: 36)

1. Icagasioglu, E., **Haznedaroglu, B.Z.**, Civelek, I., and Bilgin, R., 2025. "Transcriptional Responses to Long-term Salinity Stress and Acclimation in the Black Mussel, *Mytilus galloprovincialis*", [in review](https://doi.org/10.22541/au.172498224.41296693/v1), doi.org/10.22541/au.172498224.41296693/v1
2. Görünmek, M., Ballık, B., Karsavran, K., **Haznedaroglu, B.Z.**, Bayram, E., İlker, M.F., Çakmak, Z.E., Kibar, A.A., Özer, H. and Çakmak, T., 2025. "Psychrotolerant *Coccomyxa subellipsoidea* ASYA6 for Sustainable UV Protection: A Novel Green Source of Mycosporine-Like Amino Acids", *Sustainable Chemistry and Pharmacy*, 47, (2025), 102127.
3. Chovancek, E., Poque, S., Bayram, E., Borhan, E. Jokel, M., Rantanen, I., **Haznedaroglu, B.Z.**, Himanen, K., Sirin, S., and Allahverdiyeva, Y., 2025. "Stepwise processing of *Chlorella sorokiniana* confers a plant biostimulant that reduces mineral fertilizer requirements", *Bioresource Technology*, 418(2025), 131923.
4. Yousefzadeh, H., Borhan, E., **Haznedaroglu, B.Z.**, Uzun, A., and Erkey, C., 2024. "Hydrothermal Liquefaction of *Chlamydomonas nivalis* and *Nannochloropsis gaditana* Microalgae Under Different Operating Conditions Over Copper-Exchanged Zeolites", *Biochemical Engineering Journal*, (205), 109237.
5. Mutlu-Durak, H., Arikan, Y., Engin, B., **Haznedaroglu, B.Z.**, Kutman, U.B., and Kutman, B.Y., 2024. "Various extracts of the brown seaweed *Cystoseira barbata* with different compositions exert biostimulant effects on seedling growth of wheat". *Physiologia Plantarum*, 176(4), e14503.

6. Kaysudu, I., Gungul, T., Atici, S., Yilmaz, S., Guven, G., Bayram, E., Terzi Cizmecioglu, N., Sahin, O., Yesiloz, G., **Haznedaroglu, B.Z.**, Cizmecioglu, O., 2023 “Cholesterol Biogenesis is a PTEN-dependent Actionable Node for the Treatment of Endocrine Therapy-refractory Cancers”, *Cancer Science*, 114(11), 4127-4475.
7. Gelgor, R.D., Ozcelik, D., and **Haznedaroglu, B.Z.**, 2022. “Effect of Baking on the Biochemical Composition of *Chlorella vulgaris*”. *Algal Research*, (65), 102716.
8. Avci, S., and **Haznedaroglu, B.Z.**, 2022. “Pretreatment of Algal and Cyanobacterial Biomass for High Purity Phycocyanin Production”. *Journal of Applied Phycology*, 34(4), 2015-2026.
9. Sakarya, F.K., **Haznedaroglu, B.Z.**, and Tezel, U., 2021. “Biological Removal of Benzalkonium Chlorides from Wastewater by Immobilized Cells of *Pseudomonas* sp. BIOMIG1 in an Up-flow Packed Bed Reactor”. *Journal of Hazardous Materials*, 418(2021), 126210.
10. Matich, E.K., Ghafari, M., Camgoz, E., Caliskan, E., Pfeifer, B.A., **Haznedaroglu, B.Z.**, and Atilla-Gokcumen, G.E., 2018. “Time Series Lipidomics Analysis of the Oleaginous Green Microalga Species *Ettlia oleoabundans* Under Nutrient Stress”, *Biotechnology for Biofuels*, 11(1), 29.
11. Ghafari, M., Rashidi, B., and **Haznedaroglu, B.Z.**, 2016. “Effects of Macro and Micronutrients on Neutral Lipid Accumulation in Oleaginous Microalgae”, *Biofuels*, 9(2), 147-156.
12. Matich, E., Butryn, D., Ghafari, M., del Solar, V., Camgoz, E., Pfeifer, B., Aga, D.S., **Haznedaroglu, B.Z.**, and Atilla-Gokcumen, G.E., 2016. “Mass spectrometry-based metabolomics of value added biochemicals in non-model microalgae”, *Algal Research*, 19, 146-154.
13. Han, Y., Hwang, G., Kim, H., **Haznedaroglu, B.Z.**, and Lee, B., 2015. “Amine-impregnated Millimeter-sized Spherical Silica Foams with Hierarchical Mesoporous-Macroporous Structure for CO₂ Capture”, *Chemical Engineering Journal*, 259(2015), 653-662.
14. Chowdhury, I., Zorlu, O., Walker, S.L., and **Haznedaroglu, B.Z.**, 2015. “Impact of Growth Phase and Natural Organic Matter on the Attachment Kinetics of *Salmonella typhimurium* to Solid Surfaces”, *Environmental Engineering Science*, 32(2), 111-120.
15. Beckinghausen, A., Martinez, A., Blersch, D., and **Haznedaroglu, B.Z.**, 2014. “Association of nuisance filamentous algae *Cladophora* spp. with *E. coli* and *Salmonella* in public beach waters: impacts of UV protection on bacterial survival”, *Environmental Science: Processes & Impacts*, 16(6), 1267-1274 [invited article for Emerging Investigators' special issue].
16. Soh, L., Montazeri, M., **Haznedaroglu, B.Z.**, Kelly, C., Peccia, J., Eckelman, M., and Zimmerman, J., 2014. “Evaluating microalgal integrated biorefinery schemes: Empirical controlled growth studies and life cycle assessment”, *Bioresource Technology*, 151, 19-27 [Cover Article].
17. Aslan, S., Määttä, J., **Haznedaroglu, B.Z.**, Goodman, J.P.M., Pfeifferle, L.D., Elimelech, M., Pauthe, E., Sammalkorpi, M., and Van Tassel, P.R., 2013. “Carbon nanotube bundling: influence on layer-by-layer assembly and antimicrobial activity”, *Soft Matter*, 9(7), 2136-2144.
18. Rismani-Yazdi*, H., **Haznedaroglu, B.Z.***, Hsin, C., and Peccia, J., 2012. “Transcriptomic Analysis of the Oleaginous Microalgae *Neochloris oleoabundans* Reveals Metabolic Insights into Triacylglyceride Accumulation”, *Biotechnology for Biofuels*, 5(1), 74 [*Equal contribution].
19. **Haznedaroglu, B.Z.***, Reeves, D.*, Rismani-Yazdi, H.*, and Peccia, J., 2012. “Optimization of *de novo* Transcriptome Assembly from High-Throughput Sequencing Data Improves Functional Annotation for Non-model Organisms”, *BMC Bioinformatics*, (13), 170. [*Equal contribution].
20. **Haznedaroglu, B.Z.**, Yates, M.V., Maduro, M.F., and Walker, S.L., 2012. “Effects of Residual Antibiotics in Groundwater on *Salmonella typhimurium*: Changes in Antibiotic Resistance, *in vivo* and *in vitro* Pathogenicity”, *Journal of Environmental Monitoring*, 14(1), 41-47 [Cover Article].
21. Rismani-Yazdi, H., **Haznedaroglu, B.Z.**, Bibby, K., and Peccia, J., 2011. “Transcriptome Sequencing and Annotation of the Microalgae *Dunaliella tertiolecta*: Pathway Description and Gene Discovery for Production of Next-generation Biofuels”, *BMC Genomics*, (12), 148.

