

## Prof. BARIŞ ÇALLI

### Personal Information

**Office Phone:** [+90 216 777 3595](tel:+902167773595)

**Email:** [baris.calli@marmara.edu.tr](mailto:baris.calli@marmara.edu.tr)

**Web:** <https://avesis.marmara.edu.tr/baris.calli>

**Address:** Marmara Üniversitesi, Mühendislik Fakültesi, Çevre Mühendisliği Bölümü, Aydınevler 34854 - MALTEPE/İSTANBUL, TÜRKİYE

### International Researcher IDs

ScholarID: \_39EhMEAAAAJ

ORCID: 0000-0002-7234-0771

Publons / Web Of Science ResearcherID: Z-2163-2019

ScopusID: 6602622840

Yoksis Researcher ID: 36817

### Biography

Professor of Environmental Engineering Department of Marmara University in Istanbul, Turkey. Received his Ph.D. degree in 2003 in Environmental Technology from Bogaziçi University in Istanbul. In 2006, awarded a Marie Curie Intra European Fellowship and participated in a research project in VITO, Belgium on fermentative hydrogen production from waste biomass. Since 2008, working as a full-time professor at Marmara University and has been involved in many research projects on environmental engineering bioprocesses, anaerobic digestion and biogas technology, resource recovery, and solid waste management.

### Education Information

Doctorate, Bogazici University, Institute Of Environmental Sciences, Department Of Environmental Technology, Turkey 1999 - 2003

Postgraduate, Marmara University, Faculty of Engineering, Environmental Engineering, Turkey 1997 - 1999

Undergraduate, Marmara University, Faculty of Engineering, Environmental Engineering, Turkey 1993 - 1997

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, Elucidation of ammonia inhibition in anaerobic treatment process by using 16S rRNA/DNA based microbial identification techniques, Boğaziçi Üniversitesi, Çevre Bilimleri Enstitüsü, Çevre Teknolojisi Anabilim Dalı, 2003

Postgraduate, Anaerobic and Aerobic Treatment of Sanitary Landfill Leachate, Marmara University, Faculty of Engineering, Environmental Engineering, 1999

## Research Areas

Environmental Technology, Industrial and Hazardous Waste Management, Solid Waste Engineering and Management, Water Pollution and Control, Hazardous Waste Management

## Academic Titles / Tasks

Professor, Marmara University, Faculty of Engineering, Environmental Engineering, 2011 - Continues  
Associate Professor, Marmara University, Faculty of Engineering, Environmental Engineering, 2006 - 2011  
Assistant Professor, Marmara University, Faculty of Engineering, Environmental Engineering, 2005 - 2006  
Research Assistant, Marmara University, Faculty of Engineering, Environmental Engineering, 1997 - 2005

## Academic and Administrative Experience

Head of Department, Marmara University, Faculty of Engineering, Environmental Engineering, 2018 - 2020  
Deputy Head of Department, Marmara University, Faculty of Engineering, Environmental Engineering, 2011 - 2018  
Director of the Center, Marmara University, Rectorate, 2012 - 2015

## Courses

Advanced Anaerobic Treatment, Doctorate, 2019 - 2020  
Engineering Project I, Undergraduate, 2020 - 2021  
SOLID WASTE ENGINEERING, Undergraduate, 2019 - 2020  
Anaerobic Biotechnology for Bioenergy Production, Postgraduate, 2019 - 2020  
HAZARDOUS AND SPECIAL WASTE MANAGEMENT, Undergraduate, 2019 - 2020

## Advising Theses

Çallı B., Tuğtaş Karnabat A. E., Anaerobic digestion of waste activated sludge: Influence of co- substrate in the bioleaching of heavy metals, Doctorate, R.MOLAEY(Student), 2021  
ÇALLI B., Anaerobic chicken manure digestion coupled with ammonia separation, Doctorate, A.BAYRAKDAR(Student), 2018  
Çallı B., Desulfurization of biogas using a membrane bio-scrubber, Doctorate, E.TILAHUN(Student), 2018  
ÇALLI B., Removal and recovery of ammonia from chicken manure, Postgraduate, R.ÖNDER(Student), 2016  
ÇALLI B., Effect of trace metals in anaerobic digestion of chicken manure, Postgraduate, R.MOLAEY(Student), 2015  
ÇALLI B., Türkiye'de tehlikeli atık oluşumu ve bertarafı, Postgraduate, Ş.TAŞKAN(Student), 2013  
ÇALLI B., Ambalaj atıkları yönetimi- İstanbul, Kadıköy örneği, Postgraduate, A.ŞEYMA(Student), 2013  
ÇALLI B., CAN Z. S., CFC-11 amount in polyurethane foam in end-of-life refrigerators, Postgraduate, B.YAZICI(Student), 2012  
ÇALLI B., CAN Z. S., Evaluation of hazardous wastes generated from automotive industry in Turkey and their disposal methods, Postgraduate, B.YAZICI(Student), 2011  
ÇALLI B., Composting of cattle manure, Postgraduate, M.SİNAN(Student), 2011  
Birbir M., Çallı B., Mikrobiyal yakıt hücrelerinde (MYH) bulunan aktif türlerin tespiti, Postgraduate, E.YILMAZ(Student), 2011  
ÇALLI B., Investigation of Bursa hamitler landfill leachate treatment plant, Postgraduate, K.KAŞIKÇI(Student), 2010  
ÇALLI B., Use of microbial fuel cells (MFCs) in organic wastewater treatment, Postgraduate, P.ÇAVDAR(Student), 2009  
ÇALLI B., Identification of prevalent microbial communities in municipal solid waste landfill leachate, Postgraduate, S.DURMAZ(Student), 2005  
ÇALLI B., Identification of prevalent microbial communities in municipal solid waste landfill leachate, Postgraduate,

