



Modeling and simulation of transport in porous media

Modeling is performed by homogenization using a volume averaging technique, and simulation of heat, mass and momentum transport is generally examined in products undergoing solid/liquid separation processes such as drying. The media are either two-phase and macroscopically deformable (gel) or three-phase and macroscopically rigid (porous media).

Most of the work consists in extending the methodologies tried and tested for solid/liquid separation to applications that involve chemical reactions and more complex thermodynamics in the medium:

- Waste gasification
- Reactive absorption
- Drying of solid hydrates