22. Bolster, C.H., Cook, K.L., Marcus, I.M., **Haznedaroglu, B.Z.**, and Walker, S.L., 2010. "Correlating Attachment Behavior with Cell Properties for Eight Porcine *Escherichia coli* Isolates", *Environmental Science and Technology*, 44(13), 5008-5014.
23. **Haznedaroglu, B.Z.**, Zorlu, O., Hill, J.E., and Walker, S.L., 2010. "Identifying the Role of Flagella in the Transport of Motile and Nonmotile *Salmonella enterica* Serovars", *Environmental Science and Technology*, 44(11), 4184-4190.
24. **Haznedaroglu, B.Z.**, Haznedaroglu, I.C., Walker, S.L., Bilgili, H., Goker, H., Kosar, A., Aktas, A., Captug, O., Kurt, M., Ozdemir, O., Kirazli, S., and Firat, H.C., 2010. "Ultrastructural and Morphological Analyses of the *in vitro* and *in vivo* Hemostatic Effects of Ankaferd Blood Stopper", *Clinical and Applied Thrombosis/Hemastasis*, 16(4), 446-453.
25. Bradford, S.A., Kim, H.N., **Haznedaroglu, B.Z.**, Torkzaban, S., and Walker, S.L., 2009. "Coupled Factors Influencing Concentration Dependent Colloid Transport and Retention in Saturated Porous Media", *Environmental Science and Technology*, 43(18), 6996-7002.
26. **Haznedaroglu, B.Z.**, Kim, H.N., Bradford, S.A., and Walker, S.L., 2009. "Relative Transport Behavior of *Escherichia coli* O157:H7 and *Salmonella enterica* serovar Pullorum in Packed Bed Column Systems: Influence of Solution Chemistry and Cell Concentration", *Environmental Science and Technology*, 43(6), 1838-1844.
27. Bolster, C.H., **Haznedaroglu, B.Z.**, and Walker, S.L., 2009. "Diversity in Cell Properties and Transport Behavior among 12 Environmental *Escherichia coli* Isolates", *Journal of Environmental Quality*, 38(2), 465-472.
28. Bolster, C.H., Cook, K.L., **Haznedaroglu, B.Z.**, and Walker, S.L., 2009. "The Transport Behavior of *Mycobacterium avium* subsp. *paratuberculosis* through Saturated Aquifer Materials", *Letters in Applied Microbiology*, 48(3), 307-312.
29. **Haznedaroglu, B.Z.**, Bolster, C.H., and Walker, S.L., 2008. "The role of starvation on *Escherichia coli* adhesion and transport in saturated porous media", *Water Research*, 42(6), 1547-1554.
30. **Haznedaroglu, B.Z.**, Yurtsever, D., Lefkovitz, J.R., and Duran, M., 2007. "Phenotypic Characterization of *Escherichia coli* through Whole-cell Fatty Acid Profiling to Investigate Host Specificity", *Water Research*, 41(4), 803-809.
31. Duran, M., **Haznedaroglu, B.Z.**, and Zitomer, D.H., 2006. "Microbial Source Tracking Using Host Specific FAME Profiles of Fecal Coliforms" *Water Research*, 40(1), 67-74.
32. **Haznedaroglu, B.Z.**, Zitomer, D.H., Hughes-Strange, G.B., and Duran, M., 2005. "Whole-cell Fatty Acid Composition of Total Coliforms to Predict Sources of Fecal Contamination, *Journal of Environmental Engineering*, 131(10), 1426-1432.

REVIEW ARTICLES

1. Sabotič, J., Bayram, E., ..., **Haznedaroglu, B.Z.**, ... and Vasquez, M.I. 2024. "A guide to the use of bioassays in exploration of natural resources", *Biotechnology Advances*, 71, 108307, doi.org/10.1016/j.biotechadv.2024.108307
2. Novoveská, L., Nielsen, S.L., Eroldoğan, O.T., **Haznedaroglu, B.Z.**, Rinkevich, B., Fazi, S., Robbens, J., Vasquez, M., and Einarsson, H., 2023. "Overview and Challenges of Large-scale Cultivation of Photosynthetic Microalgae and Cyanobacteria". *Marine Drugs*, 21(8), 445.
3. Gaudêncio, S.P., Bayram, E., Lukić Bilela, L., Cueto, M., Díaz-Marrero, A.R., **Haznedaroglu, B.Z.**, Jimenez, C., Mandalakis, M., Pereira, F., Reyes, F., and Tasdemir, D. 2023. "Advanced Methods for Natural Products Discovery: Bioactivity Screening, Dereplication, Metabolomics Profiling, Genomic Sequencing, Databases and Informatic Tools, and Structure Elucidation". *Marine Drugs*, 21(5), 308.
4. Eroldogan, O., Glencross, B., ..., **Haznedaroglu, B.Z.**, ..., and Rotter, A. 2023. "From Sea to Aquafeed: A Perspective Overview". *Reviews in Aquaculture*, 15(3), 1028-1057.
5. van Hullebusch, E.D., Bani, A., ..., **Haznedaroglu, B.Z.**, ..., and Zeeman, G. 2021. "Nature-based units as building blocks for resource recovery systems in cities". *Water*, 13 (22), 3153.

6. Rudovica, V., Rotter, A.,..., **Haznedaroglu, B.Z.**, ..., and Burlakovs, J. 2021. “Valorization of Marine Waste: Exploitation of Industrial by-products and Beach Wrack towards the Production of High Added-Value Products”. *Frontiers Marine Science*, 8, 723333.
7. Ozdalgic, B., Ustun, M., Dabbagh, S.R., **Haznedaroglu, B.Z.**, Kiraz, A., and Tasoglu, S., 2021. “Microfluidics for Microalgal Biotechnology”. *Biotechnology and Bioengineering*, 118, 1545–1563.
8. Kissler, J., Wirth, M.,..., **Haznedaroglu, B.Z.**, ..., and Beesley, L. 2020. “A Review of Nature-based Solutions for Resource Recovery in Cities”. *Blue-Green Systems*, 2(1), 138-172.
9. Peccia, J., **Haznedaroglu, B.Z.**, Gutierrez, J., and Zimmerman, J., 2013. “Nitrogen Supply is an Important Driver of Sustainable Microalgae Biofuel Production”, *Trends in Biotechnology*, 31(3), 134-138 [Invited Article].
10. **Haznedaroglu, B.Z.**, Beyazit, Y., Walker, S.L., and Haznedaroglu, I.C., 2012. “Pleiotropic Cellular, Hemostatic, and Biological Actions of Ankaferd Hemostat”, *Critical Reviews in Oncology/Hematology*, 83(1), 21-34.
11. Duran, M., Alm, E.W., Stedtfeld, R.D., **Haznedaroglu, B.Z.**, and Hashsham, S.A., 2005. “Detection and Occurrence of Indicator Organisms and Pathogens”, *Water Environment Research*, 77(6), 659-717.

BOOK CHAPTERS

1. **Haznedaroglu, B.Z.**, 2024. “Single Cell Protein Sources”, In **Alternative Food Sources**, Sahin, K. (Editor), Turkish Academy of Sciences Publications, Ankara, TR, ISBN: 9786256110007.
2. Sakarya, F.K., Ertekin, E., and **Haznedaroglu, B.Z.**, 2023. “Algae-Based Treatment of Domestic and Industrial Wastewater”, In **A Sustainable Green Future - Perspectives on Energy, Economy, Industry, Cities and Environment**, Oncel, S. (Editor), Springer Nature, Cham, Switzerland, ISBN: 9783031249426.
3. Borhan, E., Ozcelik, D., Yilmaz, A., Sakarya, F.K., Sahin, Z., Yesir, A., Karamollaoglu, I., and **Haznedaroglu, B.Z.**, 2022. “Understanding Metabolic Pathways and Their Network to Augment Microalgal Strain Performance for Industrially Important Metabolites Production”, In **Microalgae for Sustainable Products: The Green Synthetic Biology Platform**, Shekh, A., and Dasgupta, S. (Editors), Royal Society of Chemistry (RSC Publishing), Cambridge, UK, ISBN: 9781839165627.
4. Ozcelik, D., Sakarya, F.K., Tezel, U., and **Haznedaroglu, B.Z.**, 2022. “Recent Advancements in Algae-Bacteria Consortia for the Treatment of Domestic and Industrial Wastewater”, In **Integrated Waste Management and Valorization using Algal Cultures**, Demirer G., and Demirer, S. (Editors), Elsevier Publishing, Amsterdam, Netherlands, ISBN: 9780323858595.
5. Ozcelik, D., Sakarya, F.K., Erdinçler, B., Yilmaz, A., Avci, S., Borhan, E., and **Haznedaroglu, B.Z.**, 2021. “Recent Advancements in Algal Biorefineries”, In **Microalgae Biotechnology: Recent Advances, Market Potential, and Sustainability**, Shekh, A., Schenk, P., and Sarada, R. (Editors), Royal Society of Chemistry (RSC Publishing), Cambridge, UK, ISBN: 9781839160035.
6. **Haznedaroglu, B.Z.**, and Tezel, U., 2017. “Integrating microbial and molecular tools to determine the fate and impact of hazardous pollutants”, In **Hazardous Pollutants in Biological Treatment Systems: Fundamentals and a Guide to Experimental Research**, Cecen F., and Tezel, U. (Editors), International Water Association (IWA Publishing), London, UK, ISBN: 9781780407708.
7. **Haznedaroglu, B.Z.**, Rismani-Yazdi, H., Allnut, F. C. T., and Peccia, J., 2016. “Algal Biorefinery for High Value Platform Chemicals”, In **Platform Chemical Biorefinery–Future Green Industry**, Brar, S.K., Sarma, S.J., and Pakshirajan, K. (Editors), Elsevier, Netherlands, ISBN: 9780128030042.

