Numerical Simulation of Dispersed Gas/Liquid Flows in Bubble Columns at High Phase Fractions using OpenFOAM (R) Part 2-Numerical Simulation and Results

Abstract:
The design of industrial gas/liquid reactors such as bubble columns requires detailed information with respect to the flow structure and characteristics of two- or multiphase systems in the reactor. The contribution is focused on the evaluation of the simulation results obtained by a selection of models. The results are further compared with those reported in literature. The simulations have been performed with the CFD software OpenFOAM (R). The main focus of the numerical simulation was set on capturing the characteristic process and design parameters of bubble columns.