

Chapter 4 - Carbon and Molecular Diversity

The Importance of Carbon

1. Explain how carbon's electron configuration accounts for its ability to form large, complex, and diverse organic molecules.
2. Describe how carbon skeletons may vary, and explain how this variation contributes to the diversity and complexity of organic molecules.
3. Describe the basic structure of a hydrocarbon and explain why these molecules are hydrophobic.
4. Distinguish among the three types of isomers: structural, geometric, and enantiomer.

Functional Groups

5. Name the major functional groups found in organic molecules. Describe the basic structure of each functional group and outline the chemical properties of the organic molecules in which they occur.