CURRICULUM VITAE: BURAK DEMIREL

Faculty Member

Institute of Environmental Sciences, Boğaziçi University, Bebek 34342, Istanbul, Turkey

Tel: + 90 212 359 46 00

Fax: + 90 212 257 50 33

E-mail: burak.demirel@boun.edu.tr

ACADEMIC QUALIFICATIONS

PhD (1996-2003): Institute of Environmental Sciences, Boğaziçi University, Istanbul, Turkey

Thesis: Acidogenesis in two-phase anaerobic treatment of dairy wastewater

Supervisor: Prof. Dr. Orhan Yenigün

MSc (1994-96): Institute of Environmental Sciences, Boğaziçi University, Istanbul, Turkey

Thesis: Removal of heavy metals by ferritisation

Supervisor: Prof. Dr. Orhan Yenigün

BSc (1990-1994): Istanbul Technical University (ITU), Faculty of Chemical and Metallurgical Engineering, Department of Metallurgical Engineering, Istanbul, Turkey

EMPLOYMENT AND RESPONSIBILITIES

- 2022-: Head of Environmental Technology Division, Boğaziçi University, Institute of Environmental Sciences
- 2021-: Head, Boğaziçi University Research Grant Commission
- 2021-: Executive Committee Member, Boğaziçi University TTO
- 2020- : Member, Boğaziçi University Research Grant Commission
- 2014 -: Vice Director - Boğaziçi University, Institute of Environmental Sciences
- 2018-: Professor - Boğaziçi University, Institute of Environmental Sciences
- 2011-2018: Associate Professor - Boğaziçi University, Institute of Environmental Sciences
- 2009-2011: Assistant Professor - Boğaziçi University, Institute of Environmental Sciences, Istanbul, Turkey

- 2008-2009: Project Manager - Renewable Energy Networks between Turkish and European Universities (RENET), EU Project - Boğaziçi University, Institute of Environmental Sciences, Istanbul, Turkey
- 2005-2008: DAAD (German Academic Exchange Service) Post-Doc Period, Hamburg University of Applied Sciences (HAW Hamburg), Faculty of Life Sciences, Hamburg, Germany
- 1997-2005: Graduate Research Assistant - Boğaziçi University, Institute of Environmental Sciences, Istanbul, Turkey

OTHER PROFESSIONAL ACTIVITIES

- Member, Turkish National Committee on Water Pollution Research and Control
- Member, International Water Association (IWA)

RESEARCH INTERESTS

- Biogas Engineering
- Anaerobic Biotechnology for Wastewater and Waste Treatment
- Fate and Behavior of Nanomaterials in the Environment
- Solid Waste Management

TEACHING

- Biogas Engineering / Anaerobic Digestion Processes
- Global Climate Change
- Renewable Energy Sources / Energy from Biomass

LANGUAGES

- Fluent in English
- Fluent in German

HONORS AND AWARDS

- DAAD (Deutscher Akademischer Austausch Dienst-German Academic Exchange Service)
  Re-Invitation Programme Fellowship, Institute of Environmental Technology and Energy Economics, Hamburg University of Technology (TUHH), Germany, July-August 2018
- Energy Globe National Award 2012, Renewable Energy Networks between Turkish and European Universities (RENET) Project
- DAAD (Deutscher Akademischer Austausch Dienst-German Academic Exchange Service)
  Post-doctoral Research Fellowship, Faculty of Life Sciences, Hamburg University of Applied Sciences (HAW Hamburg), Germany, August 2005 – January 2006
- TÜBİTAK (The Scientific & Research Council of Turkey) NATO B-1 Post-doctoral Research Fellowship, December 2004

- ITU (Technical University of Istanbul), The 9th Industrial Pollution National Symposium, 'The best oral presentation award', Istanbul, Turkey, June 2-4, 200

