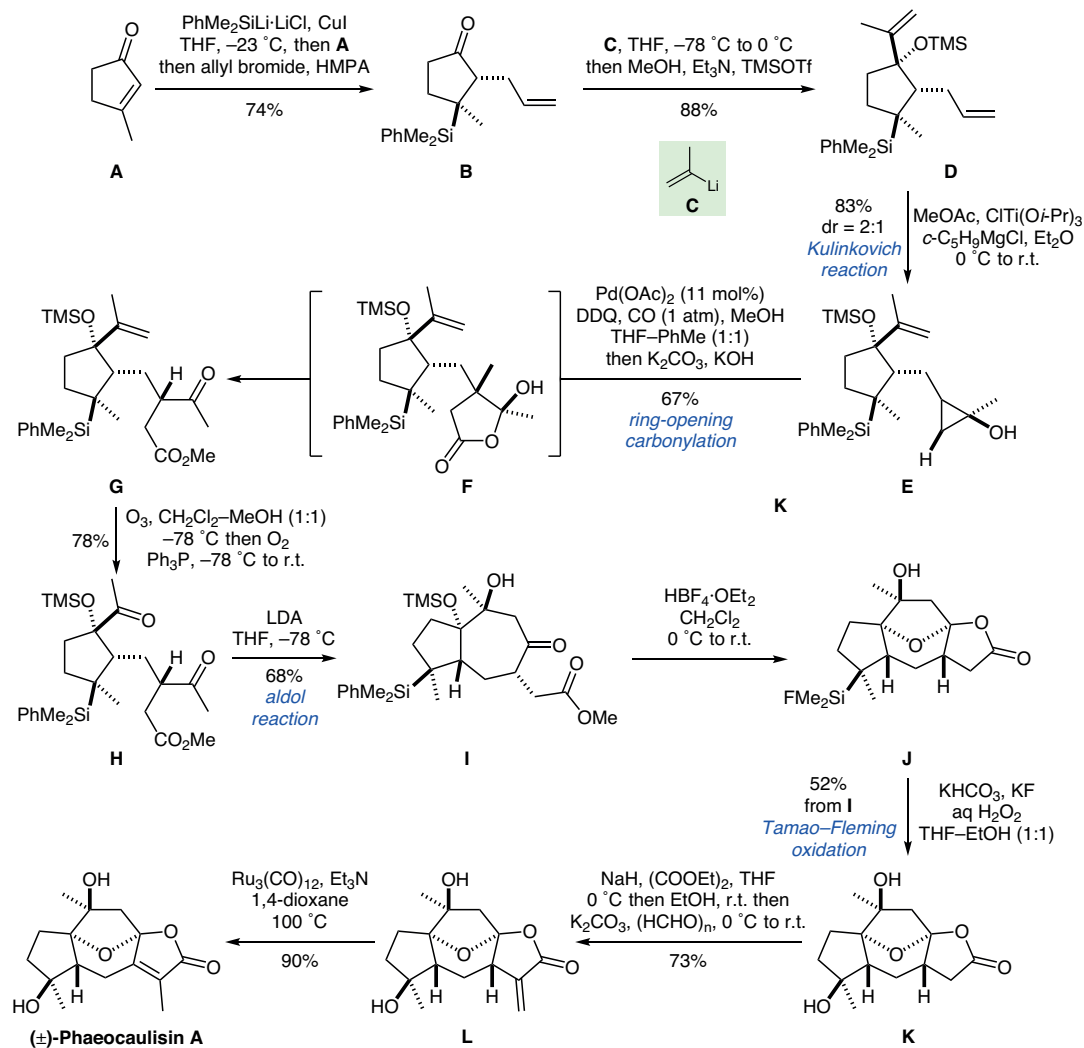


## Total Synthesis of (±)-Phaeocaulisin A



**Significance:** Dai and co-workers report the total synthesis of (±)-phaeocaulisin A. The catalytic cyclopropanol ring-opening carbonylation protocol was investigated and displayed as a general method to access various  $\gamma$ -keto esters. Choice of base was crucial for desired chemoselective aldol cyclization to later construct the oxaspirolactone of the tetracyclic skeleton of the natural product.

**Comment:** Retrosynthetically devised in a concise manner, sequential Kulinkovich cyclopropanation and palladium-catalyzed cyclopropanol ring-opening carbonylation from diene **D** gave keto ester **G**. Subsequent ozonolysis yielded dione **H** followed by aldol cyclization to access cycloheptanone **I**. Ketallization, lactonization and oxidation yielded tetracycle **K**. Installation of the  $\alpha$ -methylene group followed by alkene migration finally gave (±)-phaeocaulisin A.