Special Issue

Functional Materials Based on Metal Hydrides

Message from the Guest Editors

Our extreme and growing energy consumption, based on fossil fuels, has significantly increased the levels of carbon dioxide, which may lead to global and irreversible climate changes. We have plenty of renewable energy, but the most difficult challenge appears to be the development of efficient and reliable storage of them. Hydrogen has long been considered as a potential means of energy storage. Therefore, a wide range of hydrogen-containing materials, with energy-related functions, has been discovered over the past few decades. This has led to a wide range of new possible applications of metal hydrides that permeate beyond solid-state hydrogen storage. A variety of new hydrides, proposed as battery materials, has been discovered. Solar heat storage is also an area of great potential with metal hydrides, in principle offering orders of magnitude better storage performance than phase change materials. Recently, hydrides with optical and superconducting properties have also been investigated. This Special Issue is dedicated to the full range of emerging electronic, photonic, and energy-related inorganic hydrogen-containing materials.

Guest Editors

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Inorganic chemistry remains a lynchpin of modern chemistry, not only embracing the function and reactivity of combinations of most elements of the periodic table, but also providing a footing for studies of materials, catalysts, drugs, fuels and industrial chemicals. Arguably, the role and reach of inorganics in society have never been as great as today. Adventurous research at the heart and at the extremes of inorganic chemistry is vital to further advances and Inorganics offers authors the opportunity to publish exciting new research in an open access format.

Editor-in-Chief

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