CERTIFICATES

- Summer School on Planning and Operation of WWTPs, Certificate of Participation, Instructor, Akdeniz University & Hamburg University of Applied Sciences (HAW Hamburg), Antalya, Turkey, June-July 2007
- Star City of the Future 'Energy-Hydrogen Society' TC 2, Sector B Course Participation Certificate, Arona, Italy, April 2007
- Turkish Standards Institution (TSE), Occupational Health and Safety Management System, TSE İSG-OHSAS TS 18001 Certificate of Participation, Istanbul, Turkey, April 2005
- The University of Marmara Contemporary Management Techniques Program, Contemporary Management Techniques Certificate of Achievement, Istanbul, Turkey, September 1994-June 1995

EDITORIAL WORK

- Editorial Board Member, *American Journal of Environmental Sciences* (2016-)
- Advisory Board Member, *Asian Journal of Chemistry* (2014-2016)
- Guest Editor for Special Issue; *Journal of Hazardous Materials*, Special Section: Advanced Treatment Options for the Removal of Environmental Contaminants, Volume 263, Part 2, Pages 267-792 (15 December 2013)
- Reviewer for *Bioresource Technology; Chemosphere; Energy Sources Part A: Recovery, Utilization and Environmental Effects; Water Science & Technology; Waste Management & Research; Water Research; Biochemical Engineering Journal; International Journal of Global Warming; Biomass & Bioenergy; Water Air & Soil Pollution; BioEnergy Research; Energy Conversion & Management; Waste Management; Environmental Technology; Korean Journal of Civil Engineering; Engineering in Life Sciences; Waste and Biomass Valorization; Detritus; Renewable Energy; Journal of Hazardous Materials*

PROJECTS

- Boğaziçi University TTO-TÜPRAŞ A.Ş.:'' Rafineri arıtma çamurundan enerji eldesinin değerlendirilmesi'', September 2021-, Project Coordinator
- Boğaziçi University TTO-Bosch:''Enerji Verimliliği Ve Atık Yönetimi: Sıfır Karbon Yol Haritasının Hazırlanması'', August 2021-September 2022, Project Team Member
- Boğaziçi University Research Fund (BAP): ''Removal and discharge of microplastics from wastewater treatment plants of Istanbul'', September 2019 – January 2021, Project Coordinator, Project Budget: 44.932 TL
- TÜBİTAK (The Scientific & Research Council of Turkey) - British Council: ''Sürdürülebilir Sulama için Disiplinler Arası Çok Kurumlu Ağ'', March 2019 – (In Progress), Researcher, Project Budget: 745.068 TL

- Boğaziçi University Research Fund (BAP): ''Influence of bio-organocolloids on aggregation behavior of engineered nanoparticles during light-initiated reactions in the environment'', June 2018 – December 2020, Project Coordinator, Project Budget: 55.640 TL
- Boğaziçi University Research Fund (BAP): ''The effect of nanoparticles on the behavior of the methanogenic community during waste stabilization phases in simulated landfills'', June 2017-October 2018, Project Coordinator, Project Budget: 31.235 TL
- Boğaziçi University Research Fund (BAP): ''The behavior of ZnO, CuO and CeO_2 nanoparticles during biogas production stage from municipal solid waste (MSW)'', May 2016- December 2017, Project Coordinator, Project Budget: 54.000 TL
- İSTKA (Istanbul Development Agency): ''İstanbul Mikroyosun Biyoteknolojileri Araştırma ve Geliştirme Birimi (İMBİYOTAB) '', 2015 – 2016, Researcher, Project Budget: 1.622.609,20 TL
- TÜBİTAK (The Scientific & Research Council of Turkey): ''Biotechnological approach for recovery of rare earth metals and precious metals from e-waste – (BIOREEs)'', August 2014- May 2018, Researcher, Project Budget: 566.561 TL
- Boğaziçi University Research Fund (BAP): ''Evaluation of recovery potential for precious and rare earth metals from e-waste'', 2014- 2016, Project Coordinator, Project Budget: 56.680 TL
- Boğaziçi University Research Fund (BAP): ''Effect of nanoparticles (NPs) on anaerobic digestion of biomass'', 2013- 2014, Project Coordinator, Project Budget: 79.070 TL
- TÜBİTAK (The Scientific & Research Council of Turkey) 1001: ''The behavior of nanoparticles in conventional and bioreactor landfills'', 2013- 2017, Project Coordinator, Project Budget: 368.080 TL
- TÜBİTAK (The Scientific & Research Council of Turkey) 1001: ''Bioethanol production from agricultural wastes for waste minimization and carbon budget analysis'', 2011-2015, Researcher, Project Budget: 345.670 TL
- Boğaziçi University Research Fund (BAP): '' Impact of trace metal addition on biogas yield from maize silage'', 2012- 2013, Project Coordinator, Project Budget: 30.600 TL
- Boğaziçi University Research Fund (BAP): " Evaluation of renewable energy production through co-digestion of poultry wastes and agricultural residues", 2010 – 2011, Project Coordinator, Project Budget: 29.994 TL
- Boğaziçi University Research Fund (BAP): "Production of biogas as a source of renewable energy from poultry wastes", 2010 – 2011, Project Coordinator, Project Budget: 29.528 TL
- EU Grant Project (CFCU): "Renewable Energy Networks between Turkish and European Universities (RENET)", 2008 – 2009, Project Manager, Project Budget: 650.000 TL

