

Curriculum Vitae

ÇAĞRI AKYOL, M.Sc.

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BIOGRAPHY

Place of Birth: Istanbul
Date of Birth: 08.04.1987

Education

Ph.D.: Boğaziçi University, - , Institute of Environmental Sciences
GPA: 3.56/4.00
M.Sc.: Boğaziçi University, 2013, Institute of Environmental Sciences
GPA: 3.90/4.00
B.Sc.: Yıldız Technical University, 2010, Department of Environmental Engineering
GPA: 2.68/4.00
High school: Cağaloğlu Anadolu Lisesi, 2005
GPA: 4.22/5.00

Professional records

September 2014 – present : Research assistant, Institute of Environmental Sciences,
Boğaziçi University

Working group

Microbial Ecology Group (www.meg.boun.edu.tr)

Awards&Grants

Award for the best poster presentation in 2nd IWA Specialized International Conference "Ecotechnologies for Wastewater Treatment (EcoSTP2014)" Verona, Italy 23-27 June 2014.

European Community Action Scheme for the Mobility of University Students (Erasmus) scholarship - Univerzita Jana Evangelisty Purkyně, Department of Environment, Usti nad Labem, Czech Republic (September 2008 – February 2009).

RESEARCH TOPICS

- Microbial ecology of anaerobic digestion
- Anaerobic treatment of energy crops, agricultural wastes and by-products
- Bioenergy systems and waste to energy
- Fate and behavior of antibiotics in anaerobic digestion systems

PROJECTS

The Scientific and Technological Research Council of Turkey (TUBITAK) Projects

- 109Y275 - Effects of a commonly used veterinary antibiotic on biogas production in anaerobic digestion systems and its fate in receiving environments
Project position: Scholar (2011-2012)
- 11Y018 - Microbial products and metal inhibition in biological systems
Project position: Scholar (2013-2014)
- 113Y451 - Improvement of biomethane potential of anaerobic digesters using specific rumen bacteria and hydrolytic enzymes
Project position: Scholar (2014-2015)
- 115Y597 - Determination of biochemical methane potentials and microbial community dynamics during anaerobic co-digestion of commonly cultivated cereal crops and cow manure, composting of the digestates, and investigation of the effect of final products on the ecosystem
Project position: Scholar (2016-2019)

Boğaziçi University Research Fund Projects

- 8720 - Determination of the effect of hydrolytic enzyme addition on acidification and biomethane production in two-phase anaerobic digestion of oxytetracycline-medicated cattle manure
Project position: Researcher (2014-2015)
- 11262 - Enhancement of biomethane production of anaerobic digesters using rumen fluid of cattle
Project position: Researcher (2016-2017)
- 13081 - The effect of nanoparticles on the behavior of the methanogenic community during waste stabilization phases in simulated landfills
Project position: Researcher (2017-2018)

INTERNATIONAL REFEREED JOURNAL PUBLICATIONS

Turker G., Ince O., Ertekin E., **Akyol Ç.**, Ince B., 2013. Changes in performance and active microbial communities due to single and multiple effects of mixing and solid content in anaerobic digestion process of OTC medicated cattle manure. *International Journal of Renewable Energy Research*, 3(1): 144-148.

Akyol Ç., Ince O., Türker G., Ince B., 2014. Acidification of non-medicated and oxytetracycline-medicated cattle manures during anaerobic digestion. *Environmental Technology*, 35(18): 2373-2379.

Sakarya F.K., **Akyol Ç.**, Demirel B., 2015. The effect of short-term exposure of engineered nanoparticles on methane production during the anaerobic digestion of primary sludge. *Water, Air & Soil Pollution*, 226:100: 1-9.

Akyol Ç., Ince B., Coban H., Koksel G., Cetecioglu Z., Ayman Oz N., Ince O., 2015. Individual and combined inhibitory effects of methanol and toluene on acetyl-CoA synthetase expression level of acetoclastic methanogen, *Methanoseta concilii*. *International Biodeterioration & Biodegradation*, 105: 233-238.

Akyol Ç., Demirel B., Onay T.T., 2015. Recovery of methane from tannery sludge: the effect of inoculum to substrate ratio and solids content. *Journal of Materials Cycle and Waste Management*, 17: 808-815.

Akyol Ç., Ince O., Cetecioglu Z., Alkan F.U., Ince B., 2016. The fate of oxytetracycline in two-phase and single-phase anaerobic cattle manure digesters and its effects on microbial communities. *Journal of Chemical Technology and Biotechnology*, 91: 806-814.

Akyol Ç., Turker G., Ince O., Ertekin E., Üstüner O., Ince B., 2016. Performance and microbial community variations in thermophilic anaerobic digesters treating OTC medicated cow manure under different operational conditions. *Bioresource Technology*, 205: 191-198.

Akyol Ç., Ozbayram E.G., Ince O., Kleinstaub S., Ince B., 2016. Anaerobic co-digestion of cow manure and barley: effect of cow manure to barley ratio on methane production and digestion stability. *Environmental Progress & Sustainable Energy*, 35(2): 589-595.

