Special Issue

Process Design Issues for Hydrogen Production: From Catalyst Design to Reactor Modelling and Process Simulation

Message from the Guest Editors

Hydrogen is used throughout the entire chemical industry as a chemical, and it is also raising attention as an alternative fuel. Its production can spread from technologically, well-assessed routes, from fossil sources, to different possible alternative scenarios, such as the use of renewable biofuels, the splitting of water (photo-catalytic, electro-catalytic, or thermal), and biochemical pathways. Catalysis plays a key role in all them. The interest recently shifted also from centralized production to distributed generation or microgeneration, to cope with on-site production needs. Therefore, we welcome contributions regarding all the different technologies for hydrogen production, which may be focused on the following topics (but not limited to them):

- process design issues for hydrogen production
- kinetics
- reactors sizing and modelling (including microreactors)
- process simulation (either in steady state conditions or dynamic)
- life cycle assessment
- process control
- scale up issues, prototypes and demonstrative units
- design of catalytic materials for the production of hyd

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