

Special Issue

Methane Release—from Old Subsurface Origins to Recent Biogenic Production

Message from the Guest Editors

Trace gases are a minor part of our atmospheric dry air (around 0.1%), but they have a crucial role in controlling air temperature and climate. The main components include the so-called greenhouse gases (GHG), namely, methane (CH₄), the most potent, with less than 2 ppm (vol). The natural occurrence of methane is related to several different mechanisms and origins, namely, abiogenesis, thermogenesis, and methanogenesis. Its release to the atmosphere is driven mainly by diffusive gas transfer and ebullition, but natural emissions of CH₄ are highly uncertain in terms of atmospheric content and budget. Therefore, recognizing, mapping, and characterizing the main sources are crucial for increasingly accurate climate modeling. With this Special Issue, we intend to contribute to increasing the knowledge about natural methane occurrences and their potential impact on global changes.

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