

## Modeling of the Methane Steam Reforming for the Molten Carbonate Fuel Cell

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Hydrogen for use in the Molten Carbonate Fuel Cell (MCFC) is formed from fuels ( $C_xH_yO_z$ ) by means of the reforming reaction on a catalyst. Steam reforming is known to produce high concentrations of hydrogen in product. In Molten Carbonate Fuel Cell modeling process, for the purpose of optimizing important system variables, a detailed dynamic model of methane steam reforming rate on the reformer is needed.

In this study, for reformer modeling of the Molten Carbonate Fuel Cell, the Aspen Customer Modeler is used. Describing the methane reforming reaction rate kinetics on the catalyst is complicate, the Aspen Reaction Toolkit in the Aspen Customer Modeler is used for modeling for the reformer easily.