S.Durmaz(Student), 2005

ÇALLI B., Relations between landfill stabilization and microbial diversity, Postgraduate, E.GİRĞİN(Student), 2004

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **An investigation of a process for selective biogas desulfurization and autotrophic denitrification in a membrane supported reactor**  
Tilahun E., ÇALLI B.  
Process Safety and Environmental Protection, vol.187, pp.133-144, 2024 (SCI-Expanded)
- II. **In situ methane enrichment with vacuum application to produce biogas with higher methane content**  
Sengur O., AKGÜL D., ÇALLI B.  
Environmental Science and Pollution Research, 2024 (SCI-Expanded)
- III. **Conceptual system for sustainable and next-generation wastewater resource recovery facilities**  
Owusu-Agyeman I., Plaza E., Elginöz N., Atasoy M., Khatami K., Perez-Zabaleta M., Cabrera-Rodríguez C., YEŞİL H., TUĞTAŞ KARNABAT A. E., ÇALLI B., et al.  
Science of the Total Environment, vol.885, 2023 (SCI-Expanded)
- IV. **Enhancing biogas production from chicken manure through vacuum stripping of digestate**  
Sengur O., AKGÜL D., Bayrakdar A., ÇALLI B.  
Biomass Conversion and Biorefinery, 2023 (SCI-Expanded)
- V. **Removal and recovery of heavy metals from sewage sludge via three-stage integrated process**  
YEŞİL H., Molaey R., ÇALLI B., TUĞTAŞ KARNABAT A. E.  
Chemosphere, vol.280, 2021 (SCI-Expanded)
- VI. **Enhanced heavy metal leaching from sewage sludge through anaerobic fermentation and air-assisted ultrasonication**  
Molaey R., YEŞİL H., ÇALLI B., TUĞTAŞ KARNABAT A. E.  
Chemosphere, vol.279, 2021 (SCI-Expanded)
- VII. **Extent of bioleaching and bioavailability reduction of potentially toxic heavy metals from sewage sludge through pH-controlled fermentation**  
YEŞİL H., Molaey R., ÇALLI B., TUĞTAŞ KARNABAT A. E.  
Water Research, vol.201, 2021 (SCI-Expanded)
- VIII. **Prokaryotic Communities in the Thalassohaline Tuz Lake, Deep Zone, and Kayacik, Kaldirim and Yavsan Salterns (Turkey) Assessed by 16S rRNA Amplicon Sequencing**  
Akpolat C., Beatriz Fernandez A., ÇAĞLAYAN P., ÇALLI B., BİRBİR M., Ventosa A.  
MICROORGANISMS, vol.9, no.7, 2021 (SCI-Expanded)
- IX. **Influence of volatile fatty acids in anaerobic bioleaching of potentially toxic metals**  
Molaey R., YEŞİL H., ÇALLI B., TUĞTAŞ KARNABAT A. E.  
Journal of Environmental Management, vol.285, 2021 (SCI-Expanded)
- X. **A hybrid dry-fermentation and membrane contactor system: Enhanced volatile fatty acid (VFA) production and recovery from organic solid wastes**  
YEŞİL H., ÇALLI B., TUĞTAŞ KARNABAT A. E.  
Water Research, vol.192, 2021 (SCI-Expanded)
- XI. **How do the influent COD/Nitrogen and internal recirculation ratios affect the oxidation ditch type pre-anoxic landfill leachate treatment?**  
Cakirgoz M., BAYRAKDAR A., ÇALLI B.  
JOURNAL OF ENVIRONMENTAL MANAGEMENT, vol.278, 2021 (SCI-Expanded)
- XII. **Recovery of phosphorus from liquid digestate using waste magnesite dust**  
Al-Mallahi J., Surmeli R. O., ÇALLI B.  
JOURNAL OF CLEANER PRODUCTION, vol.272, 2020 (SCI-Expanded)
- XIII. **Treatment of synthetic wastewater and cheese whey by the anaerobic dynamic membrane bioreactor**  
Pacal M., SEMERCİ N., ÇALLI B.

- ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH, vol.26, no.32, pp.32942-32956, 2019 (SCI-Expanded)
- XIV. **Phosphorus recovery from sewage sludge ash with bioleaching and electro dialysis**  
SEMERCİ N., Kunt B., ÇALLI B.  
International Biodeterioration and Biodegradation, vol.144, 2019 (SCI-Expanded)
- XV. **Simultaneous nitrate and sulfide removal using a bio-electrochemical system**  
Bayrakdar A., Tilahun E., ÇALLI B.  
BIOELECTROCHEMISTRY, vol.129, pp.228-234, 2019 (SCI-Expanded)
- XVI. **Synergistic Effect of Sulfide and Ammonia on Anaerobic Digestion of Chicken Manure**  
Surmeli R. O., Bayrakdar A., Molaey R., ÇALLI B.  
WASTE AND BIOMASS VALORIZATION, vol.10, no.3, pp.609-615, 2019 (SCI-Expanded)
- XVII. **Anaerobic digestion of chicken manure: Influence of trace element supplementation**  
Molaey R., Bayrakdar A., Surmeli R. O., ÇALLI B.  
ENGINEERING IN LIFE SCIENCES, vol.19, no.2, pp.143-150, 2019 (SCI-Expanded)
- XVIII. **Effect of Operating Conditions on Separation of H<sub>2</sub>S from Biogas Using a Chemical Assisted PDMS Membrane Process**  
Tilahun E., ŞAHİNKAYA E., ÇALLI B.  
WASTE AND BIOMASS VALORIZATION, vol.9, no.12, pp.2349-2359, 2018 (SCI-Expanded)
- XIX. **Upflow packed bed Anammox reactor used in two-stage deammonification of sludge digester effluent**  
Celen-Erdem I., Kurt E. S., Bozcelik B., Calli B.  
WATER SCIENCE AND TECHNOLOGY, vol.78, no.9, pp.1843-1851, 2018 (SCI-Expanded)
- XX. **Long-term influence of trace element deficiency on anaerobic mono-digestion of chicken manure**  
Molaey R., Bayrakdar A., ÇALLI B.  
JOURNAL OF ENVIRONMENTAL MANAGEMENT, vol.223, pp.743-748, 2018 (SCI-Expanded)
- XXI. **Ammonia recovery from chicken manure digestate using polydimethylsiloxane membrane contactor**  
Surmeli R. O., Bayrakdar A., ÇALLI B.  
JOURNAL OF CLEANER PRODUCTION, vol.191, pp.99-104, 2018 (SCI-Expanded)
- XXII. **Anaerobic digestion of chicken manure by a leach-bed process coupled with side-stream membrane ammonia separation**  
Bayrakdar A., Surmeli R. O., ÇALLI B.  
BIORESOURCE TECHNOLOGY, vol.258, pp.41-47, 2018 (SCI-Expanded)
- XXIII. **Influence of trace element supplementation on anaerobic digestion of chicken manure: Linking process stability to methanogenic population dynamics**  
Molaey R., Bayrakdar A., Surmeli R. O., ÇALLI B.  
JOURNAL OF CLEANER PRODUCTION, vol.181, pp.794-800, 2018 (SCI-Expanded)
- XXIV. **A hybrid membrane gas absorption and bio-oxidation process for the removal of hydrogen sulfide from biogas**  
Tilahun E., Sahinkaya E., ÇALLI B.  
INTERNATIONAL BIODETERIORATION & BIODEGRADATION, vol.127, pp.69-76, 2018 (SCI-Expanded)
- XXV. **Anaerobic digestion of chicken manure: Mitigating process inhibition at high ammonia concentrations by selenium supplementation**  
Molaey R., Bayrakdar A., Surmeli R. O., ÇALLI B.  
BIOMASS & BIOENERGY, vol.108, pp.439-446, 2018 (SCI-Expanded)
- XXVI. **Removal and Recovery of Metals by Using Bio-electrochemical System**  
Tugtas A. E., ÇALLI B.  
MICROBIAL FUEL CELL: A BIOELECTROCHEMICAL SYSTEM THAT CONVERTS WASTE TO WATTS, pp.307-333, 2018 (SCI-Expanded)
- XXVII. **Dry anaerobic digestion of chicken manure coupled with membrane separation of ammonia**  
Bayrakdar A., Surmeli R. O., ÇALLI B.  
BIORESOURCE TECHNOLOGY, vol.244, pp.816-823, 2017 (SCI-Expanded)
- XXVIII. **Removal and recovery of ammonia from chicken manure**  
Surmeli R. O., Bayrakdar A., Calli B.

- WATER SCIENCE AND TECHNOLOGY, vol.75, no.12, pp.2811-2817, 2017 (SCI-Expanded)
- XXIX. **Biogas production from chicken manure: Co-digestion with spent poppy straw**  
Bayrakdar A., Molaey R., Surmeli R. O., ŞAHİNKAYA E., ÇALLI B.  
INTERNATIONAL BIODETERIORATION & BIODEGRADATION, vol.119, pp.205-210, 2017 (SCI-Expanded)
- XXX. **Performance of polydimethylsiloxane membrane contactor process for selective hydrogen sulfide removal from biogas**  
Tilahun E., Bayrakdar A., ŞAHİNKAYA E., ÇALLI B.  
WASTE MANAGEMENT, vol.61, pp.250-257, 2017 (SCI-Expanded)
- XXXI. **Polyhydroxyalkanoate production from moderately halophilic Bacillus strains**  
Ogan A., Fetahovic M., Çağlayan P., Birbir M., Çallı B., Bayrakdar A., Danış Ö.  
Febs Journal, vol.284, pp.106, 2017 (SCI-Expanded)
- XXXII. **Biogas desulfurization using autotrophic denitrification process**  
Bayrakdar A., Tilahun E., ÇALLI B.  
APPLIED MICROBIOLOGY AND BIOTECHNOLOGY, vol.100, no.2, pp.939-948, 2016 (SCI-Expanded)
- XXXIII. **Anaerobic fermentation of organic solid wastes: volatile fatty acid production and separation**  
Yesil H., Tugtas A. E., Bayrakdar A., Calli B.  
WATER SCIENCE AND TECHNOLOGY, vol.69, no.10, pp.2132-2138, 2014 (SCI-Expanded)
- XXXIV. **Prediction of future disposal of end-of-life refrigerators containing CFC-11**  
Yazici B., CAN Z. S., Calli B.  
WASTE MANAGEMENT, vol.34, no.1, pp.162-166, 2014 (SCI-Expanded)
- XXXV. **Bio-electrochemical post-treatment of anaerobically treated landfill leachate**  
TUĞTAŞ KARNABAT A. E., ÇAVDAR P., ÇALLI B.  
BIORESOURCETECHNOLOGY, vol.128, pp.266-272, 2013 (SCI-Expanded)
- XXXVI. **Continuous flow membrane-less air cathode microbial fuel cell with spunbonded olefin diffusion layer**  
TUĞTAŞ KARNABAT A. E., ÇAVDAR P., ÇALLI B.  
BIORESOURCETECHNOLOGY, vol.102, no.22, pp.10425-10430, 2011 (SCI-Expanded)
- XXXVII. **Acidogenic fermentation of municipal solid waste and its application to bio-electricity production via microbial fuel cells (MFCs)**  
ÇAVDAR P., YILMAZ E., Tugtas A. E., ÇALLI B.  
WATER SCIENCE AND TECHNOLOGY, vol.64, no.4, pp.789-795, 2011 (SCI-Expanded)
- XXXVIII. **H-2 production potential in thermophilic mixed fermentation**  
ÇALLI B., Chung L., Arslan D., Vanbroekhoven K.  
JOURNAL OF ENVIRONMENTAL SCIENCE AND HEALTH PART A-TOXIC/HAZARDOUS SUBSTANCES & ENVIRONMENTAL ENGINEERING, vol.44, no.1, pp.78-86, 2009 (SCI-Expanded)
- XXXIX. **Monitoring of population shifts in an enriched nitrifying system under gradually increased cadmium loading**  
MERTOĞLU B., SEMERCİ N., Guler N., ÇALLI B., ÇEÇEN F., Saatç A. M.  
JOURNAL OF HAZARDOUS MATERIALS, vol.160, pp.495-501, 2008 (SCI-Expanded)
- XL. **Significance of acetogenic H-2 consumption in dark fermentation and effectiveness of pH**  
Calli B., Zhao J., Nijssen E., Vanbroekhoven K.  
WATER SCIENCE AND TECHNOLOGY, vol.57, no.6, pp.809-814, 2008 (SCI-Expanded)
- XLI. **Dark fermentative H-2 production from xylose and lactose - Effects of on-line pH control**  
Calli B., Schoenmaekers K., Vanbroekhoven K., Diels L.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.33, no.2, pp.522-530, 2008 (SCI-Expanded)
- XLII. **Effects of insufficient air injection on methanogenic Archaea in landfill bioreactor**  
Mertoglu B., Calli B., Guler N., Inanc B., Inoue Y.  
JOURNAL OF HAZARDOUS MATERIALS, vol.142, pp.258-265, 2007 (SCI-Expanded)
- XLIII. **Extremely halophilic Archaea from Tuz Lake, Turkey, and the adjacent Kaldirim and Kayacik salterns**  
Birbir M., Calli B., Mertoglu B., Bardavid R. E., Oren A., Ogmen M. N., Ogan A.  
WORLD JOURNAL OF MICROBIOLOGY & BIOTECHNOLOGY, vol.23, pp.309-316, 2007 (SCI-Expanded)

