

CHAPTER OVERVIEW

3: Conformations and Stereochemistry

Stereochemistry is the study of how bonds are oriented in three-dimensional space. It is difficult to overstate the importance of stereochemistry in nature, and in the fields of biology and medicine in particular. As Pasteur so convincingly demonstrated, life itself is chiral: living things recognize different stereoisomers of organic compounds and process them accordingly.

- [3.1: Prelude to Conformations and Stereochemistry](#)
- [3.2: Conformations of open-chain organic molecules](#)
- [3.3: Conformations of cyclic organic molecules](#)
- [3.4: Chirality and stereoisomers](#)
- [3.5: Naming chiral centers- the R and S system](#)
- [3.6: Optical Activity](#)
- [3.7: Compounds with multiple chiral centers](#)
- [3.8: Meso Compounds](#)
- [3.9: Fischer and Haworth projections](#)
- [3.P: Problems for Chapter 3](#)
- [3.10: Stereochemistry of alkenes](#)
- [3.11: Stereochemistry in biology and medicine](#)
- [3.12: Prochirality](#)
- [3.13: Solutions to Chapter 3 exercises](#)

This page titled [3: Conformations and Stereochemistry](#) is shared under a [CC BY-NC-SA 4.0](#) license and was authored, remixed, and/or curated by [Tim Soderberg](#) via [source content](#) that was edited to the style and standards of the LibreTexts platform.