PEER REVIEWED JOURNAL PAPERS

- Impacts of coal fired power plants for energy generation on environment and future implications of energy policy for Turkey, Suat Vardar, **Burak Demirel,** Turgut T. Onay, *Environmental Science and Pollution Research,* Vol. **29**, 40302-40318, 2022.
- Degradability of bioplastics in anaerobic digestion systems and their effects on biogas production: a review, Suat Vardar, **Burak Demirel,** Turgut T. Onay, *Reviews in Environmental Science and Biotechnology*, Vol. **21**, 205-223, 2022.
- Evaluation of microplastics removal efficiency at a wastewater treatment plant discharging to the Sea of Marmara, Suat Vardar, Turgut T. Onay, **Burak Demirel**, Ahmet Kıdeys, *Environmental Pollution*, Vol. **289**, 2021.
- Hydrometallurgical recovery of neodymium from spent hard disk magnets: A life cycle perspective. Engin Karal, Mehmet Ali Küçüker, **Burak Demirel**, Nadim K. Copty, Kerstin Kuchta, *Journal of Cleaner Production*, Vol. **288**, 2021.
- Enhanced biogas production from chicken manure via enzymatic pretreatment. Mehmet Ali Küçüker, **Burak Demirel**, Turgut T. Onay, *Journal of Material Cycles and Waste Management*, Vol. **22**, 5, 1521-1528, 2020.
- Linking nano-ZnO contamination to microbial community profiling in sanitary landfill simulations. Çağrı Akyol, E. Gozde Ozbayram, **Burak Demirel**, Turgut T. Onay, Orhan Ince, Bahar Ince, *Environmental Science and Pollution Research*, Vol. **26**, 13580-13591, 2019.
- Determination of metal content of waste mobile phones and estimation of their recovery potential in Turkey. Merve Şahan, Mehmet Ali Küçüker, **Burak Demirel**, Kerstin Kuchta, Andrew Hursthouse, *International Journal of Environmental Research and Public Health*, **16**, 887, 2019.
- Development of fuzzy logic model to predict the effects of ZnO nanoparticles on methane production from simulated landfill. Martina di Addario, Ilknur Temizel, Neslihan Edes, Turgut T. Onay, **Burak Demirel**, Nadim K. Copty, Bernardo Ruggeri, *Journal of Environmental Chemical Engineering*, Vol. **5**, 5944-5953, 2017.
- Methods of ammonia removal in anaerobic digestion: a review. Niclas Krakat, **Burak Demirel**, Reshma Anjum, Donna Dietz, *Water Science & Technology*, Vol. **76** (8), 1925-1938, 2017.
- Effect of nano ZnO on biogas generation from simulated landfills. Ilknur Temizel, S. Mehdi Emadian, Martina Di Addario, Turgut T. Onay, **Burak Demirel**, Nadim K. Copty, Tanju Karanfil, *Waste Management*, Vol. **63**, 18-26, 2017.
- Methodological flaws introduce strong bias into molecular analysis of microbial populations. N. Krakat, R. Anjum, **B. Demirel**, P. Schröder, *Journal of Applied Microbiology*, Vol. **122**, 364-377, 2017.
- Biodegradation of bioplastics in natural environments. S. Mehdi Emadian, Turgut T. Onay, **Burak Demirel**, *Waste Management*, Vol. **59**, 526-536, 2017.
- Leaching of nano ZnO in municipal solid waste. Tugce Sakallioglu, Murat Bakırdoven, Ilknur Temizel, **Burak Demirel**, Nadim K. Copty, Ceyda Senem Uyguner Demirel, Turgut T. Onay, Tanju Karanfil, *Journal of Hazardous Materials*, Vol. **317**, 319-326, 2016.

