

- 1) acyl chloride, Et<sub>3</sub>N, CH<sub>2</sub>Cl<sub>2</sub>
  - 2) BiCl<sub>3</sub>, MeCN, H<sub>2</sub>O
  - 3) NaIO<sub>4</sub>, CH<sub>2</sub>Cl<sub>2</sub>
- 
- 4) DABCO, CH<sub>2</sub>Cl<sub>2</sub>, rt, 10h  
(88%, for 3 steps)

C<sub>11</sub>H<sub>14</sub>O<sub>6</sub>

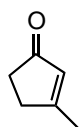
<sup>1</sup>H NMR (CDCl<sub>3</sub>, 500 MHz)

6.58 (s, 1H), 5.91 (br s, 2H), 5.0 (d, 1H, J = 2.7 Hz), 4.76 (d, 1H, J = 3.8 Hz),  
4.74 (d, 1H, J = 3.8 Hz), 4.50 (t, 1H, J = 3.8 Hz), 1.52 (s, 3H), 1.37 (s, 3H)

<sup>13</sup>C NMR (CDCl<sub>3</sub>, 75 MHz)

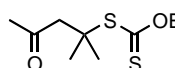
162.4, 133.9, 133.4, 112.8, 105.2, 83.4, 81.5, 75.5, 68.0, 26.7, 26.2

Krishna, P. K.; Kannan, V.; Sharma, G. V. M. *J. Org. Chem.* **2004**, *69*, 6467



1. DIBAL-H, THF, 0 °C (94%)
2. butyl vinyl ether, Hg(OAc)<sub>2</sub>, Δ, 18 hr
3. sealed tube, 190 °C, 30 min
4. vinylmagnesium bromide, THF, 0 °C  
(30%, over 4 steps)

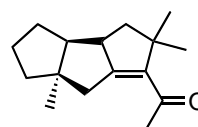
5. PCC, CH<sub>2</sub>Cl<sub>2</sub>, rt, 3 hr (56%)

6.  lauroyl peroxide

1,2-dichloroethane, Δ, 6hr (90%)

7. *n*-Bu<sub>3</sub>SnH, AIBN, toluene, Δ, 2 hr (75%)

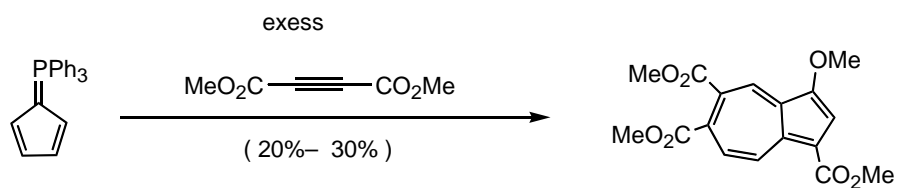
8. TsOH, THF-H<sub>2</sub>O, Δ, 18 hr (42%, 76% brsm)



Briggs, M. E.; Qacemi, M. L.; Kalaï, Zard, S. M.  
*Tetrahedron Lett.* **2004**, *45*, 6017

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D.G.Gilheany, et al., *Chem. Com.*, **2004**, 684.