Special Issue

Recent Advances of Hydrogen Storage in Carbon-Based Materials

Message from the Guest Editor

The vast combustion of fossil fuels remains the dominant source of energy consumption. A drastic solution to this problem is the replacement of fossil fuels with environmentally clean fuels such as hydrogen (H2). Hydrogen constitutes an ideal ''green'' fuel to replace non-renewable hydrocarbons. However, the utilization of molecular hydrogen as an energy carrier requires two basic steps to be accomplished, namely, a) hydrogen production and b) hydrogen storage. Carbon-based materials appear as highly attractive. We encourage the design and development of novel functional carbon nanoparticles (CNPs) and their hybrids with high surface areas and pore volumes and accessible and chemically tunable surface areas, which thus comprise ideal systems for H2-sorption applications. For this research topic, the submission of manuscripts related to the synthesis, characterization, and study of carbon-based nanohybrids and their potential applications for H2 storage applications is welcomed. The submission of experimental and theoretical original research articles as well as review papers is also encouraged.

Guest Editor

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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