PUBLICATIONS IN TURKISH JOURNALS

1. **Haznedaroglu, B.Z.**, 2023. “*Chlorella vulgaris* Türü Mikroalgelerde B Vitamini İçeriklerinin Uzun Süreli Pişirme Koşulunda Değişimi”. *Akademik Gıda*, 21(2), 167-173.

2. **Haznedaroglu, B.Z.**, Bayram, E., Ozcelik, D., Sakarya, F.K., Yilmaz, A., Borhan, E., Hocaoglu, D., Sahin, Z., and Karamollaoglu, I., 2023. “Characterization of Marine Mucilage Samples Collected from The Sea of Marmara during 2021 Incident”, *Aquatic Sciences and Engineering*, in preparation.
 3. Caliskan, E., and **Haznedaroglu, B.Z.**, 2022. “Characterization of Omega-3 and Omega-6 Fatty Acid Accumulation in *Chlorococcum novae-angliae* Microalgae Grown under Various Culture Conditions”. *International Journal of Life Sciences and Biotechnology*, (5)3, 346-369.
 4. **Haznedaroglu, B.Z.**, 2019. “Fitness and Pathogenicity of Outbreak Causing *Salmonella* Upon Short-Term Exposure to Groundwater with Residual Antibiotics”. *Trakya University Journal of Natural Sciences*, 20(1), 1-8.
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CONFERENCE PRESENTATIONS AND POSTERS

1. Parlak, D., Celayir, T., Yesir, A., Sakarya, F.K., Ünveren, E., Yürüdü, C, Özçelik, B.B., Ceylan T., Çakmak, T., and **Haznedaroglu, B.Z.**, 2025. “Photosynthetic performance of two microalgae species tested during Ax-3 Mission: Physical and molecular dynamics under microgravity”, *2025 MELiSSA Conference*, October 7-9, Granada, Spain.
2. Sakarya, F.K., Icagasioglu, E., Ertekin, E., Tezel, U., and **Haznedaroglu, B.Z.**, 2024. “Metabolic and Transcriptomic Responses of *Tetraselmis suecica* to Sub-lethal Copper”, *AlgaEurope Conference*, December 10-13, Athens, Greece.
3. Otenkaya, S., Ozdemir, A., Parlak, D., and **Haznedaroglu, B.Z.**, 2024. “Characterization of a Novel Micro-Vibration Mitigation Developed for an Experimental Life Sciences Cube used at The International Space Station”. *75th International Astronautical Congress*, October 14-18, Milan, Italy.
4. **Haznedaroglu, B.Z.**, 2024. “Algal Biotechnology: From Earth to Space”, *European Algae Biomass Association Young Algaeneers Symposium (YAS 2024)*, May 27-30, Vannes, France.
5. Ozcelik, D., and **Haznedaroglu, B.Z.**, 2023. “Algae-Based Dairy Manure Wastewater Treatment and Nutritional Profiling for Potential Feed Applications”, *European Algae Biomass Association Young Algaeneers Symposium (YAS 2023)*, May 9-11, Faro, Portugal.
6. Yesir, A., and **Haznedaroglu, B.Z.**, 2023. “Optimization of Astaxanthin Accumulation in *Haematococcus lacustris* in a Phased PBR System for Encapsulated Functional Food Products”, *European Algae Biomass Association Young Algaeneers Symposium (YAS 2023)*, May 9-11, Faro, Portugal.
7. Erdinçler, B., and **Haznedaroglu, B.Z.**, 2022. “Techno-Economic Assessment of Sustainable Aviation Fuel Produced in an Integrated Algal Biorefinery”, *AlgaEurope Conference*, December 13-15, Rome, Italy.
8. **Haznedaroglu, B.Z.**, 2022. “An Integrated Algal Biorefinery Concept for Carbon-Negative Functional Food Components”, *14th International Conference and Exhibition on Nutraceuticals and Functional Foods*, October 2–5, Istanbul, Türkiye.
9. Bayram, E., Gelgor, R.D., Ozcelik, D., and **Haznedaroglu, B.Z.**, 2022 “Effects of Baking Duration on Vitamin B Complex of *Chlorella Vulgaris* Microalgae”, *14th International Conference and Exhibition on Nutraceuticals and Functional Foods*, October 2–5, Istanbul, Türkiye.
10. Bayhan, T., Yesir, A., Sakarya, F.K., Bayram, E., Demirli, O.Z., Ocusler, E., Ozkan, S., Parlak, D., Seyman, D., Toktas, B., Uzun, B., Yilmaz, Z.G., and **Haznedaroglu, B.Z.**, 2022. “Encapsulation of Bioactive Algal Pigments: Optimization for Functional Food Applications”, *14th International Conference and Exhibition on Nutraceuticals and Functional Foods*, October 2–5, Istanbul, Türkiye.
11. Kutman, U.B., Durak, H.M., Arıkan, Y., **Haznedaroglu, B.Z.**, and Kutman, B.Y., 2022. “Effects of *Cystoseira barbata* extracts as a novel seaweed-based biostimulant agent on various crops”, *14th International Conference and Exhibition on Nutraceuticals and Functional Foods*, October 2–5, Istanbul, Türkiye.
12. Yilmaz, A., and **Haznedaroglu, B.Z.**, 2022. “Exploration of the Effects of Culture Media Modification on Hydrogen Production by *Synechocystis* sp. ATCC 27184”, *Cyano2022 7th Early Career Researcher Symposium on Cyanobacteria*, September 26–28, Leipzig, Germany.
13. **Haznedaroglu, B.Z.**, 2022. “An Integrated Algal Biorefinery Concept for Carbon-Negative Bioproducts”, *Nordic Algae Symposium 2022*, June 8–10, Turku, Finland.