- XLIV. **Evaluation of in situ ammonia removal in an aerated landfill bioreactor**  
Mertoglu B., Calli B., Inanc B., Ozturk I.  
PROCESS BIOCHEMISTRY, vol.41, no.12, pp.2359-2366, 2006 (SCI-Expanded)
- XLV. **Comparison of long-term performances and final microbial compositions of anaerobic reactors treating landfill leachate**  
Calli B., Mertoglu B., Roest K., Inanc B.  
BIORESOURSE TECHNOLOGY, vol.97, no.4, pp.641-647, 2006 (SCI-Expanded)
- XLVI. **Identification of prevalent microbial communities in a municipal solid waste landfill**  
Calli B., Durmaz S., Mertoglu B.  
WATER SCIENCE AND TECHNOLOGY, vol.53, no.8, pp.139-147, 2006 (SCI-Expanded)
- XLVII. **Methanogenic diversity in anaerobic bioreactors under extremely high ammonia levels**  
Calli B., Mertoglu B., Inanc B., Yenigun O.  
ENZYME AND MICROBIAL TECHNOLOGY, vol.37, no.4, pp.448-455, 2005 (SCI-Expanded)
- XLVIII. **Landfill leachate management in Istanbul: applications and alternatives**  
Calli B., Mertoglu B., Inanc B.  
CHEMOSPHERE, vol.59, no.6, pp.819-829, 2005 (SCI-Expanded)
- XLIX. **Effects of high free ammonia concentrations on the performances of anaerobic bioreactors**  
Calli B., Mertoglu B., Inanc B., Yenigun O.  
PROCESS BIOCHEMISTRY, vol.40, pp.1285-1292, 2005 (SCI-Expanded)
- L. **Community changes during start-up in methanogenic bioreactors exposed to increasing levels of ammonia**  
Calli B., Mertoglu B., Inanc B., Yenigun O.  
ENVIRONMENTAL TECHNOLOGY, vol.26, no.1, pp.85-91, 2005 (SCI-Expanded)
- LI. **Comparative analysis of nitrifying bacteria in full-scale oxidation ditch and aerated nitrification biofilter by using fluorescent in situ hybridization (FISH) and denaturing gradient gel electrophoresis (DGGE)**  
Mertoglu B., Calli B., Girgin E., Inanc B., Ozturk I.  
JOURNAL OF ENVIRONMENTAL SCIENCE AND HEALTH PART A-TOXIC/HAZARDOUS SUBSTANCES & ENVIRONMENTAL ENGINEERING, vol.40, no.5, pp.937-948, 2005 (SCI-Expanded)
- LII. **Microbial analysis of leachate using fluorescent in situ hybridization (fish) technique to evaluate the landfill stability**  
Calli B., Girgin E.  
FRESENIUS ENVIRONMENTAL BULLETIN, vol.14, no.8, pp.737-745, 2005 (SCI-Expanded)
- LIII. **Ammonia and pH inhibition in anaerobic treatment of wastewaters, part II: Model development**  
Eldem N. Ö., AKGIRAY Ö., Öztürk İ., Soyer E., ÇALLI B.  
Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, vol.39, no.9, pp.2421-2435, 2004 (SCI-Expanded)
- LIV. **Ammonia and pH inhibition in anaerobic treatment of wastewaters, part I: Experimental**  
Eldem N. Ö., Öztürk İ., Soyer E., ÇALLI B., AKGIRAY Ö.  
Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, vol.39, no.9, pp.2405-2420, 2004 (SCI-Expanded)
- LV. **Enzyme characteristics of extremely halophilic archaeal community in Tuzkoy Salt Mine, Turkey**  
Birbir M., Ogan A., Calli B., Mertoglu B.  
WORLD JOURNAL OF MICROBIOLOGY & BIOTECHNOLOGY, vol.20, no.6, pp.613-621, 2004 (SCI-Expanded)
- LVI. **Ammonia and pH inhibition in anaerobic treatment of wastewaters, part II: Model development**  
Eldem N., Akgiray O., Ozturk I., Soyer E., Calli B.  
JOURNAL OF ENVIRONMENTAL SCIENCE AND HEALTH PART A-TOXIC/HAZARDOUS SUBSTANCES & ENVIRONMENTAL ENGINEERING, vol.39, no.9, pp.2421-2435, 2004 (SCI-Expanded)
- LVII. **Ammonia and pH inhibition in anaerobic treatment of wastewaters, part I: Experimental**  
Eldem N., Ozturk I., Soyer E., Calli B., Akgiray Ö.  
JOURNAL OF ENVIRONMENTAL SCIENCE AND HEALTH PART A-TOXIC/HAZARDOUS SUBSTANCES &

