

## CHAPTER OVERVIEW

### 9: ALKYNES - AN INTRODUCTION TO ORGANIC SYNTHESIS

#### LEARNING OBJECTIVES

After you have completed Chapter 9, you should be able to

1. fulfill all of the detailed objectives listed under each individual section.
2. solve road-map problems involving any of the reactions introduced to this point.
3. design multistep syntheses using any of the reactions introduced to this point, and determine the viability of a given synthesis.
4. define, and use in context, the key terms introduced.

Addition reactions not only dominate the chemistry of alkenes, they are also the major class of reaction you will encounter. This chapter discusses an important difference between (terminal) alkynes and alkenes, that is, the acidity of the former; it also addresses the problem of devising organic syntheses. Once you have completed this chapter you will have increased the number of organic reactions in your repertoire, and should be able to design much more elaborate multistep syntheses. As you work through Chapter 9, you should notice the many similarities among the reactions described here and those in Chapters 7 and 8.

[9.0: Chapter Objectives](#)

[9.1: Naming Alkynes](#)

[9.2: Preparation of Alkynes - Elimination Reactions of Dihalides](#)

[9.3: Reactions of Alkynes - Addition of HX and X<sub>2</sub>](#)

[9.4: Hydration of Alkynes](#)

[9.5: Reduction of Alkynes](#)

[9.6: Oxidative Cleavage of Alkynes](#)

[9.7: Alkyne Acidity - Formation of Acetylide Anions](#)

[9.8: Alkylation of Acetylide Anions](#)

[9.9: An Introduction to Organic Synthesis](#)

[9.S: Alkynes - An Introduction to Organic Synthesis \(Summary\)](#)

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