14. **Haznedaroglu, B.Z.**, Bayram, E., Sakarya, F.K., Ozcelik, D., Yilmaz, A., Borhan, E., Hocaoglu, D., Sahin, Z., and Karamollaoglu, I., 2021. "Characterization of Surface Mucilage Samples from Marmara Sea 2021 Incident", *14th National 2nd International Environmental Engineering Congress*, December 9–11, Virtual, ISBN: 9786250095201, pp. 392-395.
15. Yilmaz, A., Polat, B., Kahveci, H., and **Haznedaroglu, B.Z.**, 2021. "Cultivation of Snow Algae Species in Open Raceway Ponds for Bio Jet Fuel Production in a Biorefinery Concept", *75th Annual Meeting of Phycological Society of America*, July 13-22, Virtual.
16. Ozcelik, D., and **Haznedaroglu, B.Z.**, 2021. "Algae-Based Dairy Manure Wastewater Treatment Integrated with Animal Feed Production", *75th Annual Meeting of Phycological Society of America*, July 13-22, Virtual.
17. Borhan, E., Polat, B., Kahveci, H., Pekerli, M., Odabas, C.D., and **Haznedaroglu, B.Z.**, 2021. "Carbon Negative Bio-Jet Fuel Production under Integrated Biorefinery Settings", *75th Annual Meeting of Phycological Society of America*, July 13-22, Virtual.
18. Hocaoglu, D., Sahin, Z., Bayram, E., and **Haznedaroglu, B.Z.**, 2021. "Low-Cost Production of High-Purity Phycocyanin from *Desertifilum tharense*", *75th Annual Meeting of Phycological Society of America*, July 13-22, Virtual.
19. Sakarya, F.S., and **Haznedaroglu, B.Z.**, 2021. "Wastewater Treatment by an Algae-Bacterium Consortium", *75th Annual Meeting of Phycological Society of America*, July 13-22, Virtual.
20. Erdinçler, B., and **Haznedaroglu, B.Z.**, 2021. "Techno-Economic Assessment of Sustainable Aviation Fuel Produced in an Integrated Algal Biorefinery", *75th Annual Meeting of Phycological Society of America*, July 13-22, Virtual.
21. Ozcelik, D., Bayram, E., and **Haznedaroglu, B.Z.**, 2020. "Dairy Farm Wastewater Treatment and Feed Potential of Algae: A Circular Bioeconomy Perspective", *AlgaEurope Conference*, December 1–3, Rome, Italy.
22. Avci, S. and **Haznedaroglu, B.Z.**, 2019. "Optimization of Extraction and Purification Methods for C-phycocyanin Production", *AlgaEurope Conference*, December 3–5, Paris, France.
23. Sakarya, F.S., Scannell, L.W., and **Haznedaroglu, B.Z.**, 2019. "Feasibility of using algal biomass for the pretreatment of metals in hydraulic fracturing wastewater", *International Water Association (IWA) Conference on Algal Stabilization Ponds for Wastewater Treatment and Resource Recovery*, July 1-2, Valladolid, Spain.
24. **Haznedaroglu, B.Z.** and Uzunyayla, D. 2019. "Algae Based Solutions for Breathable Spaces within Cities", *International Civil Engineering and Architecture Conference*, April 17-20, Trabzon, Türkiye.
25. **Haznedaroglu, B.Z.**, 2019. "Comprehensive lipidomics analysis of *Ettlia oleoabundans* under nitrogen and phosphorus stress conditions", *EUALGAE Final Conference – European Recent Advances in Microalgae Field*, February 26-27, Madrid, Spain.
26. **Haznedaroglu, B.Z.**, Yilmaz, A., Ozcelik, D., and Avci, S., 2018. "Photoautotrophic Hydrogen Production in Microalgae and Cyanobacteria", *AlgaEurope Conference*, December 4–6, Amsterdam, Netherlands.
27. Matich, E.K., Ghafari, M., Camgoz, E., Caliskan, E., Pfeifer, B.A., Atilla-Gokcumen, G.E., and **Haznedaroglu, B.Z.**, 2017. "Time series lipidomics analysis of *Ettlia oleoabundans* under nutrient stress", *AlgaEurope Conference*, December 5–7, Berlin, Germany.
28. Matich, E.K., Ghafari, M., Camgoz, E., Caliskan, E., Pfeifer, B., **Haznedaroglu, B.Z.**, and Atilla-Gokcumen, G.E., 2017. "Time-series LC-MS Based Metabolomics Analysis of Non-model, Oleaginous Green Microalgae Under Nutrient Stress", *Algae Biomass Summit*, October 29–November 1, Salt Lake City, UT, USA.
29. Matich, E.K., Butryn, D.M., Ghafari, M., del Solar, V., Camgoz, E., Pfeifer, B., Aga, D.S., Atilla-Gokcumen, G.E., and **Haznedaroglu, B.Z.**, 2016. "Time-series Metabolomics Pipeline for the Production of Lipids and Value-added Nutraceuticals in Non-model Microalgae", *Algae Biomass Summit*, October 23– 26, Phoenix, AZ, USA.
30. **Haznedaroglu, B.Z.**, and Walker, S.L., 2016. "Effects of Residual Antibiotics in Groundwater on Survival and Pathogenicity of *Salmonella*", *252nd American Chemical Society National Meeting*, August 21–25, Philadelphia, PA, USA.

31. Matich, E.K., Butryn, D.M., Ghafari, M., del Solar, V., Camgoz, E., Pfeifer, B., Aga, D.S., **Haznedaroglu, B.Z.**, and Atilla-Gokcumen, G.E., 2016. "Characterization of value-added biochemicals using mass spectrometry-based metabolomics in a non-model microalgae", 252nd *American Chemical Society National Meeting*, August 21-25, Philadelphia, PA, USA.
32. Scannell, L.W., Wegst-Uhrich, S., Mullin, E., Aga, D., and **Haznedaroglu, B.Z.**, 2016. "Treatment of Hydraulic Fracturing Wastewater by Algal Biomass", 251st *American Chemical Society National Meeting*, March 13-17, San Diego, CA, USA.
33. Ghafari, M., Matich, E., Camgoz, E., Pfeifer, B., Atilla-Gokcumen, G.E., and **Haznedaroglu, B.Z.**, 2015. "Time-series Transcriptomics and Metabolomics Characterization of Non-model Microalgae: Applications for Food:Energy:Water Nexus", *Algae Biomass Summit*, September 29 – October 3, Washington, DC, USA.
34. Ghafari, M., Matich, E., Camgoz, E., Pfeifer, B., Atilla-Gokcumen, G.E., and **Haznedaroglu, B.Z.**, 2015. "Systems-level Characterization of Microalgae: Applications for Food:Energy:Water Nexus", *Association of Environmental Engineering and Science Professors' Research and Education Conference*, June 13-16, New Haven, CT, USA.
35. Matich, E.K., Butryn, D.M., Ghafari, M., Aga, D.S., **Haznedaroglu, B.Z.**, and Atilla-Gokcumen, G.E., 2016. "Characterization of metabolic changes in *Ettlia oleabundans* under nitrate limitation", 250th *American Chemical Society National Meeting*, August 16-20, Boston, MA, USA.
36. Matich, E., Butryn, D., Ghafari, M., Aga, D., **Haznedaroglu, B.Z.**, and Atilla-Gokcumen, G.E., 2015. "Characterization of metabolic changes in *Ettlia oleabundans* under nitrate limitation", 249th *American Chemical Society National Meeting*, March 22-26, Denver, CO, USA.
37. Ghafari, M., Matich, E., Beckinghausen, A., Pfeifer, B., Atilla-Gokcumen, G.E., and **Haznedaroglu, B.Z.**, 2014. "Time-series Characterization of Non-model Microalgae at the Systems-level for Sustainable Biofuel Production", 248th *American Chemical Society National Meeting*, August 10-14, San Francisco, CA, USA.
38. Beckinghausen, A., Martinez, A., Blerch, D., and **Haznedaroglu, B.Z.**, 2014. "Association of enteric bacteria with filamentous nuisance algae *Cladophora spp.* in Lake Erie", 248th *American Chemical Society National Meeting*, August 10-14, San Francisco, CA, USA.
39. Nuding, E., Swarthout, J., Reed, P., and **Haznedaroglu, B.Z.**, 2014. "Feasibility of Testing Cyanophages as Biological Control Mechanisms against Harmful Algal Bloom Forming *Microcystis aeruginosa*", 248th *American Chemical Society National Meeting*, August 10-14, San Francisco, CA, USA.
40. Ghafari, M., Rashidi, B., and **Haznedaroglu, B.Z.**, 2014. "Effects of Macro- and Micronutrients on Neutral Lipid Accumulation in Oleaginous Microalgae", 248th *American Chemical Society National Meeting*, August 10-14, San Francisco, CA, USA.
41. Scannell, L.W., Ji, X., Xu, R., and **Haznedaroglu, B.Z.**, 2014. "Feasibility of Utilizing Algal Biomass for the Pre-treatment of Hydraulic Fracturing Wastewater", 248th *American Chemical Society National Meeting*, August 10-14, San Francisco, CA, USA.
42. Reed, P., and **Haznedaroglu, B.Z.**, 2013. "Testing Cyanophage N-1 as a Biological Control Mechanism against Harmful Algal Bloom (HAB) Forming Species *Microcystis aeruginosa*", *The Middle States Division of the Association of American Geographers Annual Meeting*, October 18-19, Buffalo, NY, USA.
43. **Haznedaroglu, B.Z.**, and Walker, S.L., 2013. "Effects on Residual Antibiotics in Groundwater on Salmonella: Changes in Survival and Pathogenicity", *Association of Environmental Engineering and Science Professors' 50th Anniversary Conference*, July 14-16, 2013, Golden, CO, USA.
44. **Haznedaroglu, B.Z.**, Yates, M.V., Maduro, M.F., and Walker, S.L., 2013. "Phenotypic and genotypic responses of *Salmonella* exposed to groundwater environments: Changes in survival and pathogenicity", *87th American Chemical Society Colloid and Surface Science Symposium*, June 23-26, 2013, Riverside, CA, USA.
45. **Haznedaroglu, B.Z.**, Rismani-Yazdi, H., and Peccia, J., 2012. "Next Generation RNA-seq Based Transcriptomics on the Microalgae *Neochloris oleabundans*: Implications for Improved Lipid Biosynthesis", *The 243rd American Chemical Society National Meeting*, March 25-29, San Diego, CA, USA.

