Dynamic response & control of RO process

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Dynamic response behavior of Reverse Osmosis(RO) is important in starting up and contolling system. Moreover, dynamic behaviors can be used to fix the disturbances of system. But, most of the literutures for RO considered a steady state process. So, objectives of this poster are composition of RO module using a COMSOL and finding transfer functions for each units, then analyze a transfer model parameters physically. Finally, simulate the process for control conditions such as temperatures, operating pressures or initial concentrations of bulk solutions using a CMP and compare the results with PID.