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Mechanisms of Halocarbene Additions to Cyclooctyne

The additions of dichlorocarbene (**2a**) and phenylhalocarbenes (**2b**, **2c**) to cyclooctyne **1** were investigated. A single product was observed for addition of **2a** to **1** and has been analyzed by NMR. Although the identity of this product has not yet been confirmed, it has been found that its structure is not **5**. Two isomeric products were formed from the addition of **2b** and **2c** to **1**. The confirmation of product structures will help to elucidate the most likely mechanisms for these additions.