46. **Haznedaroglu, B.Z.**, Rismani-Yazdi, H., Bibby, K., and Peccia, J., 2011. "Next Generation DNA Sequencing and Annotation of the Microalgae *Dunaliella tertiolecta* Transcriptome: Gene Discovery for Biofuel Production", *Association of Environmental Engineering and Science Professors' Education and Research Conference*, July 10-12, 2011, Tampa, FL, USA.
47. Zorlu, O., **Haznedaroglu, B.Z.**, and Walker, S.L., 2010. "Role of the Growth Phase in Attachment Kinetics of *Salmonella enterica* subspecies Typhimurium", *The International Chemical Congress of Pacific Basin Societies*, December 15-20, 2010, Honolulu, Hawaii, USA.
48. Bolster, C.H., Cook, K.L., Marcus, I.M., **Haznedaroglu, B.Z.**, and Walker, S.L., 2010. "Correlating Attachment Behavior with Cell Properties for Eight Porcine *Escherichia coli* Isolates", *International Annual Meeting of American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America*, October 31-November 3, 2010, Long Beach, CA, USA.
49. **Haznedaroglu, B.Z.**, Hill, J., and Walker, S.L., 2009. "Determining the Influence of Flagella and Growth Phase in *Salmonella enterica* Transport", *The 13th International Association of Colloid and Interface Science International Conference on Surface and Colloid Science and the 83rd American Chemical Society Colloid and Surface Science Symposium*, June 14-19, 2009, New York, NY, USA.
50. Hill, J., Walker, S.L., and **Haznedaroglu, B.Z.**, 2009. "Adhesion and Swimming Dynamics of Flagellated Bacteria under Laminar Flow", *The 13th International Association of Colloid and Interface Science International Conference on Surface and Colloid Science and the 83rd American Chemical Society Colloid and Surface Science Symposium*, June 14-19, 2009, New York, NY, USA.
51. **Haznedaroglu, B.Z.**, and Walker, S.L., 2009. "Determining the Extent of Virulence and Influence of Motility in *Salmonella* Transport", *The First International Conference on Microbial Transport and Survival in Porous Media*, May 10-19, 2009, Niagara-on-the-Lake, Ontario, Canada.
52. **Haznedaroglu, B.Z.**, and Walker, S.L., 2009. "Changes in Antibiotic Resistance and Pathogenicity of *Salmonella* Exposed to Artificial Groundwater with Residual Antibiotics", *The First International Conference on Microbial Transport and Survival in Porous Media*, May 10-19, 2009, Niagara-on-the-Lake, Ontario, Canada.
53. Bradford, S.A., Kim, H.N., **Haznedaroglu, B.Z.**, Walker, S.L., and Torkzaban, S., 2008. "Concentration Dependent Colloid Transport in Saturated Porous Media: The Role of Solution Chemistry", *American Geophysical Union Fall Meeting*, December, 15-19, 2008, San Francisco, CA, USA.
54. **Haznedaroglu, B.Z.**, and Walker, S.L., 2008. "Determining the Extent and Influence of Flagella, Injection Concentration, and Solution Chemistry in *Salmonella* Transport", *The 100th Annual Meeting of American Institute of Chemical Engineers*, November 16-21, 2008, Philadelphia, PA, USA.
55. **Haznedaroglu, B.Z.**, and Walker, S.L., 2008. "Fate of Pathogenicity and Transport Characteristics of *Salmonella* and *E. coli* O157:H7 in Groundwater", *Gordon Research Conferences, Environmental Science: Water*, June 22-27, 2008, Holderness, NH, USA.
56. **Haznedaroglu, B.Z.**, and Walker, S.L., 2008. "Monitoring the Pathogenicity and Transport Behavior of *Escherichia coli* O157:H7 and *Salmonella enterica* spp. in Packed Bed Column Systems", *The 108th General Meeting of the American Society for Microbiology*, June 1-5, 2008, Boston, MA, USA.
57. Bolster, C.H., **Haznedaroglu, B.Z.**, and Walker, S.L., 2008. "Variability of Surface Characteristics and Transport Behavior of *Escherichia coli* Isolates from Different Hosts", *The 108th General Meeting of the American Society for Microbiology*, June 1-5, 2008, Boston, MA, USA.
58. **Haznedaroglu, B.Z.**, and Walker, S.L., 2008. "Transport behavior of *Escherichia coli* O157:H7 and *Salmonella enterica* serovar Pullorum in packed bed column systems: Influence of solution chemistry and cell concentration", *The 235th American Chemical Society National Meeting*, April 6-10, New Orleans, LA, USA.
59. Salas, Y., **Haznedaroglu, B.Z.**, Smith, H., and Walker, S.L., 2007. "The Effects of Various Stress Conditions on the Virulence of *Salmonella* spp. During the Transport in Groundwater", *The 15th Annual Southern California Conference for Undergraduate Research*, November 16, 2007, Los Angeles, CA, USA.
60. Yurtsever, D., **Haznedaroglu, B.Z.**, Dunaev, T., and Duran, M., 2007. "The Effects of Indicator Organism Type on Phenotypic Characterization of Host-Specificity and the Implications for Microbial Source

Tracking”, *WEFTEC 80th Annual Technical Exhibition and Conference*, October 13-17, 2007, San Diego, CA, USA.

61. **Haznedaroglu, B.Z.**, Bolster, C.H., and Walker, S.L., 2007. “Establishing the influence of starvation upon the transport of environmental *Escherichia coli* isolates”, *The 107th General Meeting of the American Society for Microbiology*, May 20-24, 2007, Toronto, Canada.
62. Avila, J.D., Cummings, D., **Haznedaroglu, B.Z.**, Smith, H., and Walker, S.L., 2006. “Establishing the Phenotypic Nature of *Salmonella spp.* and *Escherichia coli* Isolates as a Function of Environmental Stress: Implications for Pathogen Transport in Aquatic Environments”, *The 14th Annual Southern California Conference for Undergraduate Research*, November 18, 2006, Los Angeles, CA, USA.
63. **Haznedaroglu, B.Z.** and Duran, M., 2005. “Fatty Acid Methyl Ester (FAME) Profiles of Total Coliforms as a New Tool for Predicting Sources of Fecal Contamination”, *WEFTEC 78th Annual Technical Exhibition and Conference*, October 29-November 2, 2005, Washington, DC, USA.
64. **Haznedaroglu, B.Z.** and Duran, M., 2005. “Predicting Sources of Fecal Pollution Using Fatty Acid Methyl Ester (FAME) Profiling”, *WEF-TMDL 2005*, June 26-29, 2005, Philadelphia, PA, USA.
65. Duran, M., and **Haznedaroglu, B.Z.**, 2005. “Host Specific Differences in Fatty Acid Methyl Ester Profiles of Indicator Organisms as a New Tool for Microbial Source Tracking”, *ASCE-EWRI World Water and Environmental Resources Congress 2005*, May 15–19, 2005, Anchorage, Alaska, USA.
66. **Haznedaroglu, B.Z.** and Duran, M., 2004. “Fatty Acid Methyl Ester (FAME) Profiling for Microbial Source Tracking: Theory and Applications”, *PennTEC 2004 Pennsylvania Water Environment Association's Annual Technical Conference and Exhibition*, June 27-30, 2004, State College, PA, USA.

INVITED LECTURES

Haznedaroglu, B.Z. “*Integrated Algal Biorefinery Concept for Carbon-Negative SAF Production*”. **Sustainable Aviation Fuels Forum**, December 6-7, 2022, Berlin, Germany.

Haznedaroglu, B.Z. “*Microalgae as Bioeconomy Feedstock*”. **Bioeconomy Summit, Gebze Technical University**, November 11, 2018, Istanbul, Türkiye.

Haznedaroglu, B.Z. “*Microalgal Biorefineries Towards a Bioeconomy-Driven World*”. **Energy Institute, Istanbul Technical University**, November 18, 2016, Istanbul, Türkiye.

Haznedaroglu, B.Z. “*Microalgal Biorefineries Towards Sustainable Cities*”. **SBE2016 - International Conference on Sustainably Built Environment**, October 13-15, 2016, Istanbul, Türkiye.