- ENVIRONMENTAL ENGINEERING, vol.39, no.9, pp.2405-2420, 2004 (SCI-Expanded)
- LVIII. **Inactivation of coliform bacteria in Black Sea waters due to solar radiation**  
Yukselen M., Calli B., Gokyay O., Saatci A.  
ENVIRONMENT INTERNATIONAL, vol.29, no.1, pp.45-50, 2003 (SCI-Expanded)
- LIX. **Investigation of variations in microbial diversity in anaerobic reactors treating landfill leachate**  
Calli B., Mertoglu B., Tas N., Inanc B., Yenigun B., Yenigun O., Ozturk I.  
WATER SCIENCE AND TECHNOLOGY, vol.48, no.4, pp.105-112, 2003 (SCI-Expanded)
- LX. **Molecular analysis of microbial communities in nitrification and denitrification reactors treating high ammonia leachate**  
Calli B., Tas N., Mertoglu B., Inanc B., Ozturk I.  
JOURNAL OF ENVIRONMENTAL SCIENCE AND HEALTH PART A-TOXIC/HAZARDOUS SUBSTANCES & ENVIRONMENTAL ENGINEERING, vol.38, no.10, pp.1997-2007, 2003 (SCI-Expanded)
- LXI. **Anaerobic treatment by a hybrid reactor**  
Calli B., Yukselen M.  
ENVIRONMENTAL ENGINEERING SCIENCE, vol.19, no.3, pp.143-150, 2002 (SCI-Expanded)
- LXII. **Toxicity assessment on combined biological treatment of pharmaceutical industry effluents**  
Inanc B., Calli B., Alp K., Ciner F., Mertoglu B., Ozturk I.  
WATER SCIENCE AND TECHNOLOGY, vol.45, no.12, pp.135-142, 2002 (SCI-Expanded)
- LXIII. **Characterization and anaerobic treatment of the sanitary landfill leachate in Istanbul**  
Inanc B., Calli B., Saatci A.  
WATER SCIENCE AND TECHNOLOGY, vol.41, no.3, pp.223-230, 2000 (SCI-Expanded)

## Books & Book Chapters

- I. **Removal and Recovery of Metals by Using Bio-electrochemical System.**  
Tuğtaş Karnabat A. E., Çallı B.  
in: Microbial Fuel Cell A Bioelectrochemical System that Converts Waste to Watts, Debabrata Das, Editor, Springer-Verlag , New-York, pp.307-333, 2018
- II. **KATI ATIK YÖNETİMİ VE TEKNOLOJİLERİ**  
ÖZKAYA B., AKKAYA E., DEMİR A., VARANK G., Akça L., yay s. e., akıncı g., yıldız ş., BÜYÜKKAMACI N., KOÇER N., et al.  
Nobel, 2017
- III. **Landfilling: Environmental Issues**  
DEMİR A., VARANK G., ÖZÇOBAN M. Ş., KARADAĞ D., BANAR M., AYOL A., ÖZKAYA B., TURAN N. G., AKINCI G., BÜYÜKKAMACI N., et al.  
in: Katı Atık Yönetimi ve Teknolojileri, Ahmet Demir, Lütfi Akça, Editor, Nobel Akademik Yayıncılık, Ankara, pp.695-709, 2017
- IV. **Atıksu Arıtma Çamurlarının İşlenmesi ve Bertarafı**  
Öztürk İ., Çallı B., Çallı B., Arıkan O. A., Altınbaş M.  
Türkiye Belediyeler Birliği, Ankara, 2016

## Refereed Congress / Symposium Publications in Proceedings

- I. **A novel digester configuration for simultaneous biogas production and ammonia recovery**  
Şengür Ö., AKGÜL D., BAYRAKDAR A., ÇALLI B.  
International Sustainable Resource Recovery Strategies Towards Zero Waste (FULLRECO4US), İstanbul, Turkey, 13 - 15 September 2023
- II. **Effects of vacuum treatment on anaerobic digestion of chicken manure digestate**  
Şengür Ö., AKGÜL D., BAYRAKDAR A., ÇALLI B.  
10th International Conference on Sustainable Solid Waste Management, Chania, Greece, 21 - 24 June 2023