- The impacts of engineered nanomaterials (ENMs) on anaerobic digestion processes. **Burak Demirel**, *Process Biochemistry*, Vol. **51**, 308-313, 2016.
- Leaching potential of nano-scale titanium dioxide in fresh municipal solid waste. Mumine Dulger, Tugce Sakallioglu, Ilknur Temizel, **Burak Demirel**, Ceyda Senem Uyguner Demirel, Turgut T. Onay, Nadim K. Copty, Tanju Karanfil, *Chemosphere*, Vol. **144**, 1567-1572, 2016.
- Recovery of methane from tannery sludge: the impact of I/S ratio and solids content. Çağrı Akyol, **Burak Demirel** and Turgut T. Onay, *Journal of Material Cycles and Waste Management*, Vol. **17**, 808-815, 2015.
- The effect of short-term exposure of engineered nanoparticles on methane production during mesophilic anaerobic digestion of primary sludge. Koray Sakarya, Çağrı Akyol and **Burak Demirel**, *Water, Air & Soil Pollution*, Vol. **226**, 100, 2015.
- The impact of Ni, Co and Mo supplementation on methane yield from anaerobic mono-digestion of maize silage. Beyza Evranos and **Burak Demirel**, *Environmental Technology*, Vol. **36**, 12, 1556-1562, 2015.
- Major pathway of methane formation from energy crops in agricultural biogas digesters. **Burak Demirel**, *Critical Reviews in Environmental Science and Technology*, Vol. **44**, 199-222, 2014.
- Determination of biogas generation potential as a renewable energy source from supermarket wastes. Gizem Alkanok, **Burak Demirel** and Turgut T. Onay, *Waste Management*, Vol. **34**, 134-140, 2014.
- Contaminant removal Editorial. Hüseyin Selçuk, Ceyda Senem Uyguner-Demirel, **Burak Demirel**, Miray Bekbölet, *Journal of Hazardous Materials*, Vol. **263**, 267, 2013.
- Recovery of biogas as a source of renewable energy from ice-cream production residues and wastewater, **Burak Demirel**, Murat Orok, Elif Hot, Selin Erkişi, Metin Albukrek, and Turgut T. Onay, *Environmental Technology*, Vol. **34**, 13-14, 2099-2104, 2013.
- Ammonia inhibition in anaerobic digestion: a review. Orhan Yenigun and **Burak Demirel**, *Process Biochemistry*, Vol. **48**, 901-9011, 2013.
- Evaluation of heavy metal content in digestate from batch anaerobic co-digestion of sunflower hulls and poultry manure. **B. Demirel**, Nefise Pınar Göl and Turgut T. Onay, *Journal of Material Cycles and Waste Management*, Vol. **15**, 242-246, 2013.
- Trace elements requirements of biogas digesters during biological conversion of renewable biomass to methane. **B. Demirel** and Paul Scherer, *Biomass & Bioenergy*, Vol. **35**, 992-998, 2011.
- Impact of food waste fraction in MSW on sorption of heavy metals. Turgut T. Onay, N. Copty, **B. Demirel** and A. Bacıoglu, *Waste Management & Research*, Vol. **28**, 936-943, 2010.
- Production of renewable methane and hydrogen from biomass through conventional and high-rate anaerobic digestion processes. **B. Demirel**, P.Scherer, O. Yenigün and Turgut T. Onay, *Critical Reviews in Environmental Science and Technology*, Vol. **40**, 2, 116-146, 2010.
- Bio-methanization of energy crops through mono-digestion for continuous production of renewable biogas. **B. Demirel** and Paul Scherer, *Renewable Energy*, Vol. **34**, 2490-2495, 2009.

