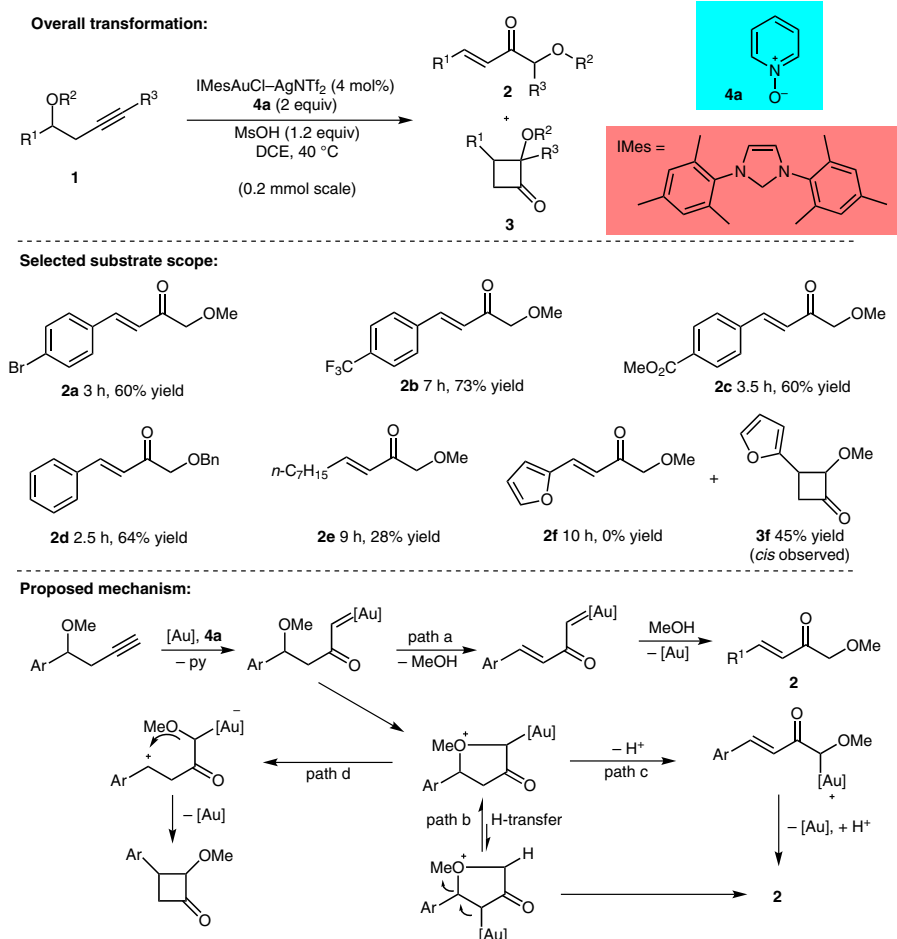


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Gold-Catalyzed Oxidative Rearrangement of Homopropargylic Ether via Oxonium Ylide  
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## Homopropargylic Ether Rearrangement via Gold Catalysis



**Significance:** Gold catalysis has emerged as a powerful platform to conduct complex organic transformations. Specifically, the implementation of gold carbenoids has shown great promise in synthetic planning. These useful intermediates offer a convenient alternative to generate metal carbenes which are traditionally obtained from diazo compounds. The authors utilize these intermediates to synthesize  $\alpha,\beta$ -unsaturated carbonyl compounds from homopropargylic ethers.

**Comment:** The authors report a silver-assisted gold(I)-catalyzed carbonyl synthesis. In an effort to obtain cyclobutanes **3** via a [1,2]-shift mechanism (path d), the authors unexpectedly obtained the corresponding  $\alpha,\beta$ -unsaturated carbonyl compounds **2**. Control experiments show that neither IMesAuCl, nor AgNTf<sub>2</sub> or HNTf<sub>2</sub> alone could catalyze the reaction. The scope of the reported reaction is quite broad; however, yields are generally moderate to good. In some instances cyclobutanones are obtained as the major product.

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