13.1: Prelude to Equilibria

Chemical equilibrium is an essential concept in chemistry, allowing for an accurate understanding of the molecular processes behind those symbols in chemical equations. However, chemical equilibrium is easily misunderstood. To dispel any misconceptions before we begin our investigation of chemical equilibrium, we will first define what chemical equilibrium is not.

Chemical equilibrium is not when there are equal amounts or concentrations of reactants and products. Instead, chemical equilibrium is defined as the state at which the concentration of the reactants and products are constant, not necessarily equal.

Chemical equilibrium is not when the reaction "stops". Rather chemical equilibrium is achieved when the forward and reverse rates of a reaction are equal. We will learn more about that further along in the chapter, but before then it is essential to understand that chemical equilibrium is not a reaction coming to a stop.

Now that we have alerted you to the two biggest misconceptions that pop up when learning about chemical equilibrium, we can proceed to learning more about what exactly chemical equilibrium is and why it's important. For a preview to what we will be learning in the coming chapter, check out the video below or move on to the next section.