

Cirriculum Vitae

Prof. BAHAR İNCE, Ph.D.

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KEY QUALIFICATIONS

- Design, analysis, operational control of industrial and municipal wastewater treatment systems
- Microbial ecology and environmental microbiology
- Methanogenic archaeal diversity, their functions and interrelationships
- Microbial products in bioreactors.

PROFESSIONAL EDUCATION AND ACADEMIC DEGREES

- 1990-1994 Ph.D. in Department of Civil Engineering, Division of Environmental Engineering, University of Newcastle upon Tyne, UK.
- 1989-1990 M.Sc. in Department of Civil Engineering, Division of Environmental Engineering, University of Newcastle upon Tyne, UK.
- 1984-1988 B.Sc. in Department of Environmental Engineering, METU, Ankara, Turkey.

PROFESSIONAL RECORDS

- 2002- Professor, Institute of Environmental Sciences, Bogazici University, Istanbul, Turkey
- 1996-2002 Associate Professor, Institute of Environmental Sciences, Bogazici University, Istanbul, Turkey.
- 1995-1996 Assistant Professor, Department of Environmental Engineering, Istanbul University, Istanbul, Turkey.
- 1991-1994 Research Associate, Department of Civil Engineering, Division of Environmental Engineering, University of Newcastle upon Tyne, UK.
- 1988-1989 Teaching and Research Assistant, Department of Environmental Engineering, METU, Ankara, Turkey.

PUBLICATIONS

1. International Book Chapters

O.Ince, M. Kolukirik, **B. Kasapgil Ince**. 2010. Molecular Microbial Ecology of Marmara Sea Sediments. Microbiology Book Series - Volume # 2: "Current Research, Technology and Education Topics in Applied Microbiology and Microbial Biotechnology" (In press).

B. K. Ince, N. Ayman Öz, G. Türker, Ş. Çelikkol, O. Ince, "Microbial ecology of anaerobic reactors for treatment of alcohol industry wastewaters: a review", 2011, Badajoz, Spain: FORMATEX RESEARCH CENTER, Current Research, Technology and Education Topics in Applied Microbiology and Microbial Biotechnology, (In review).

B. Kasapgil Ince, Z. Cetecioglu, O. Ince. "Pollution Prevention in the Pulp and Paper Industries" Environmental Management (Accepted).

2. International Referred Journals

B. Ince, G. Koksel, Z. Cetecioglu, N. A. Oz, H. Coban, O. Ince, 2011. "Inhibition effect of isopropanol on acetyl-CoA synthetase expression level of acetoclastic methanogen, *Methanosaeta concilii*." Journal of Biotechnology (Submitted).

D. Ercan, S. Karatas, E. Turgay, M. Kolukirik, O. Ince, **B.K. Ince**, "Changes In Transferrin Gene Expression In Sea Bass (*Dicentrarchus labrax*) Challenged with *Vibrio anguillarum*.", Marine Biotechnology, (Submitted).

Kolukirik, O. Ince, Z. Cetecioglu, S. Celikkol, **B. K. Ince**, 2011 "Local and Seasonal Changes in Microbial Diversity of the Marmara Sea Sediments", Marine Pollution Bulletin, (Accepted).

M. Kolukirik, O. Ince, **B. K. Ince**, 2010 "Nutrient Enhanced Bioremediation of Petroleum Hydrocarbons via Methanogenesis and DNRA", ISME Journal, (2010-Submitted).

O. Ince, **B. K. Ince**, "Metabolic Activity Variations in Marmara Sea Sediments", Microbial Ecology, 2010, (Submitted).

M. Kolukirik, O. Ince, **B. K. Ince**, "Increment in anaerobic hydrocarbon degradation activity of Halic Bay sediments via nutrient amendment", Microbial Ecology, (2011-Accepted).

O. Ince, M. Kolukirik, Z. Cetecioglu, O. Eyice, O. Inceoglu, **B. Ince**, "Toluene Inhibition of an Anaerobic Reactor Sludge in Terms of Activity and Composition of Acetoclastic Methanogens", Journal of Environmental Science and Health- Part A: Toxic/Hazardous Substances & Environmental Engi, Vol. 44, No. 14, 2009.