- Laboratory investigations on continuous bio-methanization of energy crops as mono-substrate without supplementation. **B. Demirel**, *Biomass & Bioenergy*, Vol. **33**, 988-993, 2009.
- Long term fermentation studies about the nutritional requirements for biogasification of fodder beet silage as mono-substrate. P. Scherer, L. Neumann, **B. Demirel**, O. Schmidt and M. Unbehauen, *Biomass & Bioenergy*, Vol. **33**, 873-881, 2009.
- Performance and behaviour of the microbial community of an anaerobic biogas digester using sugar beet silage as mono-substrate. **B. Demirel**, S. Ergun, L. Neumann and P. Scherer, *Biosystems Engineering*, Vol. **102,** 444-452, 2009.
- Application of a fuzzy logic control system for continuous anaerobic digestion of low buffered, acidic energy crops as mono-substrate. P. Scherer, K. Lehmann, O. Schmidt and **B. Demirel**, *Biotechnology & Bioengineering*, Vol. **102**, 3, 736-748, 2009.
- Microbial community dynamics of a continuous mesophilic anaerobic biogas digester fed with sugar beet silage as the single substrate without manure addition. **B. Demirel**, L. Neumann and P.Scherer, *Engineering in Life Sciences*, Vol. **8**, 4, 390-398, 2008.
- The roles of acetotrophic and hydrogenotrophic methanogens during anaerobic conversion of biomass to methane: A review. **B. Demirel** and P.Scherer, *Reviews in Environmental Science and Bio/technology*, Vol. **7**, 173-190, 2008.
- Production of methane from sugar beet silage without manure addition by a single-stage anaerobic digestion process. **B. Demirel** and P.Scherer, *Biomass & Bioenergy*, Vol. **32**, 203-209, 2008.
- Changes in the microbial ecology in an anaerobic acidogenic reactor. **B. Demirel** and O. Yenigün, *Bioresource Technology*, Vol. **97**, 10, 1201-1208, 2006.
- Anaerobic treatment of dairy wastewaters: a review. **B. Demirel**, O. Yenigun and Turgut T. Onay, *Process Biochemistry*, Vol. **40**, 2583-2595, 2005.
- Anaerobic acidogenesis of dairy wastewater: the effects of variations in hydraulic retention time with no pH control. **B. Demirel** and O. Yenigün, *Journal of Chemical Technology and Biotechnology,* Vol. **79**, 755-760, 2004.
- The effects of change in volatile fatty acid (VFA) composition on methanogenic upflow filter reactor (UFAF) performance. **B. Demirel** and O. Yenigün, *Environmental Technology*, Vol. **23**, pp 1179-1187, 2002.
- Two-phase anaerobic digestion processes: a review. **B. Demirel** and O. Yenigün, *Journal of Chemical Technology and Biotechnology*, Vol. **77**, 743-755, 2002.
- Removal of Cu, Ni and Zn from wastewaters by the ferrite process. **B. Demirel,** O. Yenigün and M. Bekbolet, *Environmental Technology*, Vol. **20**, pp 963-970, 1999.