Haznedaroglu, B.Z. “*Microalgal Biorefineries Towards a Bioeconomy-Driven World*”. **Department of Chemical and Biological Engineering, Koc University**, March 3, 2016, Istanbul, Türkiye.

Haznedaroglu, B.Z. “*An Introduction to Algae and Their Significance in Daily Life*”. **Department of Mineral Resources and Energy Engineering, Chonbuk National University**, July 29, 2014, Jeonju, South Korea.

Haznedaroglu, B.Z. “*Transcriptome analysis of lipid producing microalgae using next generation DNA sequencing technologies: Implications for improved biofuel production*”. **Department of Civil and Environmental Engineering, Syracuse University**, March 3, 2014, Syracuse, NY.

Haznedaroglu, B.Z. “*Systems level characterization of non-model microalgae using next generation ‘omics’ technologies: Applications for bioenergy, water quality and sustainable food*”. **Department of Earth and Environmental Engineering, Columbia University**, February 21, 2014, New York, NY.

Haznedaroglu, B.Z. “*Transcriptome analysis of lipid producing microalgae using next generation DNA sequencing technologies: Implications for improved biofuel production*”. **Interdisciplinary Seminar Series in the Life Sciences (LSS) at Lafayette College**, November 22, 2013, Easton, PA.

Haznedaroglu, B.Z. “*Transcriptome analysis of lipid producing microalgae using next generation DNA sequencing technologies: Implications for improved biofuel production*”. **Department of Chemical and Biological Engineering, University at Buffalo**, November 20, 2013, Buffalo, NY.

Haznedaroglu, B.Z. “*Transcriptome analysis of lipid producing microalgae using next generation DNA sequencing technologies: Implications for improved biofuel production*”. **Department of Biological Sciences, University at Buffalo**, March 28, 2013, Buffalo, NY.

Haznedaroglu, B.Z. “*Next generation transcriptome sequencing of biofuel producing microalgae*”. **Department of Civil and Environmental Engineering, Villanova University**, November 19, 2010, Villanova, PA.

RESEARCH ADVISING

Ongoing theses and dissertations

Graduate advisor (Ph.D.): Tuğçe Celayir (Fall 2024 – Present)

Graduate advisor (M.S.): Sadaqah Hamblin (Fall 2024 – Present)

Graduate advisor (M.S.): Gizem Nurser Koroğlu (Fall 2023 – Present)

Graduate advisor (M.S.): Beyza İrem Ayan (Fall 2023 – Present)

Graduate advisor (M.S.): Mehmet Yiğit Gezer (Fall 2023 – Present)

Graduate co-advisor (M.S.): Doğukan Parlak (Fall 2023 – Present)

Completed theses and dissertations

Aslıhan Yesir (M.S., 2024): Thesis title: “Optimization of Astaxanthin Accumulation in Haematococcus lacustris CCAP 34/6 in a Photobioreactor System”

Fahri Koray Sakarya (Ph.D., 2024): Dissertation title: “Wastewater Treatment Technologies by Algae-Bacteria Consortia”

Emren Borhan (M.S., 2022): Thesis title: “Optimized Accumulation of Algal Lipids for Bio-Jet Fuel Production”

Dila Hocaoglu (M.S., 2022): Thesis title: “Integrated Wastewater Management for Sustainable Agriculture Operations using Cyanobacteria”

Begüm Erdinçler (M.S., 2021): Thesis title: “Techno-economic Assessment of an Integrated Algal Biorefinery”

Arca Yılmaz (M.S., 2020): Thesis title: “Exploration of Photoautotrophic Hydrogen Production in Synechocystis sp. ATCC 27184”

Duygu Özçelik (M.S. 2020): Thesis title: “Integrated Waste Management for Sustainable Livestock and Aquaculturing Systems Using Microalgae”

Sevda Avcı (M.S. 2020): Thesis title: “Pretreatment of Algal and Cyanobacterial Biomass for High Purity Phycocyanin Production”

Derya Gelgör (M.S. 2019): Thesis title: Design of Micro Algae-Based Nutritional Enhancer for Food

Elifcan Çalışkan (M.S. 2019): Thesis title: Optimized Production of Omega-3 Omega-6 Fatty Acids from Chlorococcum novae-angliae

HONORS & AWARDS

Dr. Akın Çakmakçı Pioneer Researcher Award, **Technology Development Foundation of Türkiye (TTGV)** (2024)

Climate Sciences Award, **All Federation of Bureaucrats and Business People (TÜMBİFED)** (2022)

Jury Special Award, **Istanbul Chamber of Industry** Environmental Awards (2018)

BAGEP Young Scientist Award, **The Science Academy, Türkiye** (2018)

Distinguished Service Award as Internet Resources Committee Chair, **Association of Environmental Engineering and Science Professors** (2017)

Newton Advanced Fellowship, **The Royal Society of UK** (2015 – 2018)

FABED Eser Tumen Research Award, **Fevzi Akkaya Scientific Research Support Fund** (2015)

Incoming Researcher Fellowship, **The Scientific and Technological Research Council of Türkiye** (2014 – 2016)

International Scholar Fellowship, **Brown University** (2014)

Postdoctoral Fellowship, **Yale Institute for Biospheric Studies & Yale Climate and Energy Institute** (2010 – 2012)

International Scholar Award, **Alpha Association of Phi Beta Kappa Alumni in Southern California** (2009)

Graduate Dean's Dissertation Fellowship, **University of California, Riverside** (2008 – 2009)

Graduate Student Association Research Award, **University of California, Riverside** (2008)

Krieger and Stewart Engineering Incorporated Fellowship, Riverside, CA (2008)

Graduate Dean's Dissertation Research Grant, **University of California, Riverside**, (2008)

The Montgomery-Watson-Harza Consulting Engineers / AEESP Master's Thesis of the Year Award, **Association of Environmental Engineering and Science Professors** (2006)

A&WMA Graduate Student Scholarship, **Air & Waste Management Association**, Mid-Atlantic States Section, Delaware Valley Chapter (2005)

PWEA Student Research Award, **Pennsylvania Water Environment Association**: "Fatty Acid Methyl Ester (FAME) Profiling for Microbial Source Tracking: Theory and Applications". (2004)

Student Technical Paper Award, **American Society of Civil Engineers/Environmental and Water Resources Institute**: "Fatty Acid Methyl Ester (FAME) Profiling for Microbial Source Tracking: Theory and Applications" (2004)

ORSP Graduate Research Fellowship, Office of Research and Sponsored Projects, **Villanova University** (2004 – 2005)

Graduate Assistantship, Department of Civil and Environmental Engineering, **Villanova University** (2003 – 2005)

PROFESSIONAL AFFILIATIONS

American Chemical Society (ACS), American Geophysical Union (AGU), American Institute of Chemical Engineers (AIChE), American Society of Microbiology (ASM), American Society of Civil Engineers (ASCE), Association of Environmental Engineering and Science Professors (AEESP), International Water Association (IWA), National Society of Professional Engineers (NSPE), Water Environment Federation (WEF)

TEACHING EXPERIENCE

<u>Associate Professor</u> <i>Bogaziçi University</i> ESC 315 – Microbes [Spring 2024-2025] ESC 554 – Biofuels and Bioenergy [Fall 2015-2025] ESC 557 – Environmental Microbiology [Spring 2015-2025]	Sept. 2014 – Present <i>Istanbul, TÜRKIYE</i>
<u>Assistant Professor</u> <i>University at Buffalo</i> CIE 565 – Biological Process Fundamentals [Fall 2013] CIE 500 – Environmental Microbiology [Spring 2013-2014] CIE 500 – Energy and Environment [Fall 2012]	August 2012 – May 2014 <i>Buffalo, NY</i>
<u>Teaching Assistant</u> <i>University of California</i> CHE 116 – Heat Transfer ENVE 142 – Water Quality Modelling CEE 160B – Environmental Engineering	September 2005 – June 2007 <i>Riverside, CA</i>
<u>Teaching Assistant</u> <i>Villanova University</i> CEE 7511 – Microbiology for Environmental Engineers	January – May 2005 <i>Villanova, PA</i>