Z. Cetecioglu, **B. K. Ince**, M. Kolukirik, O. Ince, "Biogeographical Distribution and Diversity of Bacterial and Archaeal Communities within Highly Polluted Anoxic Marine Sediments from the Marmara Sea", Marine Pollution Bulletin, Vol. 58, No. 3, 2009, p. 384-395.

Y. Oktem, O. Ince, P. Sallis, T. Donnelly, **B. Kasapgil Ince**, "Anaerobic treatment of a chemical synthesis-based pharmaceutical wastewater in a hybrid upflow anaerobic sludge blanket reactor", Bioresource Technology, No. 995, 2008, p. 1089-1096.

O. Ince, M. Kolukirik, Z. Cetecioglu, O. Eyice, C. Tamerler, **B. Ince**, "Methanogenic and sulfate reducing bacterial population levels in a full-scale anaerobic reactor treating pulp and paper industry wastewater using fluorescence in situ hybridization", Water Science and Technology, Vol. 10, No. 55, 2007, p. 183-191.

Y. Oktem, O. Ince, P. Sallis, T. Donnelly, **B. Kasapgil Ince**, "Determination of optimum operating conditions of an acidification reactor treating a chemical synthesis-based pharmaceutical wastewater", *Process Biochemistry*, Vol. 11, No. 41, 2006, p. 2258-2263.

M. Kolukirik, O. Ince, **B. Kasapgil Ince**, "Methanogenic Community Change in a Full-Scale UASB Reactor Operated at a Low F/M Ratio", *Journal of Environmental Science and Health, Part A Toxic/Hazardous Substance & Environmental Engine*, No. 42, 2006, p. 903-910.

B. K. Ince, I. Usenti, A. Eyigor, N. A. Oz, M. Kolukirik, O. Ince, "Analysis of methanogenic archaeal and sulfate reducing bacterial populations in the sediments of the Black Sea using FISH", *Journal of Geomicrobiology*, No. 23, 2006, p. 1-8.

O. Ince, A. T. Akarsubasi, N. Sayi, O. Eyice, S. Ovez, **B. Kasapgil Ince**, "Analysis of Anaerobic Microbial Diversity in Haliç (marine inlet) Sediment by Molecular Tools", *Advanced Molecular Medicine*, Vol. 2, No. 2, 2006, p. 71-77.

A. T. Akarsubasi, O. Ince, B. Kirdar, N. A. Oz, D. Orhon, T. P. Curtis, I. M. Head, **B. Ince**, "Effect of wastewater composition on archaeal population diversity", *Water Research*, Vol. 8, No. 39, 2005, p. 1576-1584.

A. T. Akarsubasi, O. Ince, N. A. Oz, B. Kirdar, **B. Ince**, "Evaluation of performance, acetoclastic methanogenic activity and archaeal composition of full-scale UASB reactors treating alcohol distillery wastewaters", *Process Biochemistry*, Vol. 1, No. 41, 2006, p. 28-35.

T. Dogan, O. Ince, N. Ayman Oz, **B. Kasapgil Ince**, "Inhibition of Volatile Fatty Acid Production in Granular Sludge From An UASB Reactor", *Journal of Environmental Science and Health, Part A Toxic/Hazardous Substance & Environmental Engine*, Vol. 3, No. 40, 2005, p. 633-644.

O. Ince, M. Kolukirik, N. A. Oz, **B. Kasapgil Ince**, "Comparative Evaluation of Full-Scale UASB Reactors Treating Alcohol Distillery Wastewater in Terms of Performance and Methanogenic Activity", *Journal of Chemical Technology and Biotechnology*, No. 80, 2005, p. 138-144.

N. Ayman Oz, O. Ince, **B. Kasapgil Ince**, "Effect Of Wastewater Composition On Methanogenic Activity In An Anaerobic Reactor", *Journal of Environmental Science and Health, Part A Toxic/Hazardous Substance & Environmental Engine*, Vol. 11-12, No. 39, 2004, p. 2941-2953.

B. Ince, O. Ince, N. Ayman Oz, "Changes in acetoclastic methanogenic activity and microbial composition in an upflow anaerobic filter", *Air and Soil Pollution*, No. 144, 2003, p. 301-315.

N. Ayman Oz, O. Ince, **B. Kasapgil Ince**, A. T. Akarsubasi, O. Eyice, "Microbial population dynamics in an anaerobic CSTR treating chemical synthesis based pharmaceutical wastewater", *Journal of Environmental Science and Health, Part A Toxic/Hazardous Substance & Environmental Engineering*, Vol. 10, No. 38, 2002, p. 2029-2042.

