Special Issue

Recent Development and Application of Hydrogen Production and Storage Materials

Message from the Guest Editors

Molecular hydrogen is a useful energy source for a variety of applications due to its high gravimetric energy density and low emissions profile. Due to this, hydrogen has been proposed as the centerpiece for a hydrogen economy where it serves as a candidate for broad replacement of fossil fuels for a variety of applications due to its almost zero carbon emission. This is motivated by a vision that moves us to a sustainable, environmentally friendly, and secure energy future. Broad application of hydrogen as an energy carrier has faced a number of challenges, including production and safe and reliable storage. A variety of materials are also currently under development for safer storage of hydrogen, including metal hydrides and liquid organic hydrogen carriers. This Special Issue presents recent work on:

- Different methods under development for the production of hydrogen both at small and large scales, including new materials for hydrogen production;
- New and proposed methods and materials for the storage of hydrogen;
- Applications of these materials at all scales, including fuel cells.

Guest Editors

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Message from the Editor-in-Chief

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.

Editor-in-Chief

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