WORK EXPERIENCE

<u>Associate Professor</u> <i>Bogaziçi University</i> TÜRKIYE Institute of Environmental Sciences	January 2024 – Present <i>Istanbul,</i>
<u>Assistant Professor</u> <i>Bogaziçi University</i> TÜRKIYE Institute of Environmental Sciences	September 2014 – January 2024 <i>Istanbul,</i>
<u>Assistant Professor</u> <i>University at Buffalo</i> Department of Civil, Structural, and Environmental Engineering	August 2012 – August 2014 <i>Buffalo, NY</i>
<u>Postdoctoral Associate</u> <i>Yale University</i> Department of Chemical and Environmental Engineering	May 2010 – August 2012 <i>New Haven, CT</i>
<u>Graduate Research Assistant</u> <i>University of California</i> Department of Chemical and Environmental Engineering	September 2005 – March 2010 <i>Riverside, CA</i>
<u>Graduate Research Assistant</u> <i>Villanova University</i> Department of Civil and Environmental Engineering	August 2003 – May 2005 <i>Villanova, PA</i>
<u>Intern</u> <i>Marmara Research Center</i> TÜRKIYE Earth and Marine Sciences Institute	June – September 2002 <i>Izmit,</i>
<u>Undergraduate Research Assistant</u> <i>Middle East Technical University</i> TÜRKIYE Department of Environmental Engineering	June – September 2001 <i>Ankara,</i>

FUNDING

Current (as PI)

1. “Artificial Intelligence Supported Bioreactor Monitoring and Simulation System (YAZiS)”, **The Scientific and Technological Research Council of Türkiye Informatics and Information Security Institute (TUBITAK-Bilgem)**, \$25,000 [Award ID: TBD; September 2025–June 2026].
2. “Integrated Biorefinery Concept for Bioeconomy Driven Development (INDEPENDENT)”, **Ministry of Industry and Technology & Directorate General for EU and Foreign Affairs Department of EU Financial Programmes**, Competitiveness and Innovation Sector Operational Programme (CISOP), 6.900.000€ [Award ID: EuropeAid/140111/IH/SUP/TR; December 2019–2027].

Current (as co-PI)

1. “Sustainable, Secure and Competitive Energy Through Scaling Up Advanced Biofuel Generation (SUSTEPS)”, **European Commission, Horizon Europe, HORIZON-CL5-2022-D3-03 Call**, €2.999.536 [Award ID: 101122363; PI: Abdullah Z. Turan (TUBITAK-MAM); September 2023–September 2027].
2. “Identification and Targeting of Ferroptosis-Regulating Gene Activities Potentially Involved in Resistance to Alpelisib-Fulvestrant-Mediated Growth Suppression in PIK3CA-Mutant Breast Cancers”, **The Scientific and Technological Research Council of Türkiye (TUBITAK)**, 1001 Scientific and

Technological Research Projects Funding Program, \$60.000 [Award ID: 125Z409; PI: Onur Çizmecioğlu (Bilkent Uni.); November 2025–September 2027]

3. “Mycosporine-like Aminoacids of some Microalgae from Horseshoe Island (Antarctica): Evaluation of the Extraction, Purification and Economic Potential”, **The Scientific and Technological Research Council of Türkiye (TUBITAK)**, 1001 Scientific and Technological Research Projects Funding Program, \$41.550 [Award ID: 122Y136; PI: Turgay Çakmak (İstanbul Medeniyet Uni.); October 2022–2025].

Past (as PI)

1. “Microalgal Life Support Systems for Space Missions (UzMA_n)”, **The Scientific and Technological Research Council of Türkiye Space Institute (TUBITAK-Uzay)**, \$65.000 [Award ID: TABM-HZT-23-24; co-PIs: Osman Okur, Elif Ünveren, Caner Yürüdü (TUBITAK-MAM); Turgay Çakmak (İMU); April 2023–March 2024].
2. “Development of Algae-based Inhibitor Compounds against SARS-CoV-2 Virus (VirALGin)”, **Higher Education Council**, Research Universities Support Program, \$185.000 [Award ID: 22Y00ADP1; co-PIs: Rana Sanyal (BU); August 2022–June 2025].
3. “Istanbul Renewable Energy Generation and Storage Technologies Research and Development Center (Renew-IST)”, **Istanbul Development Agency**, Innovative Istanbul Financial Assistance Program, \$521.000 [Award ID: TR10/21/YEP/0001; co-PIs: Damla Eroğlu Pala, Betül Uralcan (BU); Can Erkey, Alper Uzun, Sarp Kaya (Koç Uni.); February 2022–July 2023].
4. “Microalgae Based Sustainable Bio-Jet Fuel Project (MICRO-JET)”, **The Scientific and Technological Research Council of Türkiye (TUBITAK)**, 1003 Primary Subjects R&D Funding Program, \$448.000 [Award ID: 218M857; June 2020–July 2023].
5. “Highly Nutritional Plant-based Food (IGNITE)”, **The Scientific and Technological Research Council of Türkiye (TUBITAK)**, 1512 Entrepreneurship Multi-phase Programme, \$36.000 [Award ID: 2180589; July 2019–March 2021].
6. “Joint Consortium on Algal Biotechnology for Bioeconomy-Driven Future”, **British Council**, Newton Fund Research Environment Links Program, \$51.000 [Award ID: 439618100; co-PI: Alison Smith (University of Cambridge); January 2019–2021].
7. “Systems-level Characterization of Photoautotrophic Hydrogen Production in Non-model Microalgae and Cyanobacteria”, **The Scientific and Technological Research Council of Türkiye (TUBITAK)**, 1001 Scientific and Technological Research Projects Funding Program, \$135.000 [Award ID: 115Y163; January 2016–2019].
8. “Cellular and Molecular Characterization of Non-model Microalgae for Maximized Lipid Synthesis”, **The Royal Society**, Newton Fund, \$163.000 [Award ID: NA140481; co-PI: Alison Smith (University of Cambridge); March 2015–2018].
9. “Istanbul Algal Biotechnology Research and Development Center”, **Istanbul Development Agency**, Innovative Istanbul Financial Assistance Program, \$560.000 [Award ID: TR10/15/YNK/0062; co-PIs: Burak Demirel, Turgut Onay, Emre Otay, Ulas Tezel (BU); September 2015–August 2017].
10. “Maximizing the Biotechnological Potential of Microalgae: Applications for Food and Energy”, **Bogazici University Research Fund**, Start-up Program, \$75.000 [Award ID: 14Y00SUP10; October 2014–2017].
11. “Improving Biofuel Capacity of Microalga at the Systems Level by OMICS-based Characterization”, **The Scientific and Technological Research Council of Türkiye (TUBITAK)**, 2232 Incoming Researcher Program, \$13.500 [Award ID: 115C019; February 2015–2017].

Past (as co-PI)

1. “Investigation of the Biostimulant Potential of Extracts Prepared from *Cystoseira barbata* Algae on Wheat”, **The Scientific and Technological Research Council of Türkiye (TUBITAK)**, 3501 Career Development Program, \$41.000 [Award ID: 121Z215; PI: Bahar Yıldız Kutman (Gebze Teknik Uni.); October 2021–February 2025].
2. “Enhanced Capacity of the Youth on Biobased Economy”, **European Commission**, Erasmus+ Program, 125.582€ [Award ID: 2021-1-TR01-KA220-YOU-000029205; PI: Bülent Sezer (Ministry of Agriculture and Forestry); February 2022–2024].
3. “Determination of the littoral microalgae and cyanobacteria biodiversity of Horseshoe Island, establishment of the culture collection, and evaluation of the general biotechnological properties of the cultured strains”, **The Scientific and Technological Research Council of Türkiye (TUBITAK)**,

