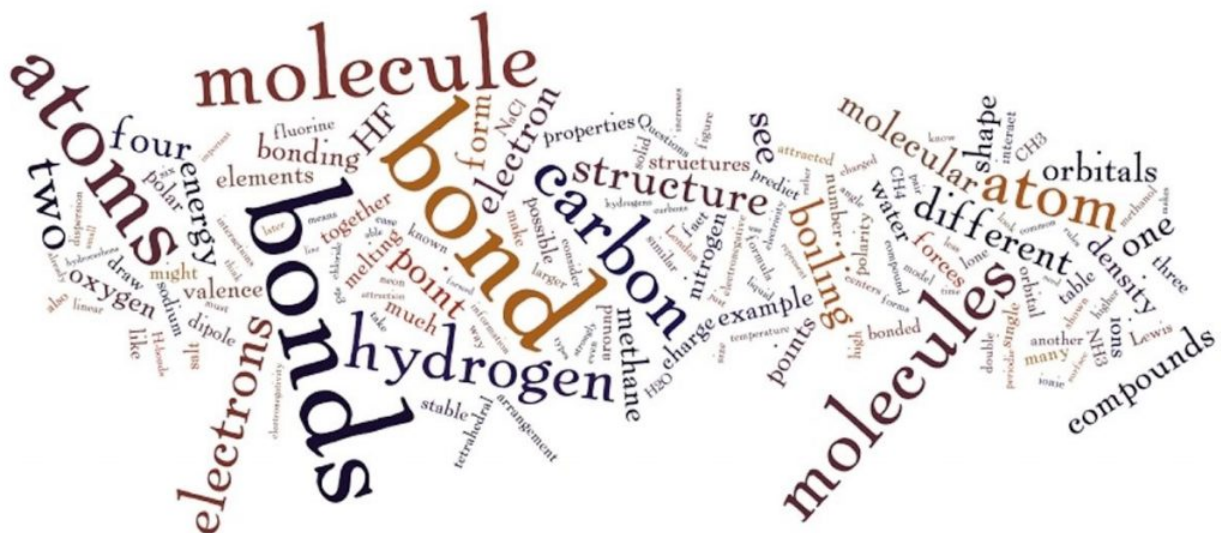


CHAPTER OVERVIEW

Chapter 4: Heterogeneous Compounds



Up until this point we have considered only bonds between atoms of the same element. While this makes things simpler (although you might not agree after thinking about the many forms of carbon), it leaves out the vast majority of the compounds that exist in the world and their chemistries. Moreover, pure elements are rare in nature. Much of the efforts of alchemists, early chemists, and the modern refining industry involve determining how to (economically) separate specific types of atoms (elements) away from others. Modern chemistry is concerned (largely) with putting atoms together to form new and useful molecules. Both involve understanding the concepts underlying how atoms interact.

- [4.1: 3D and 2D Representations](#)
- [4.2: Single Bonds and Molecular Shape](#)
- [4.3: Double and Triple Bonds](#)
- [4.4: Bonding in Nitrogen, Oxygen, and Fluorine](#)
- [4.5: Molecular Shapes, Polarity, and Molecular Interactions](#)
- [4.6: Ionic Bonding](#)
- [4.7: In-Text References](#)

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