

Membrane and plasma reactors for H₂ production

Process Intensification is an important topic for the chemical industry as it can lead to an increase of energy efficiency and hence a decrease of anthropogenic CO₂ emissions. Process intensification can be achieved in different ways and one is the integration of process functions in a single unit. In this respect, one can integrate the reaction and the separation in a single unit (a membrane reactor is an example) or integrating reaction with efficient energy supply (a plasma reactor is an example).

In this talk we will discuss the latest advances in membrane reactors and plasma reactors for the production of (pure) hydrogen from different feedstock and at different scales.

Advances in membranes for membrane reactors will be also discussed.