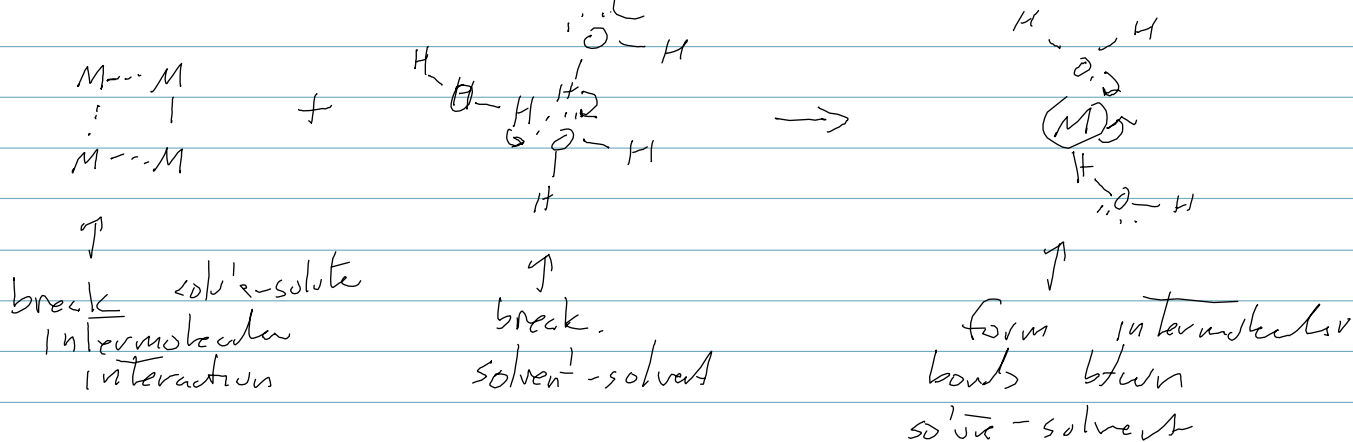


Solubility Trends due to Intermolecular Interactions

"likes dissolves likes" → $\left\{ \begin{array}{l} \text{polar solvent} \rightarrow \text{polar solutes} \\ \text{nonpolar " } \rightarrow \text{nonpolar solutes} \end{array} \right.$



to dissolve solute → form stronger intermolecular non-covalent bonds between solute-solvent than our solute-solute & solvent-solvent interactions.

polar solvent:

ion-ion
ion-dipole
dipole-dipole
H-bonds.

polar solute

same for solute

Non-polar solvent

dispersion interaction

non-polar solute

same from solute