- III. **Heat-Assisted Vacuum Disintegration of Waste Activated Sludge for Improved Biogas Production**  
Kaplan Ö., AKGÜL D., ÇALLI B.  
Euresia Waste Management Symposium, 26 - 28 October 2020
- IV. **Reduction of heavy metals from waste activated sludge via anaerobic fermentation and chemical post treatment for land application**  
MOLAEY R., YEŞİL H., ÇALLI B., TUĞTAŞ KARNABAT A. E.  
2020 11th International Conference on Environmental Science and Development, Barcelona, Spain, 10 - 12 February 2020
- V. **Effect of Influent C/N Ratio and Internal Recirculation Rate on the Performance of an Oxidation Ditch Type Pre-Anoxic Landfill Leachate MBR system**  
Çakırgöz M., BAYRAKDAR A., ÇALLI B.  
6th MEMTEK International Symposium on Membrane Technologies and Applications, 18 - 20 December 2019
- VI. **Bioleaching of phosphorus from sewage sludge ash using sulfur oxidizing bacteria**  
SEMERCİ N., KUNT B., ÇALLI B.  
ABWET - G16, 6 - 07 December 2018
- VII. **Simultaneous nitrate and sulfide removal using a bio-electrochemical system**  
BAYRAKDAR A., TİLAHUN E., ÇALLI B.  
Joint G16 – ABWET conference, 6 - 07 December 2018
- VIII. **Nitrogen and Phosphorus Recovery from the Liquid Fraction of Anaerobic Chicken Manure Digestate**  
Almallahi J., SÜRMEİ R. Ö., ÇALLI B.  
4th International Conference on Recycling and Reuse, 24 - 26 October 2018
- IX. **Assessment of Energy Efficiency in Wastewater**  
SEMERCİ N., ÇALLI B.  
Recycle and Reuse 2018, 24 - 26 October 2018
- X. **Ammonia recovery from liquid fraction of chicken manure digestate**  
BAYRAKDAR A., SÜRMEİ R. Ö., ÇALLI B.  
3rd International Conference on Civil and Environmental Engineering, İzmir, Turkey, 24 - 27 April 2018
- XI. **Influence of Trace Elements on Methanogenic Pathways at High Ammonium Concentrations**  
MOLAEY R., BAYRAKDAR A., SÜRMEİ R. Ö., ÇALLI B.  
1st International Congress on Metals in Anaerobic Biotechnologies, 4 - 06 October 2017
- XII. **Influence of trace element supplementation on anaerobic mono-digestion of chicken manure**  
BAYRAKDAR A., MOLAEY R., SÜRMEİ R. Ö., ÇALLI B.  
1st International Congress on Metals in Anaerobic Digestion, IMAB17, 4 - 06 October 2017
- XIII. **Polyhydroxyalkanoate production from moderately halophilic Bacillus strains**  
OGAN A., Fetahovic M., ÇAĞLAYAN P., BİRBİR M., ÇALLI B., Bayrakdar A., DANIŞ Ö.  
42nd Febs Congress, 25 September 2018 - 30 September 2017
- XIV. **Biyogazdan H<sub>2</sub>S giderimi için Geliştirilen Membran-Biyo-Kontaktör Prosesinin Farklı Koşullarda Test Edilmesi**  
Tilahun E., ŞAHİNKAYA E., ÇALLI B.  
MEMTEK 2017-5. Ulusal Membran Teknolojileri ve Uygulamaları Sempozyumu, İstanbul, Turkey, 21 - 23 September 2017
- XV. **Membran kontaktörle anaerobik çürütücü çıkış suyundan amonyak geri kazanımı**  
BAYRAKDAR A., SÜRMEİ R. Ö., ÇALLI B.  
5. Ulusal Membran Teknolojileri ve Uygulama Sempozyumu, Turkey, 21 - 23 September 2017
- XVI. **Polyhydroxyalkanoate production from moderately halophilic Bacillus strains**  
Ogan A., Fetahovic M., Çağlayan P., Birbir M., Calli B., Bayrakdar A., Danis O.  
42nd Congress of the Federation-of-European-Biochemical-Societies (FEBS) on From Molecules to Cells and Back, Jerusalem, Israel, 10 - 14 September 2017, vol.284, pp.106
- XVII. **Air Drying of Dewatered Biogas Digestate and the use of Dried Product as Bulking Agent**  
SÜRMEİ R. Ö., BAYRAKDAR A., ŞAHİNKAYA E., ÇALLI B.  
ATHENS 2017 5th International Conference on Sustainable Solid Waste Management, Atina, Greece, 21 - 24 June



