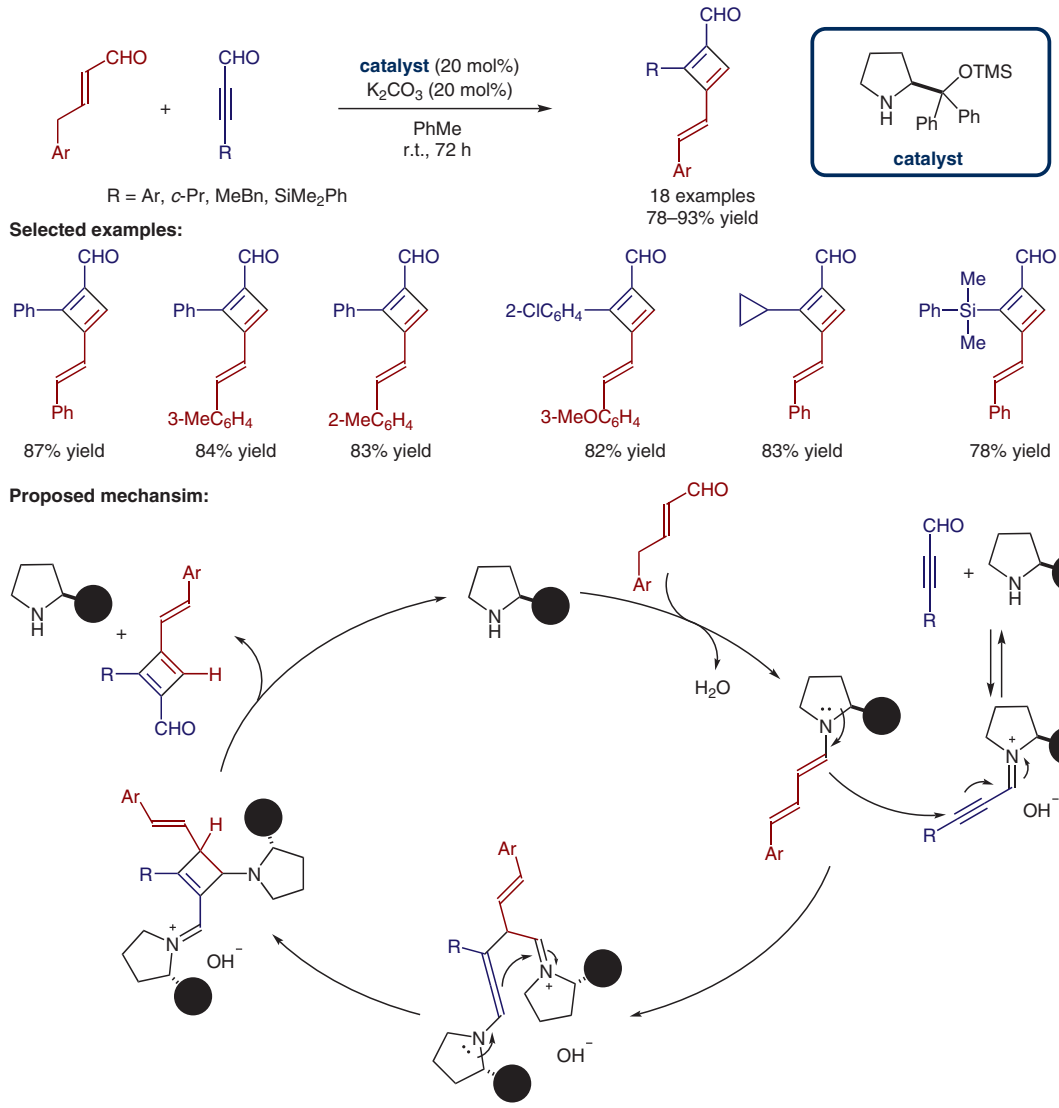
W. LI, M. LANG, J. WANG* (TSINGHUA UNIVERSITY, BEIJING, P. R. OF CHINA)
Access to Cyclobutadienes via an Organocatalytic Dienamine–Iminium–Allenamine Cascade Approach
Org. Lett. **2017**, *19*, 4564–4567.

Cyclobutadienes via an Organocascade



Significance: The Wang group reports an organocatalytic [2+2] cycloaddition between α,β-unsaturated aldehydes and ynals. This reaction is catalyzed by secondary amines and generates cyclobutadienes in high yields under mild conditions.

Comment: The authors suggest that the reaction follows a dienamine–iminium–allenamine cascade sequence furnishing cyclobutadienes as products. Typically high temperatures are required for the synthesis of cyclobutadienes. This method requires only room temperature, hence overcoming a limitation of previous methods.

SYNFACTS Contributors: Benjamin List, Oleg Grossmann
Synfacts 2017, 13(11), 1199 Published online: 19.10.2017
DOI: 10.1055/s-0036-1591365; **Reg-No.:** B08617SF

Category
Organo- and Biocatalysis

Key words
cyclobutadienes
ynals
α,β-unsaturated aldehydes
[2+2] cycloaddition