

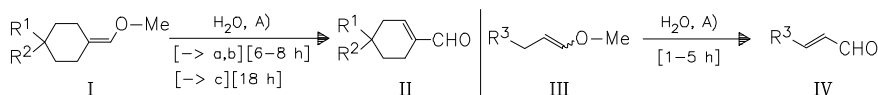
Oxidation

O 0212

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
19- 031

**Palladium-Catalyzed Reactions of Enol Ethers: Access to Enals, Furans, and Dihydrofurans.** — The present oxidation reaction of alkyl enol ethers to enals employs low loadings of the palladium catalyst. Due to mild oxidation conditions a diverse array of functional groups is tolerated to form of di-, tri-, and tetrasubstituted olefins. This new method is also applied to provide furan derivatives from alkyl enol ethers containing pendant alcohols. Without treatment with aqueous HCl dihydrofuran products are obtained as diastereomeric mixtures. — (LAUER, M. G.; HENDERSON, W. H.; AWAD, A.; STAMBULI\*, J. P.; *Org. Lett.* 14 (2012) 23, 6000-6003, <http://dx.doi.org/10.1021/ol3028994>; Dep. Chem., Ohio State Univ., Columbus, OH 43210, USA; Eng.) — S. Adam



a R<sup>1</sup>: -Ph; R<sup>2</sup>: -H 80%

b R<sup>1</sup>: -tBu; R<sup>2</sup>: -H 90%


c R<sup>1</sup>-R<sup>2</sup>:  76%


A): benzoquinone, Pd(OAc)<sub>2</sub> (cat.), CH<sub>2</sub>Cl<sub>2</sub>, AcOH, 23°C


a R<sup>3</sup>: -(CH<sub>2</sub>)<sub>9</sub>-Me (E:Z=1.6:1) 65%

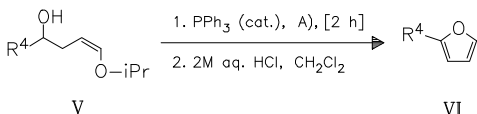
b R<sup>3</sup>: -(CH<sub>2</sub>)<sub>3</sub>-O-Tbs (E:Z=1.7:1) 57%

c R<sup>3</sup>: -(CH<sub>2</sub>)<sub>3</sub>-O-Ac (E:Z=2:1) 79%

d R<sup>3</sup>:  (E:Z=2:1) 67%

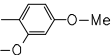
e R<sup>3</sup>:  (E:Z=2.6:1) 72%

f R<sup>3</sup>:  (E:Z=1.2:1) 44%



a R<sup>4</sup>: -(CH<sub>2</sub>)<sub>2</sub>-Ph 82%

b R<sup>4</sup>: -Ph 75%

c R<sup>4</sup>:  89%

d R<sup>4</sup>:  72%

e R<sup>4</sup>: -(CH<sub>2</sub>)<sub>4</sub>-O-Tbs 78%

