



Recent Advances in Greenhouse Gases' Emission Processes and Potential in Natural and Artificial Anaerobic Systems

Guest Editors:

Dr. Peng Zhang

Kunming University of Science
and Technology, Kunming
650032, China

Dr. Chuancheng Fu

Red Sea Research Center (RSRC)
and Computational Bioscience
Research Center (CBRC), King
Abdullah University of Science
and Technology (KAUST), Thuwal
23955-6900, Saudi Arabia

Dr. Jian Liu

Shandong Key Laboratory of
Biophysics, Institute of
Biophysics, Dezhou University,
Dezhou 253023, Shandong, China

Deadline for manuscript
submissions:

closed (31 March 2023)

Message from the Guest Editors

Global warming caused by the annual increase of greenhouse gases in the atmosphere has aroused great concern worldwide. Carbon dioxide (CO₂) is the major contributor; methane (CH₄) is also problematic, contributing 15% to global warming. Natural and artificial anaerobic systems, including but not limited to wetlands and landfill, are the primary sources of CO₂ and CH₄ emission to the atmosphere, and contribute significantly to the global greenhouse effect.

This Special Issue invites research papers addressing one or more aspects of CO₂ and CH₄ emission from natural and artificial anaerobic systems. Topics of interest for the Special Issue include but are not limited to:

- The adaptation mechanisms of CO₂ and CH₄ emissions to environmental changes.
- New technologies to reduce CO₂ and CH₄ emissions from natural and artificial anaerobic systems.
- CO₂ and CH₄ emissions affected by artificial sources.
- Interspecies electron exchange during CO₂ and CH₄ emission process.





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Ilias Kavouras

Environmental, Occupational,
and Geospatial Health Sciences,
CUNY School of Public Health,
New York, NY 10027, USA

Message from the Editor-in-Chief

Continued developments in instrumentation and modeling have driven atmospheric science to become increasingly more complex with a deeper understanding of concepts, mechanisms, and interactions. This is the field that innovation built and it has led to a better appreciation for the complexity with atmosphere. Human life is intertwined in this complexity as we strive to better understand our atmosphere. Climate change is constantly stretching the limits of our thinking and forcing new ideas and concepts to be played out. Welcome to the Anthropocene!

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), Ei Compendex, GEOBASE, GeoRef, Inspec, CAPlus / SciFinder, Astrophysics Data System, and other databases.

Journal Rank: CiteScore - Q2 (*Environmental Science (miscellaneous)*)

Contact Us

Atmosphere Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/atmosphere
atmosphere@mdpi.com
[X@Atmosphere_MDPI](https://twitter.com/Atmosphere_MDPI)