BOOK CHAPTER

- Presence, behavior and fate of engineered nanomaterials in municipal solid waste landfills, Ceyda Senem Uyguner Demirel, **Burak Demirel**, Nadim K. Copty and Turgut T. Onay, *Nanotechnologies for Environmental Remediation*, 311-325, G. Lofrano et al. (eds), Springer International Publishing AG 2017.

JOURNAL PAPERS (IN TURKISH)

- Süt endüstrisi atıksularının havasız arıtımı, **Burak Demirel**, Orhan Yenigün, Turgut T. Onay. İTÜ Dergisi/e Su Kirlenmesi Kontrolü, Cilt: 15, Sayı: 1-3, 3-16, 2005.
- İki fazlı havasız arıtma ve çürütme proseslerine bir bakış, Orhan Yenigün ve **Burak Demirel**. Çevre Bilimleri, Sayı: 5, 9-18, 2002.
- Uçucu yağ asitleri (UYA) kompozisyonunun yukarı akışlı biyofiltre tipi metan reaktörü performansı üzerindeki etkileri, **Burak Demirel** ve Orhan Yenigün. SKKD, Cilt: 11, Sayı: 3, 7-16, 2001.

CONGRESS/SYMPOSIUM PAPERS

- Fate and transport of some commonly used pesticides in the Konya plain, Y. Ongar, U. Tezel, **B. Demirel**, N. Copty, IWA DIPCON 2022 (International Water Association 4th Regional Conference on Diffuse Pollution & Eutrophication), Istanbul, Turkey, October 25-28, 2022.
- Enzymatic pre-treatment of chicken manure for improved biogas yield, S. Emadian, M. Kuzulcan, M.A. Kucuker, B. Demirel, T.T. Onay, Frontiers in Water-Energy-Nexus-Nature Based Solutions, Advanced Technologies and Best Practices for Environmental Sustainability, Proceedings of the 2nd WaterEnergyNEXUS Conference, November 2018, Salerno, Italy, pp. 357-358, V. Naddeo et al. (eds), Springer Nature Switzerland AG 2020.
- The changes in Bacterial and Archaeal communities in simulated landfill reactors spiked with metal nanoparticles, Çağrı Akyol, E. Gozde Ozbayram, **Burak Demirel**, Turgut T. Onay, Orhan Ince, Bahar Ince. The 11th Micropol &Ecohazard Conference (Micropol 2019), Seoul, Korea, October 20-24, 2019.
- Sustainable solid waste management practices in Turkey, **Burak Demirel**, Sustainability Days in Civil, Environmental and Building Engineering, Interdisciplinary Symposium, Salerno, Italy, July 1-2, 2019.
- The impact of nano ZnO on microbial community and biogas generation from simulated landfill reactors, Çağrı Akyol, E. Gozde Ozbayram, **Burak Demirel**, Turgut T. Onay, Orhan Ince, Bahar Ince. 10th International Conference on Combustion, Incineration/Pyrolysis, Emission and Climate Change (i-CIPEC 2018), Bangkok, Thailand, December 18-21, 2018.
- Particle interactions during solar TiO_2 photocatalytic treatment of organic matter, Ayse Hazal Pekcan Cetin, Didem Saglik, **B. Demirel**, M. Bekbölet, 2nd Edition of Global Conference on Catalysis, Chemical Engineering & Technology (CAT 2018), Rome, Italy, September 13-16, 2018.
- The impact of nano ZnO on anaerobic digestion of the organic fraction of municipal solid waste, I. Temizel, **B. Demirel**, N.K. Copty, T.T. Onay. 1st International Congress on Metals in Anaerobic Biotechnologies, Seville, Spain, October 4-6, 2017.

