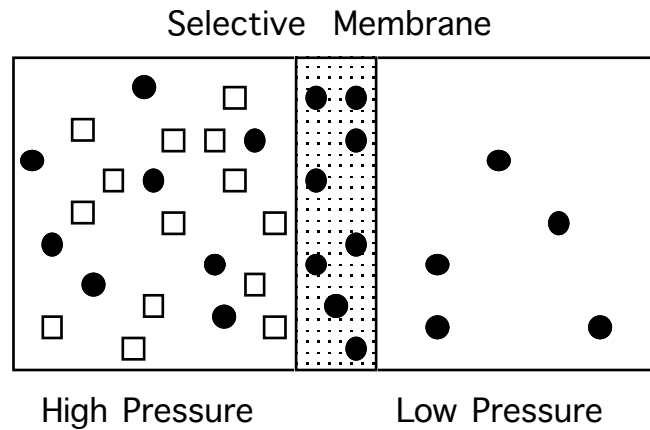


Homework #4

1. In order to adsorb water produced from the esterification of benzoic (100 g) with ethanol (23g), which zeolite in Homework #2 should be used with the least amount. How many gram must be employed? Show by calculation.
2. Pervaporation is widely used for separation of ethanol/water mixture. In this process, the compound (●) that has stronger interaction with the membrane will adsorb on the membrane and diffuse to the other side as shown;



- 2.1 If silicalite is used as a membrane, water or ethanol should diffuse to the low-pressure chamber?
- 3.2 If this silicalite membrane is used for Separation of propanol/water, separation selectivity would be better or worse, as compared to the separation of ethanol/water?