Mathematical modelling of membrane separation

Frank Vinther
DTU Mathematics

Abstract

Membrane separation is commonly used in chemistry and chemical engineering, where the separation of one or several species of molecules is of interest. This presentation will present mathematical modelling of the dynamic interplay between the transport equations through the membrane and the transport equations within the bulk solution. Thus, resulting in a system of PDE's with time varying boundary conditions. The model is used for predicting optimal parameters for separation processes.