



## Recent Advances of Hydrogen Storage in Graphene

Guest Editor:

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Deadline for manuscript  
submissions:

**closed (30 September 2020)**

### Message from the Guest Editor

Dear Colleagues,

Vast combustion of fossil fuels remains the dominant source of energy consumption. Consequently, carbon dioxide is the main combustion product in power plants and automotive applications. A drastic solution is the replacement of fossil fuels with environmentally clean fuels such as hydrogen (H<sub>2</sub>). Hydrogen constitutes an ideal 'green' fuel to replace non-renewable hydrocarbons. However, the utilization of molecular hydrogen as energy carrier requires two basic steps to be accomplished, namely a) hydrogen production and b) hydrogen storage.

To meet the second step, materials capable of safely and efficiently absorbing large amounts of carbon dioxide have become a major challenge over the last decades. Graphene combines excellent mechanical and electrical properties, elevated thermal conductivity and high charge carrier mobility; graphene layers hold a foremost place and thus comprises ideal systems for H<sub>2</sub>-sorption applications.

In this Special Issue, the submission of manuscripts related to graphene-based nanohybrids and their potential applications for H<sub>2</sub> storage applications are welcomed.

Dr. Konstantinos Spyrou  
Guest Editor





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## Message from the Editor-in-Chief

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