Special Issue

Production of Renewable Hydrogen: Prospects and Challenges

Message from the Guest Editor

A great deal of focus has been given to “green hydrogen”, produced from water electrolysis using renewable energy sources such as solar and wind. However, many technical and economic challenges still need to be overcome, such as the cost of production, energy consumption, electrode performance, and material durability, among others. On the other hand, biomass can be used as an alternative feedstock for hydrogen production, not only because it is renewable but also because it is a CO2-neutral energy source. Biomass-derived compounds, can be used in the aqueous phase or steam reforming for hydrogen production. Bio-oil, produced by fast biomass pyrolysis, is also an attractive feedstock for hydrogen production, aligned with prospects of establishing an integrated biorefinery. Biogas, produced by anaerobic digestion of biomasses or organic wastes, is another attractive alternative for renewable hydrogen production. This Special Issue aims to present the current state of affairs in terms of renewable hydrogen production and the challenges faced in terms of scaling up existing processes.

Guest Editor

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