#1501

Chemical Reactor Simulators

SIMULATION AND OPTIMIZATION OF INDUSTRIAL CHEMICAL REACTORS

DESCRIPTION

Development of simulation modules of industrial-scale chemical reactors operating at steady / unsteady state. Development of software for optimization of chemical reactors. The modules are easily adapted to different geometries and designs, catalysts and operating conditions by tuning of the kinetic constants and design and transport parameters.

APPLICATIONS

Olefin production / Pyrolysis / Oxidative dehydrogenation / Steam and autothermal reforming / WGS and methanation / Ammonia production / Production & purification of biofuels.

ADVANTAGES

- Studies regarding design modifications.
- Ad-hoc simulators development.
- Sensitivity analysis.
- Training tool.

DEVELOPMENT STATUS

Complete modules available. Validation against experimental data from industrial reactors.

RESEARCHERS

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