2017

- XVIII. **Bio-methane Potential of Tannery wastes**  
BAYRAKDAR A., MOLAËY R., SÜRMEĒİ R. Ö., ÇALLI B.  
5th International Conference on Sustainable Solid Waste Management, 21 - 24 June 2017
- XIX. **Biogas desulfurization using PDMS membrane in a gas-liquid contactor under slightly alkaline conditions: Optimization of Operational Parameters**  
Tilahun E., ŞAHİNKAYA E., ÇALLI B.  
ATHENS 2017 5th International Conference on Sustainable Solid Waste Management, 21 - 24 June 2017
- XX. **Effect of sulfide on anaerobic digestion of chicken manure at high ammonia concentrations**  
SÜRMEĒİ R. Ö., BAYRAKDAR A., MOLAËY R., ÇALLI B.  
1st International ABWET Conference: Waste-to-bioenergy: Applications in Urban Areas, 19 - 20 January 2017
- XXI. **A novel membrane bio-scrubbing system for hydrogen Sulfide removal from biogas**  
TİLAHUN E., BAYRAKDAR A., ŞAHİNKAYA E., ÇALLI B.  
1st International ABWET conference : Waste-to-Bioenergy :Applications to Urban Areas, 19 - 20 January 2017
- XXII. **Mono Digestion of Chicken Manure**  
BAYRAKDAR A., SÜRMEĒİ R. Ö., ÇALLI B.  
3rd International Conference of Recycling and Reuse, 28 - 30 September 2016
- XXIII. **Seperation of Ammonia from Anaerobically Digested Chicken Manure via PDMS Membrane Contactor**  
SÜRMEĒİ R. Ö., BAYRAKDAR A., ÇALLI B.  
3rd International Conference of Recycling and Reuse, 28 - 30 September 2016
- XXIV. **ATIK YÖNETİMİ UYGULAMALARI**  
ÇALLI B.  
4. OSB Zirvesi, Turkey, 26 - 28 May 2016
- XXV. **A NOVEL MEMBRANE TECHNOLOGY for SELECTIVE HYDROGEN SULFIDE REMOVAL FROM BIOGAS**  
Tilahun E., BAYRAKDAR A., ŞAHİNKAYA E., ÇALLI B.  
EurAsia Waste Management Symposium, 2 - 04 May 2016
- XXVI. **Removal and Recovery of Ammonia from Chicken Manure Improving Biomethane Potential**  
SÜRMEĒİ R. Ö., BAYRAKDAR A., Molaey R., ÇALLI B.  
IWA 7th Eastern European Young WATER Professionals Conference, 17 - 19 September 2015
- XXVII. **Ammonia Removal from Chicken Manure**  
SÜRMEĒİ R. Ö., BAYRAKDAR A., Molaey R., ÇALLI B.  
THE INTERNATIONAL CONFERENCE ON CIVIL AND ENVIRONMENTAL ENGINEERING, 20 - 23 May 2015
- XXVIII. **Effect of Trace Metal Supplementation on Anaerobic Digestion of Chicken Manure**  
Molaey R., BAYRAKDAR A., SÜRMEĒİ R. Ö., ÇALLI B.  
The International Conference on Civil and Environmental Engineering, 20 - 23 May 2015
- XXIX. **Diversity of Extremely Halophilic Archaeal Community in Tuzköy Salt Mine in Turkey**  
Birbir M., Ogan A., Çallı B., Mertoğlu B.  
Microbiologia Balkanica 2003, 3rd Balkan Conference of Microbiology 2003, İstanbul, Turkey, 10 - 13 July 2013
- XXX. **Anaerobic fermentation of organic solid wastes Volatile fatty acid production and separation**  
YEŞİL H., TUĞTAŞ KARNABAT A. E., BAYRAKDAR A., ÇALLI B.  
13th World Congress on Anaerobic Digestion, Santiago de Compostela, Spain, 25 - 28 June 2013
- XXXI. **Türkiye’de otomotiv sektöründen kaynaklanan tehlikeli atıkların azaltılması çalışmaları**  
CAN Z. S., GÖKYAY O., ÇALLI B., MERTOĞLU B., AKGÜL D., Yazıcı B., YETİŞ Ü.  
İTÜ 13. Endüstriyel Kirlenme Kontrolü Sempozyumu, Turkey, 17 - 19 October 2012
- XXXII. **Türkiye’de beyaz eşya üretiminden kaynaklanan tehlikeli atıklar**  
Yazıcı B., CAN Z. S., ÇALLI B., MERTOĞLU B., GÖKYAY O., AKGÜL D., YETİŞ Ü.  
İTÜ 13. Endüstriyel Kirlenme Kontrolü Sempozyumu, Turkey, 17 - 19 October 2012
- XXXIII. **Hazardous Waste Generation From Household Appliances Industry in Turkey**  
YAZICI B., ÇALLI B., MERTOĞLU B., CAN Z. S., GÖKYAY O., AKGÜL D., YETİŞ Ü.  
EurAsia Waste Management Symposium, 14 - 16 November 2011
- XXXIV. **Investigation of Hazardous Waste Generation by Turkish Automotive Industry**

YAZICI B., CAN Z. S., GÖKYAY O., ÇALLI B., MERTOĞLU B., AKGÜL D., YETİŞ Ü.

EurAsia Waste Management Symposium, 14 - 16 November 2011

**XXXV. Bir katı atık depo sahasında stabilizasyona bağlı olarak görülen değişimler**

DURMAZ ŞAM S., MERTOĞLU B., YÜKSELEN M. A., ÇALLI B.

Ulusal Çevre Sempozyumu 2007, Mersin, Turkey, 18 - 21 April 2007

**XXXVI. Identification of prevalent microbial communities in a municipal solid waste landfill**

ÇALLI B., DURMAZ ŞAM S., MERTOĞLU B.

Anaerobic Digestion of Solid Waste 2005 Conference, 31 August - 02 September 2005

**XXXVII. Havalandırmalı katı atık depo sahasındaki mikrobiyal çeşitliliğin moleküler tekniklerle incelenmesi**

MERTOĞLU B., ÇALLI B., AKANYETİ İ., AKGÜL D., AKALIN N., İNANÇ B.

6. Ulusal Çevre Mühendisliği Kongresi, Turkey, 24 - 26 November 2005

**XXXVIII. Modelling Ammonia and pH Inhibition in Anaerobic Treatment**

AKGİRAY Ö., ELDEM N., ÖZTÜRK İ., SOYER E., ÇALLI B.

IWA 4th World Water Congress, Marrakech, Morocco, Marrakech, Morocco, 19 - 24 September 2004

**XXXIX. Comparative evaluation of methanogenic communities in psychrophilic and mesophilic UASB reactors treating domestic wastewater**

Gomec C., Eroglu V., Ozturk I., Calli B., Mertoglu B.

