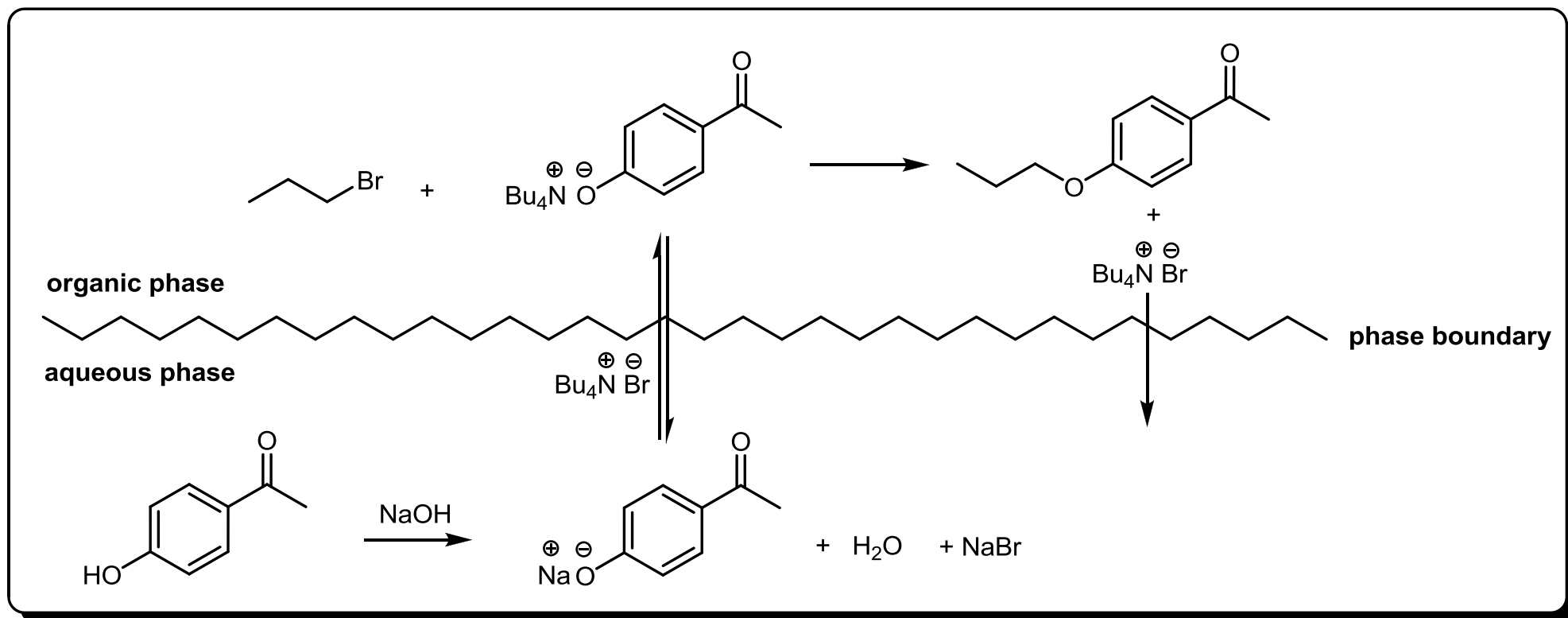


CHEM 344: Synthesis of 4'-propoxyacetophenone under phase-transfer conditions



1) NaOH deprotonates 4'-hydroxyacetophenone to give the phenolate anion.

2) The Bu_4N^+ cation pairs up with the phenolate anion.

3) The TBA/phenolate species transfers into the organic phase.

4) The phenolate anion undergoes an $\text{S}_{\text{N}}2$ reaction with 1-bromopropane.

5) Bu_4NBr is regenerated and transfers back into the aqueous phase.

Note that OH^- does not initially react with 1-bromopropane due to phase separation.