Ince O., Ozbayram E.G., **Akyol Ç.**, Ince, Ö., Ince, B., 2016. Composting Practice for Sustainable Waste Management: A Case Study in Istanbul. *Desalination and Water Treatment*, 57: 14473-14477.

Coban H., Ertekin E., Ince O., Turker G., **Akyol Ç.**, Ince B., 2016. Degradation of oxytetracycline and its impacts on biogas producing microbial community structure. *Bioprocess and Biosystems Engineering*, 39: 1051-1060.

Turker G., Aydin S., **Akyol Ç.**, Yenigun O., Ince O., Ince B., 2016. Changes in microbial community structures due to varying operational conditions in the anaerobic digestion of oxytetracycline-medicated cow manure. *Applied Microbiology and Biotechnology*, 100: 6469-6479.

Akyol Ç., Aydin S., Ince O., Ince B., 2016. A comprehensive microbial insight into single-stage and two-stage anaerobic digestion of oxytetracycline-medicated cattle manure. *Chemical Engineering Journal*, 303: 675-684.

Yangin-Gomec, C., Pekiyaş, G., Sapmaz, T., Aydin, S., Ince, B., **Akyol, Ç.**, Ince, O., 2017. Microbial monitoring of ammonia removal in a UASB reactor treating pre-digested chicken manure with anaerobic granular inoculum. *Bioresource Technology*, 241, 332-339.

Bozan, M., **Akyol, Ç.**, Ince, O., Aydin, S., Ince, B., 2017. Application of next-generation sequencing methods for microbial monitoring of anaerobic digestion of lignocellulosic biomass. *Applied Microbiology and Biotechnology*, doi: 10.1007/s00253-017-8438-7.

NATIONAL REFEREED JOURNAL PUBLICATIONS

Günel G., Ince O., Ozbayram G., **Akyol Ç.**, Ince B., 2015. Rumen Sıvısının Aşı Olarak Kullanıldığı Büyükbaş Hayvan Dışkıları İle İşletilen Anaerobik Çürütücülerde Asidifikasyon Veriminin İncelenmesi. *Çanakkale Onsekiz Mart Üniversitesi Fen Bilimleri Enstitüsü Dergisi*, 1, 27-38.

Erdem E.I., Ince O., **Akyol Ç.**, Ozbayram G., Ince B., 2015. Bahçe Atıkları Kompostunun Yasal Düzenlemeler Çerçevesinde Toprak Şartlandırıcısı Olarak Kullanımının İncelenmesi. *Çanakkale Onsekiz Mart Üniversitesi Fen Bilimleri Enstitüsü Dergisi*, 1, 65-80.

CONFERENCE PRESENTATIONS AND POSTERS

International Conference Presentations and Posters

Turker G., Ince O., Ertekin E., **Akyol Ç.**, Ince B., 2012. Changes in performance and active microbial communities due to single and multiple effects of mixing and solid content in anaerobic digestion process of OTC medicated cattle manure. EWRES - European Workshop on Renewable Energy Systems, 17-28 September 2012 Antalya, Turkey (Oral Presentation).

Turker G., Ince O., Ertekin E., **Akyol Ç.**, Ince B., 2013. Effects of mixing and solid content on active microbial populations in thermophilic digestion of OTC medicated manure. ICOEST Cappadocia 2013 - The international Conference on Environmental Science and Technology, 23-25 June 2013, Nevşehir, Turkey (Oral Presentation).

Akyol Ç., Demirel B., Onay T.T., 2014. Recovery of methane from tannery sludge: the impact of I:S ratio and solids content. 2nd International Conference on Recycling and Reuse (R&R, 2014), 4-6 June 2014, Istanbul, Turkey (Oral presentation).

Akyol Ç., Ince O., Türker G., Ince B., 2014. Enhanced acidification of cattle manure during anaerobic digestion. 2nd IWA Specialized Conference on Ecotechnologies for Wastewater Treatment. 23-35 June 2014, Verona, Italy (Poster presentation).

Akyol Ç., Ozbayram E.G., Ince O., Kleinstauber S., Cetecioglu Z., Kaya D., Coban V., Ince B., 2014. Evaluation of the effect of mixing ratio on methane generation during the anaerobic co-digestion of cow manure and *Hordeum vulgare*. Fifth International Conference on Energy from Biomass and Waste. 17-20 November 2014, Venice, Italy (Oral presentation).

Sakarya K., **Akyol Ç.**, Demirel B., 2015. The impact of engineered nanomaterials on anaerobic digestion of sewage sludge. International Conference on Anaerobic Digestion: AD Technology and microbial ecology for sustainable development. 3-6 February 2015, Chiang Mai, Thailand (Oral presentation).

Akyol Ç., Onay T.T., Demirel B., 2015. Determination of biochemical methane potential of tannery sludge with batch experiments. International Conference on Anaerobic Digestion: AD Technology and microbial ecology for sustainable development. 3-6 February 2015, Chiang Mai, Thailand (Poster presentation).

