Special Issue

Catalysis in Steam Reforming

Message from the Guest Editor

Steam reforming is the most mature and economical technology used in the production of hydrogen and uses hydrocarbons reaction with steam to generate a H2 rich stream. For its main reaction of methane with steam, producing CO and H2 as the main products, but also CO2 from water gas shift side reaction, the process relies on packed bed catalytic reactor technology, operated at medium high pressures (30-40 bar) and temperatures in the 850-1000 °C range. The reaction is strongly equilibrium driven, and pressures above atmospheric, whilst allowing reasonably sized plants delivering large throughputs, are adverse to the conversion of the hydrocarbon fuel. Excess of steam and endothermicity of the steam reforming reaction make this process very energy intensive.

Guest Editor

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