CHAPTER OVERVIEW

16: Entropy and Spontaneous Reactions

The experiences you have had in the chemical laboratory have probably already taught you that there is an uphill character to some reactions and a downhill character to others. We want to understand why some chemical reactions are downhill while others are uphill. In particular we want to know what kinds of atomic and molecular processes proceed downhill, and which processes require a “push” to go uphill. We find that these questions of uphill and downhill nature of a reaction can be answered using concepts such as spontaneity, entropy, and free energy. Chemical reactions which proceed downhill, are said to be spontaneous.