

## Special Issue

# From Methane to Hydrogen: Innovations and Implications

### Message from the Guest Editors

Over the years, methane has served as a cornerstone resource with versatile opportunities. Its abundance, as well as low carbon dioxide emissions, has driven growing interest in leveraging methane for hydrogen production, which may be used as a clean fuel, partially reducing our dependence on fossil fuels. Current pathways for hydrogen generation from methane include steam methane reforming, coal gasification, combustion, methane pyrolysis/cracking, autothermal reforming, or partial combustion to syngas. While mature, these technologies face persistent challenges in achieving higher energy efficiency, lower production costs, and minimized environmental impacts. Therefore, enhancing the sustainability and efficiency of hydrogen production across all these dimensions is of paramount importance.

This Special Issue of *Methane* is dedicated to showcasing recent advances in methane-to-hydrogen innovations and implications. Topics of interest include, but are not limited to, the following: Hydrogen from methane; Methane conversion methods; Hydrogen production methods; Methane combustion; Low carbon hydrogen production; Catalytic methane conversion; Hydrogen fuels and utilization.

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### Guest Editors

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### Deadline for manuscript submissions

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## Methane

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### Message from the Editor-in-Chief

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#### Editor-in-Chief

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