

Process design and optimisation are fundamental steps to ensure the economic sustainability of chemical processes. Suitable description of the performance of the various unit operations of the plant should be made and integrated, to understand the mutual interferences both under steady state conditions and under unsteady operation. Process simulation tools are helpful to compute both situations. The stationary case can be simulated with packages dealing with material and energy balances applied to each unit and extended to the whole plant. More complex is the unsteady state case, which needs dynamic modelling to describe the time-dependent evolution of the system.