- The fate and behaviour of engineered nanomaterials in landfills, **B. Demirel**. Applied Environmental Nanotechnology Workshop, Hong Kong, China, June 1-2, 2017.
- A fuzzy-logic-based model to predict the effects of nano ZnO nanoparticles on methane generation in landfills, M. Di Addario, I. Temizel, T.T. Onay, **B. Demirel**, N.K. Copty, B. Ruggeri. 6th International Symposium on Energy from Biomass and Waste, Venice, Italy, November 14-17, 2016.
- Evaluation of recovery potential for precious and rare earth metals from e-waste, M. Şahan, **B. Demirel**. The 5th International Conference on Industrial and Hazardous Waste Management CRETE 2016 Conference, Crete, Greece, September 27-30, 2016 (ISBN: 978-960-8475-24-3).
- Impacts of ZnO nanoparticles in municipal solid waste landfills, I. Temizel, T.T. Onay, **B. Demirel**, N.K. Copty, M. Di Addario. EURASIA 2016 Waste Management Symposium, Istanbul, Turkey, May 2-4, 2016.
- The impact of engineered nanomaterials on anaerobic digestion of sewage sludge, K. Sakarya, C. Akyol and **B. Demirel**. AD Tech 2015, Chiang Mai, Thailand, February 3-6, 2015.
- Determination of biochemical methane potential of tannery sludge with batch experiments, C. Akyol, Turgut T. Onay and **B. Demirel**. AD Tech 2015, Chiang Mai, Thailand, February 3-6, 2015.
- Impact of changes in substrate composition on the microbial ecology of a biogas digester fed with energy crop using FISH technique, L. Neumann, **B. Demirel** and P. Scherer, 13. World Conference on Anaerobic Digestion, Santiago De Compostela, Spain, June 25-28, 2013.
- Evaluation of biogas production potential from anaerobic co-digestion of ice-cream production residues and wastewater, S. Erkisi, E. Hot, M. Orok, **B. Demirel** and T. Onay, 13. World Conference on Anaerobic Digestion, Santiago De Compostela, Spain, June 25-28, 2013.
- New microbiological insights during fuzzy logics controlled anaerobic digestion of fodder beet silage reveal consequences for the operation of biogas plants. Scherer P, Krakat N, Satke K, Westphal A, Neumann L, Schmidt O, **Demirel B**, Scharfenberg N, Rösner C, Unbehauen M. Bornimer Agrartechnische Berichte, Heft 68 (ISSN 0947-7314), 79-95, 2009 (In German).
- The application of a fuzzy logic control (FLC) strategy for production of renewable energy from biomass through anaerobic digestion process. P. Scherer and **B. Demirel**. 2nd International Symposium on Energy from Biomass and Waste Venice 2008, Venice, Italy, November 17-20, 2008.
- Some experiments with a low buffered and acidic biomass to prove the feasibility of a fuzzy logic controller for anaerobic digestion. P. Scherer, K. Lehmann, O. Schmidt and **B. Demirel**. 2nd International Symposium on Energy from Biomass and Waste Venice 2008, Venice, Italy, November 17-20, 2008.
- An overview of water supply and distribution systems in the metropolitan city of Istanbul, O. Yenigun and **B. Demirel**. Water Supply in Emergency Situations, Y. Sharan et al (eds.), Springer, 43-48, 2007.
- Düzenli depolama alanlarında ağır metallerin katı atıkta sorpsiyon özellikleri, A. Bacıoğlu, Turgut T. Onay, **B. Demirel**, DEÜ Çevre Mühendisliği Bölümü ve ÇEVMER 3. Ulusal Katı Atık Kongresi UKAK 2005, 83-92, Izmir, Turkey, May 25-27, 2005.

- Acid reactor performance assessment in two-phase anaerobic treatment of dairy wastewater, **B. Demirel** and O. Yenigun. 10th World Congress-Anaerobic Digestion, Vol. 4, 2493-2496, Montreal, Canada, August 29 - September 2, 2004.
- Süt endüstrisi atıksuyunun iki fazlı havasız arıtımında asitleşme safhası, **B. Demirel** ve O. Yenigün. İTÜ 9. Endüstriyel Kirlenme Kontrolü Sempozyumu EKK 2004, 359-364, Istanbul, Turkey, June 2-4, 2004.
- Acidogenesis in anaerobic treatment of dairy wastewater, **B. Demirel** and O. Yenigün. Asian Waterqual2003-IWA Asia-Pacific Regional Conference, Bangkok, Thailand, October 19-23, 2003.
- Uçucu yağ asitleri (VFA) kompozisyonunun yukarı akışlı metan reaktörü (UFAF) performansı üzerindeki etkileri, **B. Demirel** ve O. Yenigün. İTÜ 7. Endüstriyel Kirlenme Kontrolü Sempozyumu 2000, 171-177, Istanbul, Turkey, September 20-22, 2000.

