Special Issue

Hydrogen and Carbon Production by Methane Catalytic Cracking

Message from the Guest Editors

The energy transition from fossil fuels is occurring at an unexpectedly rapid pace. Green hydrogen is the agreed path forward to facilitate this transition. Mega projects are being planned for the decades ahead, and hence, the necessary infrastructure and logistics need to be developed to achieve the free availability of hydrogen in the market. The topics of interest for this Special Issue include, but are not limited to, the following:

- Development of a catalyst that offers high conversion and stability for methane cracking
- Characterization and quantification of carbon nanostructures formed through the cracking of methane
- Separation of carbon nanostructures from the catalyst
- Kinetics and mechanism of the methane cracking reaction
- Separation of hydrogen and methane
- Regeneration and recycling of the catalyst
- Techno-economic feasibility of the methane cracking process
- Application of the carbon nanostructures formed through methane cracking

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