B. Kasapgil Ince, O. Ince, N. Ayman Oz, "Changes in acetoclastic methanogenic activity and microbial composition in an upflow anaerobic filter", *Journal of Water, Air and Soil Pollution*, Vol. 1, No. 144, 2003, p. 301-315.

B. Kasapgil Ince, A. Selçuk, O. Ince, "Effect of a chemical synthesise based pharmaceutical wastewater on performance, acetoclastic methanogenic activity and microbial population in an upflow anaerobic filter", *Journal of Chemical Technology and Biotechnology*, Vol. 6, No. 77, 2002, s. 711-719.

O.Ince, **B. Kasapgil Ince**, O. Yenigün, "Determination of potential loading capacity of an upflow anaerobic sludge blanket reactor using specific methanogenic activity test", *Journal of Chemical Technology and Biotechnology*, Vol. 6, No. 76, 2001, p. 573-578.

B.Kasapgil Ince, O.Ince, G. K. Anderson, S. Arayıcı, "Assesment of biogas use as an energy source from anaerobic digestion of brewery wastewater", *Journal of Water, Air ans Soil Pollution*, No. 126, 2001, p. 239-251.

O. Ince, **B.Kasapgil Ince**, T.Donnely, "Attachment, strength and performance of a porous-media in an upflow anaerobic filter treating dairy wastewater", *Water Science and Technology*, Vol. 4-5, No. 41, 2008, p. 261-270.

B.Kasapgil Ince, O.Ince, P.J.Sallis, G.K.Anderson, "Inert COD production in a membrane anaerobic reactor treating brewery wastewater", *Water Research*, Vol. 16, No. 34, 2000, p. 3943-3948.

B.Kasapgil Ince, O.Ince, "Changes to bacterial community make-up in a two-phase anaerobic digestion system", *Journal of Chemical Technology and Biotechnology*, No. 75, 2000, p. 500-508.

O. Ince, F. Germirli, **B. Kasapgil Ince**, G. K. Anderson, "Experimental determination of soluble inert COD fractions of brewery wastewater under anaerobic conditions", *Environmental Technology*, No. 19, 1998, p. 437-442.

O. Ince, G. K. Anderson, **B. Kasapgil**, "Composition of the microbial population in a membrane anerobic system during start-up", *Water Research*, Vol. 1, No. 31, 1997, p. 1-10.

G. K. Anderson, **B. Kasapgil**, O.Ince, "Microbial kinetics of a membrane anaerobic reactor system", *Environmental Teachnology*, No. 17, 1996, p. 449-464.

O. Ince, G. K. Anderson, **B. Kasapgil**, "Control of organic loading rate using the specific methanogenic activity test during start-up of an anaerobic digestion system", *Water Research* , Vol.29, No.1, p.349-355., Vol. 1, No. 29, 1995, p. 349-355.

O.Ince, G. K. Anderson, **B. Kasapgil**, "Effect of changes in compositions of methanogenic species on performance of a membrane anaerobic reactor system treating brewery wastewater", *Environmental Technology*, No. 16, 1995, p. 901-914.

G. K. Anderson, **B. Kasapgil**, O.Ince, "Microbiological study of two-stage digestion during start-up", *Water Research*, Vol. 11, No. 28, 1994, p. 2383-2392.

B. Kasapgil, G. K. Anderson, O. Ince, "An investigation into the pre-treatment of dairy wastewater prior to aerobic biological treatment. International Specialised Conference on Pre-treatment of Industrial Wastewater", Water Science and Technology, Vol. 9, No. 29, 1994, p. 205-215.

G. K. Anderson, **B. Kasapgil**, O. Ince, "Comparasion of porous and non-porous media in upflow anerobic filter for dairy wastewater treatment", Water Research, Vol. 7, No. 28, 1994, p. 1619-1624.

3. National Book Chapters

O İnce, Z. Çetecioğlu, N. Ayman Öz, Ş. Çelikkol, **B. Kasapgil İnce**, N. Aran (Ed.), "Waste Management and Recycling of By-products in Food Industry. In: Food Biotechnology", 2009, İstanbul: Nobel Kitabevi, (In press).

