

## SOLUTE DISSOCIATION OR IONIZATION

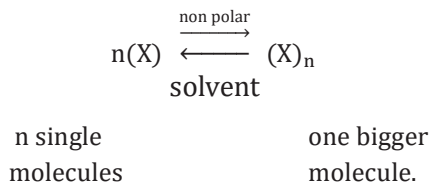
### Abnormal colligative properties

It has been noted that the disparity between the observed and calculated molecular masses of a solute arises from the association or dissociation of solute molecules in the solution. This leads to a modification in the number of particles present in the solution.

### Association of solute particles

Association refers to the creation of a larger molecule through the combination of two, three, or more solute molecules.

Let 'n' simple molecules combine to give an associated molecule as:



Consequently, the overall number of particles in the solution is reduced compared to the initial number of molecules dissolved, leading to lower values of colligative properties. Given that the molar mass of the solute is inversely proportional to colligative properties, the molar mass of the solute will exceed the theoretical value.