STUDENTS CURRENTLY SUPERVISED (IN PROGRESS)

- PhD Student Hazal Pekcan Çetin, 'Physico-Chemical Behavior of Nano-Particles in Simulated Aquatic Systems', Supervisor: Prof. Dr. Burak Demirel, Co-Supervisor: Prof. Dr. Miray Bekbölet
- PhD Student Merve Şahan Karataş, 'Assessment of the Sustainability Performances of Cities in Turkey by Building a Criteria System', Supervisor: Prof. Dr. Burak Demirel, Co-Supervisor: Prof. Dr. Orhan Yenigün
- PhD Student Meltem Ceylan Alibeyoğlu, 'Development and Implementation of Waste Recovery Educational Program and the Consequent Effects on Middle School Students' Environmental Literacy', Supervisor: Prof. Dr. Burak Demirel, Co-Supervisor: Prof. Dr. Miray Bekbölet
- MSc Student M. Talha Aluç, 'Determining the Biomethane Potential of Petrochemical Sludge After Pretreatment', Supervisor: Prof. Dr. Burak Demirel

STUDENTS SUPERVISED

- Gülnaz Pola, 'Impact of Rice Husk as Litter Material on Biogas Generation from Chicken Manure', MSc Thesis, Supervisor: Prof. Dr. Turgut T. Onay, Co-Supervisor: Assoc. Prof. Dr. Burak Demirel, 2011.
- Nefise Pınar Göl, 'Production of Biogas as a Source of Renewable Energy through Co-Digestion of Agricultural Residues with Poultry Manure', MSc Thesis, Supervisor: Assoc. Prof. Dr. Burak Demirel, Co-Supervisor: Prof. Dr. Turgut T. Onay, 2012.
- Murat Örok, 'Production of Biogas through Anaerobic Co-Digestion of Ice Cream Plant Wastewater and Ice Cream Production Residue', MSc Thesis, Supervisor: Assoc. Prof. Dr. Burak Demirel, 2012.
- İbrahim Şimşek, 'Lead-free Organometallic Perovskite Characterization for Environmentally Friendly Solar Cells, MSc Thesis, Supervisor: Assoc. Prof. Dr. Burak Demirel, 2015.
- Merve Şahan, 'Evaluation of Recovery Potential for Precious and Rare Earth Metals from E-waste', MSc Thesis, Supervisor: Assoc. Prof. Dr. Burak Demirel, 2016.
- Emine Tuğçe Sakallıoğlu, 'Leaching Behavior of ZnO Nanoparticles in Municipal Solid Waste', MSc Thesis, Supervisor: Prof. Dr. Burak Demirel, 2018.

- Beyza Evranos Kasım, ‘The Impact of Metal Addition on Biogas Production from Maize Silage’, MSc Thesis, Supervisor: Prof. Dr. Burak Demirel, 2019.
- MSc Student Sina Maghami Nick, ‘Impact of Irrigation and Soil Compaction on Salinization and Sodification in Semi-Arid Agricultural Lands’, Supervisor: Prof. Dr. Nadim K. Copty, Co-Supervisor: Prof. Dr. Burak Demirel, 2021.
- MSc Student Yağmur Ongar, ‘Fate and Transport of Some Commonly Used Herbicides in the Konya Plain‘, Supervisor: Prof. Dr. Burak Demirel, Co-supervisor: Prof. Nadim K. Copty, 2022.