catalysts

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Advances in Catalysts for the Sustainable Hydrogen Production

Guest Editors:

Dr. Filippo Bossola
Istituto di Scienze e Tecnologie Chimiche "Giulio Natta" - Consiglio Nazionale delle Ricerche, Via C. Golgi, 19 – 20133 Milano, Italy

Dr. Claudio Evangelisti
Istituto di Chimica dei Composti OrganoMetallici - Consiglio Nazionale delle Ricerche, Via G. Moruzzi, 1 – 56124 Pisa, Italy

Dr. Vladimiro Dal Santo
Istituto di Scienze e Tecnologie Chimiche "Giulio Natta" - Consiglio Nazionale delle Ricerche, Via C. Golgi, 19 – 20133 Milano, Italy

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Message from the Guest Editors

Dear Colleagues,

Hydrogen as a clean energy vector is finally becoming a reality, with significant investments being devoted to the creation of commercially available vehicles and to the development of distribution networks worldwide. In this transformation of the energy paradigm, the role of catalysis is pivotal as a means for developing adequate processes to produce blue and/or green hydrogen from renewable resources. The presence of noble metals in these catalysts is unfortunately still relevant and, in some cases, unavoidable. Efforts have been directed at replacing or, at least, reducing the content of noble elements,possibly up their total replacement without scarifying catalytic performances, of utmost importance for entering a truly sustainable hydrogen economy.

This Special Issue aims to cover the most recent progress and advances in the development of catalysts for sustainable hydrogen production processes (e.g., water electrolysis, gasification or reforming of biomass and/or biomass-derived compounds) which are free of noble metals or where their content is lower than that of benchmark catalysts. The Issue is open to both original research papers and reviews.