4. National Journals

Ş. Çelikkol, **B. K. İnce**, M. Kolukırık, Z. Çetecioğlu, O. İnce, "Determination of the Microbial Community in Pulp and Paper Mills Effluents", İTÜ Dergisi/e, Vol. 18, No. 2-3, 2008, p. 23-31.

O. İnce, Ö. Eyice, **B. K. İnce**, "Effect of sludge age on the diversity of nitrification bacteria and reactor stability", İTÜ Dergisi/e, Vol. 1, No. 18, 2008, p. 32-41.

B. K. İnce, M. Kolukırık, O. İnce, "Methanogenic population dynamics in full-scale UASB reactors", İTÜ Dergisi/e, Vol. 2, No. 17, 2007, p. 3-14, Invited sheets.

O. İnce, Ö. Eyice, **B. K. İnce**, "Effect of sludge age on the diversity of nitrification bacteria and reactor stability", İTÜ Dergisi/b,, Vol. 1, No. 2, 2005, p. 32-41.

O. Ince, N. Ayman Oz, **B. Kasapgil İnce**, B. Kocarslan, "Evaluation of anaerobic treatment system performance and biological sludge of an alcohol distillery industry characterization", Su Kirlenmesi Kontrolü Dergisi, Vol. 3, No. 13, 2003.

B. Kasapgil İnce, O. İnce, "Basic principles for determination of operating conditions of pre-acidifacation tanks for anaerobic treatment of industrial wastewaters", Su Kirlenmesi Kontrolü Dergisi, Vol. 1, No. 7, 1997, p. 29-35.

O. İnce, **B. Kasapgil**, "Determination of methanogenic activity in anaerobic treatment systems using Warburg Respirometry during start-up and control of the system stability", Su Kirlenmesi ve Kontrolü Dergisi, Vol. 1, No. 5, 1995, p. 27-37.

SELECTED PROJECTS

Determination of impacts of wastewaters including antibacterials and antibiotics on anaerobic metabolic pathways and investigation of relationship between these pharmaceuticals and antibiotic resistance genes, TÜBİTAK 110Y310.

Effects of a commonly used veterinary antibiotic on biogas production in anaerobic digestion systems and its fate in receiving environments, TÜBİTAK, 109Y275.

Detection of some indicator and pathogen bacteria in bottled water, some minimally processed fresh vegetables and fresh poultry meat by fluorescent *In situ* hybridization (FISH), TÜBİTAK, 107O690.

Quantitative analysis of transferrin gene expression during *in vitro* vibrio anguillarum infection in sea bass, TÜBİTAK (108O321).

Evaluation of anoxic and anaerobic biodegradation potential of antibiotics and their stimulation/inhibition/toxicity effects on mixed microbial culture, TÜBİTAK (109Y012).

Determination of the inhibition effects of organic solvents on acetyl-coA synthetase expression of *Methanosaeta concilii*, Bogazici University Research Fund (08M108).

Metanolün Ardışık Kesikli Anaerobik Reaktörlerde Mikrobiyal Türler Üzerine Etkisinin DGGE Yöntemi ile Belirlenmesi, B.Ü., Bilimsel Araştırma Projeleri, 2008.

Determination of the effect of sludge age on nitrifying bacterial population dynamics and treatment system stability, ITU Research Funds (32096).

Determination of interaction between anaerobic treatment of organic solvent containing industrial wastewater with its system dynamics using molecular tools, TÜBİTAK (106Y241).

Evsel Katı Atık Deponi Sahalarında Hakim Mikrobiyal Yapının FISH Tekniği Kullanılarak Belirlenmesi. B.Ü., Bilimsel Araştırma Projeleri, 2006.

Anaerobic degradation of petroleum hydrocarbons in anoxic marine environments, TÜBİTAK (105Y307).

Non-linear microbial growth dynamics and its effects on the process stability of nitrification systems, engineering and Physical Sciences Research Council (EPSRC grant GR/S59543/01), Biotechnology and Biological Sciences Research Council (BBSRC), School of Civil Engineering and Geosciences of Newcastle University upon Tyne.

Determination the microbial community structure of anaerobic systems treating sulphate containing wastewater and optimization of biogas production, Civil Engineering Faculty Interdisciplinary Research Support Program (11_04_241).

Determination of nitrifying bacteria in a full-scale activated sludge system using fluorescent *in situ* hybridization technique, TÜBİTAK (102I041).

