CHAPTER OVERVIEW

11: Synthesis of O-Thiocarbonyl Compounds

The first step in conducting most radical reactions is the preparation of a radical precursor. For many of such compounds (e.g., halides, esters, and acetals) this preparation needs little, if any, discussion, as the reactions involved are among the most common in organic chemistry. *O*-Thiocarbonyl compounds [xanthates, (thiocarbonyl)imidazolides, aryl thionocarbonates, cyclic thionocarbonates, and thionoesters] are different because their preparation is less common, and the potential difficulties in their formation less well known. Because these compounds are rich sources of carbon-centered radicals and because being able to prepare them efficiently is vital to their use, understanding the synthesis of *O*-thiocarbonyl compounds is integral to using them in radical formation. This chapter, targeted at the synthesis of these compounds, is a companion to the one that follows, where radical reactions of *O*-thiocarbonyl compounds are discussed.

Topic hierarchy