European Symposium on Environmental Biotechnology, Oostende, Belgium, 25 - 28 April 2004, pp.69-73

## Supported Projects

Çallı B., Akgül D., Bakırcı K., TUBITAK Project, 2019 YILI MARMARA ÜNİVERSİTESİ VE ARÇELİK AŞ İŞ BİRLİĞİ İLE ÇEVRESEL SÜRDÜRÜLEBİLİRLİK ALANINDA DOKTORA - SANAYİ PROJESİ, 2020 - 2027

Semerci N., Çallı B., Can Z. S., Hacıosmanoğlu G. G., TUBITAK Project, Yenilikçi, enerji-pozitif atıksu arıtma prosesinin makro ve mikro organik kirletici giderim performansı, 2021 - 2024

Çallı B., Akgül D., EU Supported Other Project, A biorefinery approach to exploit digestate as key feedstock in the energy - nutrient nexus, 2022 - 2023

Akgül D., Çallı B., Kaplan Ö., TUBITAK Project, Vakum Destekli Biyogaz Zenginleştirme İşlemi, 2020 - 2022

Tuğtaş Karnabat A. E., Çallı B., TUBITAK Project, Metal Separation and Recovery from Wastewater Treatment Plant Sludge through Anaerobic Bio-leaching and Membrane Separation Processes , 2017 - 2020

Kocamemi B., Akgiray Ö., Soyer E., Çallı B., Tayanç M., TUBITAK Project, Marmara University Research and Development Strategy Document (Environmental Technologies), 2016 - 2017

Tuğtaş Karnabat A. E., Çallı B., TÜBİTAK - AB COST Project, Yüksek Azot İçeren Organik Atıklardan Biyogaz Üretiminde İz Element İlavesi ve Amonyak Uzaklaştırma İşleminin Etkileri, 2014 - 2017

Çallı B., Semerci N., TUBITAK Project, Anaerobik Dinamik Membran Biyoreaktör, 2015 - 2016

Çallı B., Project Supported by Higher Education Institutions, Eş Zamanlı Sülfür ve Nitrat Giderimi için Kullanılan Mikrobiyal Yakıt Hücreleri ve Sabit Yataklı Biyoreaktörün Performanslarının Karşılaştırılması, 2013 - 2016

Tuğtaş Karnabat A. E., Çallı B., Yeşil H., TUBITAK Project, Pervaporation Separation of Volatile Fatty Acids from Leachate Generated by a Leach-bed Reactor, 2012 - 2016

Tuğtaş Karnabat A. E., Çallı B., Yeşil H., Project Supported by Higher Education Institutions, Organik Katı Atığın Anaerobik Fermentasyonu ile Üretilen Uçucu Yağ Asitlerinin Membran Kontaktör ile Sıvı Fazdan Ayrılması, 2013 - 2015

Tuğtaş Karnabat A. E., Çallı B., TUBITAK Project, Biyo-elektrokimyasal sistemlerde sülfür (S<sup>2-</sup>) ve nitrat giderimi, 2013 - 2014

Erdim E., Soyer E., Tuğtaş Karnabat A. E., Çallı B., TUBITAK Project, Fabrication of Nanoparticle Embedded Polymeric Membranes for Water and Wastewater Treatment: Investigation of Nanoparticle Release, 2012 - 2014

Gökyay O., Can Z. S., Çallı B., Mertoğlu B., Akgül D., TUBITAK Project, Türkiye de AB Çevre Mevzuatı ile uyumlu Tehlikeli Atık Yönetimi, 2009 - 2013

Semerci N., Çallı B., Kocamemi B., Kerç A., Project Supported by Higher Education Institutions, Evsel Atıksu Arıtma Çamurlarından Ozonlama ile Fosfor Geri Kazanımının İncelenmesi , 2009 - 2011

Semerci N., Çallı B., Kerç A., Kocamemi B., Project Supported by Higher Education Institutions, Investigation of

Phosphorus Recovery from Municipal Activated Sludge with Ozonation, , 2009 - 2011

Çallı B., Mertoğlu B., TUBITAK Project, Organik Atıksu Arıtan Mikrobiyal Yakıt Hücreleri İle Doğrudan ElektrikÜretimi, 2008 - 2011

Birbir M., Çallı B., Mertoğlu B., Ogan A., Ögmen M. N., Bardavid R. E., Project Supported by Higher Education Institutions, Türkiye deki Tuz Gölü nden Kaldırım ve Kayacık Tuzlasından Elde Edilen Aşırı Halofilik Arkebakteriler, 2007 - 2008

Çallı B., Yükselen M. A., Durmaz Şam S., TUBITAK Project, Katı atıkların stabilizasyonuna bağlı olarak depo sahasındaki mikrobiyal dağılımda meydana gelen değişikliklerin incelenmesi, 2005 - 2006

## **Metrics**

Publication: 109

Citation (WoS): 1740

Citation (Scopus): 1696

H-Index (WoS): 24

H-Index (Scopus): 23

## **Congress and Symposium Activities**

5th Eurasia Waste Management Symposium Opening Panel, Panelists, İstanbul, Turkey, 2020

5th Eurasia Waste Management Symposium, Session Moderator, İstanbul, Turkey, 2020

## **Scholarships**

EU 6th Framework Program Marie Curie Intra European Fellowship, European Commission, 2006 - 2008

BİDEB Doktora Sonrası Yurtdışı Araştırma Bursu, TUBITAK, 2005 - 2006

## **Awards**

Çallı B., Marmara Üniversitesi Akademik Yayın 2018 Ödülü-Mühendislik Alanı, Marmara Üniversitesi, October 2019

## **Non Academic Experience**

VITO, Flemish Institute of Research

Other, VITO, Flemish Institute for Technological Research, Environment and Energy