

CHAPTER OVERVIEW

6: The Wonderful World of Carbon - Organic Chemistry and Biochemicals

“The first few of what are now known to be organic chemicals to be discovered were produced by living organisms and were therefore called ‘organic.’ One such compound is urea, which occurs in urine. In 1828 Friedrich Wöhler disproved the idea that all organic compounds must come from living organisms when he accidentally discovered that urea could be made by the reaction of cyanic acid (HOCN) and ammonia, both simple organic compounds. This discovery established the science of organic chemistry based upon the unique bonding capabilities of the carbon atom leading to the synthesis and discovery of tens of millions of unique organic compounds. In 2009 the American Chemical Society Chemical Abstract Service registered the 60 millionth compound (most of which are organic compounds) only 9 months after the registration of the 40 millionth, apace of discovery of more than one new compound per minute.”

[6.1: Rings and Chains of Carbon Atoms](#)

[6.2: Compounds of Carbon and Hydrogen - Hydrocarbons](#)

[6.3: Using Lines To Show Organic Structural Formulas](#)

[6.4: Functional Groups](#)

[6.5: Giant Molecules from Small Organic Molecules](#)

[Questions and Problems](#)

[Supplementary References](#)

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