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Advance Materials for Hydrogen Storage

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Message from the Guest Editors

The continuous decrease in fossil resources and the current economic and geopolitical scenarios significantly affect the energy supply and promote the production of alternative fuels and energy systems which are more efficient and respectful of the environment. Therefore, a strong demand to produce renewable energy makes hydrogen a valid alternative energy vector for many hybrid energy systems.

In this context, advanced materials capable of absorbing and desorbing hydrogen in a reversible way are gaining attention. For example, the hydrogen accumulation in hydrides, which presents notable features in terms of storage capacity (mass and volume), does not have safety concerns associated with pressure tanks, heat insulation, or the inevitable loss of the cryogenically stored hydrogen. Therefore, the purpose of this Special Issue is to collect and publish high-quality research papers and review articles addressing the study, synthesis, and characterization of advanced materials for reversible hydrogen storage.

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Message from the Editor-in-Chief

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