Akyol Ç., Ince O., Turker G., Ince B., 2015. Fate of oxytetracycline in two-stage anaerobic digestion of manure from therapeutically treated cattle. IWA Balkan Young Water Professionals. 10-12 May 2015, Thessaloniki, Greece (Poster presentation).

Ozbayram E.G., Ince O., **Akyol Ç.**, Bakirel U., Kleinstauber, S., Ince B., 2015. Characterization of microbial community structures of cow rumen and manure by pyrosequencing and Q-PCR. VI International Conference on Environmental, Industrial and Applied Microbiology - BioMicroWorld2015. 28-30 October 2015, Barcelona, Spain (Oral presentation).

Turker G., Ince, O., **Akyol Ç.**, Ertekin E., Ince B., 2015. Effect of operational changes in tetracycline resistance gene proliferation in anaerobic digestion of OTC medicated cattle manures. VI International Conference on Environmental, Industrial and Applied Microbiology - BioMicroWorld2015. 28-30 October 2015, Barcelona, Spain (Oral presentation).

Sakarya, K., **Akyol Ç.**, Demirel B., 2016. The effect of zinc oxide (ZnO) and silver (Ag) nanoparticles on biogas production from anaerobic digestion of sludge. Sixth International Conference on Energy from Biomass and Waste. 14-17 November 2014, Venice, Italy (Oral presentation).

Tutal, B., **Akyol Ç.**, Ince, O., Ozbayram, E.G., Kurt Polat, P.O., Yagdi, K., Ince, B., 2017. Enhancement of methane production by varying operating conditions in anaerobic digesters fed with cow manure and barley. 253rd American Chemical Society National Meeting & Exposition. 2-6 April 2017, San Francisco, California, USA (Poster presentation).

Ozbayram, E.G., Ince, O., **Akyol Ç.**, Gunel, G., Ince, B., 2017. Taking one more advantage from ruminants: Improvement of methane production in anaerobic digesters. 9th IWA Young Water Professionals. 24-27 May 2017, Budapest, Hungary (Poster presentation).

National Conference Presentations and Posters

Erdem E.I., Ince O., **Akyol Ç.**, Ozbayram E.G., Ince B., 2015. Bahçe atıklarının kompostlaştırılması ile elde edilen son ürünün toprak şartlandırıcısı olarak kullanımının incelenmesi. 7. Ulusal Katı Atık Yönetimi Kongresi (UKAY 2015) , 14-16 October 2015, Gaziantep, Turkey (Oral presentation).

Günel G., Ince O., Ozbayram E.G., **Akyol Ç.**, Ince B., 2015. Büyükbaş hayvan dışkısı ile işletilen anaerobik çürütücülerde rumen sıvısı kullanılarak asidifikasyon veriminin artırılması. 7. Ulusal Katı Atık Yönetimi Kongresi (UKAY 2015), 14-16 October 2015, Gaziantep, Turkey (Oral presentation).

Günel G., Ince O, Ozbayram E.G., **Akyol Ç.**, Ince B., 2016. Üst mezofilik koşullarda büyükbaş hayvan dışkısı ile işletilen anaerobik çürütücülerde rumen sıvısı kullanılarak biyogaz veriminin artması. 8. Ulusal Katı Atık Yönetimi Kongresi (UKAY 2016), 11-14 May 2016, Kastamonu, Turkey (Oral presentation).

REVIEWS

- Chemosphere
- Environmental Progress & Sustainable Energy
- American Journal of Environmental Sciences
- International Journal of Environment and Waste Management

TEACHING EXPERIENCE

2014 - present	Teaching assistant ESC 501.01 Principles of Environmental Pollution
2014 - 2016	Teaching assistant ESC 552 Chemistry for Environmental Science & Engineering

ORGANIZED CONFERENCES AND WORKSHOPS

"Workshop on RNA Based Molecular Techniques", 26-27 September 2011, İstanbul (Lab. Applicator)

"Workshop on DNA Based Molecular Techniques", 24-25 September 2011, İstanbul (Lab. Applicator)

"Workshop on Fluorescent *in situ* Hybridization (FISH) Applications in Biotechnology", 13 October 2012, İstanbul (Lab. Applicator)

"International Conference on Recycling and Reuse", 4-6 June 2014, Istanbul (Organization Committee)

"Workshop on Microbial Ecology of Anaerobic Degradation", 8-9 September 2014, Istanbul (Organization Committee)

"Institute of Environmental Sciences 1st Annual Graduate Symposium", 2015, Istanbul (Organization Committee)

"Institute of Environmental Sciences 2nd Annual Graduate Symposium", 9-10 June 2016, Istanbul (Organization Committee)

"Institute of Environmental Sciences 3rd Annual Graduate Symposium", 5 June 2017, Istanbul (Organization Committee)

MEMBERSHIP

American Chemical Society

Chamber of Environmental Engineers, Turkey