- KUTUP 1001 Scientific and Technological Research Projects Funding Program, \$34.000 [Award ID: 119Y399; PI: Turgay Çakmak (İstanbul Medeniyet Uni.); April 2020–2022].
4. “Identification and Targeting of Enzymes that Orchestrate the Metabolic Signature of Tumor Suppressor PTEN in Metastatic and Castration Resistant Prostate Cancers”, **The Scientific and Technological Research Council of Türkiye (TUBITAK)**, 1001 Scientific and Technological Research Projects Funding Program, \$120.000 [Award ID: 118Z976; PI: Onur Çizmeçioğlu (Bilkent Uni.); March 2019–2022].
 5. “Center of Excellence for Novel Bio-Economy Resources (ÖBEK)” **Marmara Development Agency**, \$140.000 [Award ID: TR42/18/URETIM/008, co-PIs: Işıl Kurnaz (GTU); Devrim Gözüaçık (Sabancı Uni.), Anıl Çetin (Koç Uni.); September 2018–May 2020].
 6. “SusChEM-Time-series Characterization and Modeling of Non-model Microalgae at the Systems-level for Sustainable Chemical Production, **NSF Chemical, Bioengineering, Environmental, and Transport Systems (CBET)**, Energy for Sustainability Program, \$550.000 [Award ID: 1438172, co-PIs: Blaine Pfeifer (UB); Ekin Atilla-Gokcumen (UB); September 2014–August 2018].
 7. Workshop on “Water Resources Issues Related to Unconventional Natural Gas Production”, **SUNY Network of Excellence in Energy, Environment, Education, and Economics (4E)**, \$9,596 [co-PI: Christopher Lowry (UB); May 2014]

COLLABORATORS

Bogazici University: Ulas Tezel, Turgut Onay, Burak Demirel (Institute of Environmental Sciences); Emre Otay (Civil Engineering)

Cambridge University (UK): Alison G. Smith (Dept. of Plant Sciences)

University of Turku (Finland): Yagut Allahverdiyeva-Rinne (Dept. of Molecular Plant Biology)

Hanyang University (South Korea): Hyunjung Kim (Dept. of Earth Resources and Environmental Engineering)

NASA & UC Santa Cruz (USA): Jonathan Trent (Ames Research Center)

Oxford University (UK): Fraser Armstrong (Dept. of Chemistry)

University of Pittsburgh (USA): Kyle Bibby (Dept. of Civil and Environmental Engineering)

University of California, Irvine (USA): Michael McClelland, Steffen Porwollik (School of Medicine)

University at Buffalo (USA): G. Ekin Atilla-Gokcumen, Diana Aga (Dept. of Chemistry); Ning Dai (Dept. of Civil, Structural, and Environmental Engineering); Blaine Pfeifer (Dept. of Chemical and Biological Engineering); Christopher S. Lowry (Dept. of Geology)

US Environmental Protection Agency (USA): Indranil Chowdhury (National Exposure Research Laboratory)

US Department of Agriculture (USA): Scott A. Bradford (Agricultural Research Service Salinity Laboratory)

Yale University (USA): Menachem Elimelech, Julie Zimmerman (Dept. of Chemical and Environmental Engineering)

UNIVERSITY SERVICE

Bogazici University

Institute of Environmental Sciences

Executive Committee (Fall 2017 – Spring 2018)

Student Affairs Committee (Fall 2017 – Present)

Social Services Committee (Spring 2015 – Present)

Institute Infrastructural Development Committee (Spring 2015 – Present)

Student Council Selection Committee (Fall 2014 – Present)

University level

Sarıtepe Campus Coordinator (Fall 2019 – Present)

Preventive Commission on Sexual Harassment (Spring 2020 – Present)
Wildlife Protection Committee (Fall 2019 – Spring 2022)
Consultant to Rector (Fall 2019 – Fall 2020)
Research and Planning Committee (Spring 2018 – Present)

University at Buffalo

Department of Civil, Structural, and Environmental Engineering

Undergraduate Laboratories Committee (Fall 2013, Spring 2014)
Faculty Search Committee (January – March 2014)
Assistance for Undergraduate Curriculum Committee (Improvement of current curriculum and development of a new class) (Spring 2013)
Assistance for Department Seminar Series (Host for one speaker in Spring 2013; two in Fall 2013)
Assistance for Civil Engineering Faculty Search Committee (Provided feedback to the committee on the application packages of short-listed candidates; participated in several breakfast and lunch sessions for invited candidates) (Spring 2013)
Evaluation of graduate student applications in GrAdMIT portal and interview of short-listed international and domestic graduate students (Spring 2013, Fall 2014)
Served in Department Open House (Spring 2013)

University Level

Council Member, UB Sustainability Academy (Spring 2014)
Faculty Advisory Committee, Shared Instrumentation Laboratories (Spring 2014)
Affiliated Faculty, Civic Engagement and Public Policy (Fall 2012 – Spring 2014)
Affiliated Faculty, Graduate Program in Genetics, Genomics, and Bioinformatics (Fall 2013 – Spring 2014)
Faculty Advisor, Engineers for a Sustainable World (Fall 2013 – Spring 2014)
Faculty Host, Open Lab Event, Center for Undergraduate Research & Creative Activities (March 13, 2014)
Guest Lecturer, *Moving Towards Sustainability* Honors Seminar (Fall 2012)
Guest Lecturer, *Discovery Seminar on Sustainability* (Spring 2013)

PROFESSIONAL SERVICE

Symposium Organizer for “Microbial & Molecular Tools to Determine the Fate & Biotransformation of Emerging Contaminants”, *252nd American Chemical Society National Meeting*, August 21-25, 2016, Philadelphia, PA, USA.

Session co-chair of “Synergism between Microbiology and Chemistry for Environmental Sustainability”, *248th American Chemical Society National Meeting*, August 10-14, 2014, San Francisco, CA, USA.

Internet Resources Committee Chair, *Association of Environmental Engineering and Science Professors* (October 2013 – September 2017)

Volunteer faculty of “50th Anniversary Conference”, *Association of Environmental Engineering and Science Professors*, July 2013, Golden, CO.

Co-organizer of “87th Colloid and Surface Science Symposium”, *American Chemical Society*, Riverside, CA. June 23-27, 2013, Riverside, CA.

Committees

Evaluation Committee Member, TÜBİTAK Directorate of International Cooperation (UİDB) (September 2025 – Present)

Editorial Board Member

Critical Reviews in Environmental Science and Technology (July 2025 – Present)

TÜBİTAK Science and Technology (January 2025 – Present)

Frontiers in Microbiology (June 2022 – June 2023)

Royal Society Open Science (November 2016 – February 2022)

Proposal Panel Reviewer, *Network of the European Union, Latin America and the Caribbean Countries on Joint Innovation and Research Program (ERANet-LAC)*, *NASA International Life Sciences Research Program*, *NSF Division of Earth Sciences*, *NSF Division of Chemical, Bioengineering, Environmental, and Transport Systems (CBET)*, *The Scientific and Technological Research Council of Türkiye (TUBITAK)*

Manuscript Reviewer, *Algal Research*, *Applied Microbiology and Biotechnology*, *Biochemical Engineering Journal*, *Biotechnology for Biofuels*, *BMC Microbiology*, *Environmental Science and Technology*, *Langmuir*, *Journal of Environmental Engineering*, *Journal of Environmental Quality*, *Journal of Hazardous Materials*, *Microbial Pathogenesis*, *Plant Physiology*, *PLOS One*, *Surface and Interface Analysis*, *Environmental Science: Processes & Impacts*, *Biofuels*, *Colloids and Surfaces B: Biointerfaces*, *Sustainable Cities and Society*, *Turkish Journal of Agriculture & Forestry*

Reviewer, *QS World University Rankings* (2013 – Present)

Reviewer, *Times Higher Education World University Rankings* (2014 – Present)

COMMUNITY SERVICE & SYNERGISTIC ACTIVITIES

Faculty Host, **Global Cities of the 21st Century: Istanbul Urban Transformation Challenges**, **Bogazici University** (January 19, 2015)

Faculty Mentor, **The State University of New York Louis Stokes Alliance for Minority Participation (SUNY-LSAMP)** (Summer 2014)

Faculty Mentor, **Brazil Scientific Mobility Program**, Institute of International Education (Summer 2014)

Faculty Mentor, **NSF Research Experience for Undergraduates (REU)** (Summer 2013, Summer 2014)

Guest Lecturer, **Niagara Frontier Botanical Society**, Buffalo, NY. “*An Introduction to Algae and Their Significance in Daily Life*”. (May 13, 2014)

Faculty Host, **Buffalo Science Exploration Day for High School Students** (March 19, 2014)

Guest Lecturer, **Western New York Science, Technology, Engineering, and Mathematics (STEM) Forum**, Buffalo, NY. “*An Introduction to Algae and Their Significance in Daily Life*”. (November 13, 2013)

Workshop Organizer for **Buffalo Public School District Science Teachers**, The Interdisciplinary Science and Engineering Partnership (ISEP) Program, Department of Chemistry, University at Buffalo. (June 15, 2013)