Archaeal population dynamics in a full-scale anaerobic reactor using 16s rDNA based molecular techniques, TÜBİTAK (110T054).

Determination of archaeal populations in full-scale anaerobic reactors using fluorescent *in situ* hybridization technique, ITU Institute of Science Master of Sciences Thesis Support Program (00_04_63).

Analysis of anaerobic microbial diversity in halic (marine inlet) sediment by molecular tools.

Evsel Katı Atık Deponi Sahalarında Hakim Mikrobiyal Yapının FISH Tekniği Kullanılarak

Belirlenmesi. B.Ü., Bilimsel Araştırma Projeleri, 2006.

Anaerobik Proseslerde Asetoklastik Metan Arkelerin Floresanlı Yerinde Hibritleşme (FISH) Tekniği Kullanılarak Belirlenmesi, 02Y103D, B.Ü., Bilimsel Araştırma Projeleri.

Archaeal population dynamics in the black sea by fluorescence in situ hybridization technique.

Determination of sulfate reducing bacterial population in the black sea sediments by fluorescence in situ hybridization technique.

Microbial population dynamics in an anaerobic cstr treating chemical synthesis based pharmaceutical wastewater.

Determination of specific methanogenic activity of acetoclastic methanogens in anaerobic reactors, BU Research Fund (01S101), ITU Research Fund (844).

Anaerobik Arıtımda Metan Bakterilerin Aktivitelerinin Sayılarının ve Kompozisyonlarının Belirlenmesi, B.Ü., Bilimsel Araştırma Projeleri, 1999.

SUPRERVISSED THESIS

1. Ph.D. Thesis

Nilgün Ayman Öz, 2008. Analysis of microbial communities associated with anaerobic solvent degradation in sequencing batch reactors by traditional and molecular tools.

Alper Tunga Akarsubaşı, 2003. Determination of archeal populations in anaerobic reactors using molecular techniques.

2. M.Sc. Thesis

Emine Ertekin, 2011. Effect of oxytetracycline on biogas production and microbial communities during anaerobic digestion of cow manure by fluorescence in situ hybridization and real time polymerase chain reaction.

Halil Çoban, 2011. Microbial community dynamics during anaerobic digestion of OTC medicated cow manure using DGGE and clone libraries.

Gözde Köksel, 2010. Single and multiple effects of organic solvents on the expression level of acetyl-coa synthetase gene and active methanogenic population.

Erkin Gözdereliler, 2008. Evaluation of methanol effect on an anaerobic sludge using methanogenic activity measurements and fluorescent in situ hybridization.

Gökhan Türker, 2007. 16S rDNA analysis of microbial communities in a highly polluted region of the Marmara sea.

Aslı Sezgin, 2007. 16S rDNS analysis of microbial communities in anoxic marine sediments of the Marmara sea.

Leyla Şimşek Çavuş, 2007. Methanogenic and non-methanogenic activities and archaeal composition of a full-scale anaerobic EGSB reactor treating a brewery wastewater.

Sair Sinan Kestelli, 2006. Analysis of archaeal community dynamics in full scale anaerobic reactors using fluorescent in situ hybridization.

Ayşe Eyigör, 2004. Analysis of archaeal diversity in the Black Sea sediments by fluorescence in situ hybridization technique.

İclal Üşenti, 2004. Determination of sulfate reducing bacterial population in the Black Sea sediments by fluorescence in situ hybridization technique.

Egemen Burak Öncel, 2002. Determination of inert COD fractions in a two-stage biological treatment of an alcohol distillery wastewater.

Nilgün Ayman, 2001. Microbial population dynamics in an anaerobic completely stirred tank reactor (CSTR) treating a pharmaceutical wastewater.

Atakan Selçuk, 2001. Treatment of a chemical synthesis based pharmaceutical wastewater using an upflow anaerobic filter.

Turhan Doğan, 2001. The Inhibition of volatile fatty acid production in granular sludge from an UASB reactor.

Hasan Selim Sanver, 2000. Anaerobic digestion of a chemical synthesis based pharmaceutical wastewater.

LECTURES

ESC 501.01	Principles of Environmental Pollution
ESC 501.02	Principles of Environmental Pollution
ESC 518	Fundamentals of Anaerobic Digestion Processes
ESC 557	Environmental Microbiology
ESC 59B	Environmental Molecular Microbiology: Methods and Applications