

Presto-Kinetics

PRESTO-KINETICS

The detailed kinetic modeling of a reactor is a necessary condition for a successful process description. PRESTO-KINETICS has been designed to support this key requirement. The input of PRESTO-KINETICS consists of arbitrary kinetic models (also as differential-algebraic systems) combined with the treatment of operation conditions and large sets of experimental data.

Check out and download the PRESTO-KINETICS brochure.

The comfortable parameter estimation tool allows the fitting and optimization of any set of parameters in a model with respect to any state variable or user-defined expression. Moreover, systems of partial differential equations can be solved easily, for example in order to model the instationary behavior of tubular reactors.

All results are presented in online-graphs during simulation or optimization runs. Import and export of results and data in text files or via the COM-interface ensure the communication with other program packages (CiT's software products can be used both as OLE-server and as OLE-client).

All implemented numerical algorithms include self-adaptive grid and time-step controls based on robust error-control mechanisms. They lead to convincing solutions, convincing both in efficiency and in accuracy.

FEATURES:

- Reaction step patterns for general kinetics, phase transfer, feed, exit, streams
- Biokinetic and catalyst modelling
- Comprehensive definition of recipes for batch, fed-batch and continuous operation
- Treatment of partial differential equations, convection, diffusion, kinetic reaction, boundary conditions
- Parameter estimation designed for a large number of experiments
- Comprehensive output options for all results of simulation and parameter estimation