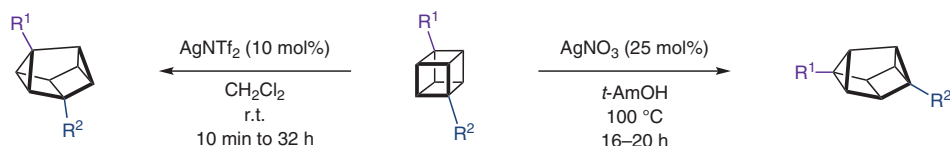


E. SMITH, K. D. JONES, L. O'BRIEN, S. P. ARGENT, C. SALOME, Q. LEFEBVRE, A. VALERY, M. BÖCÜ, G. N. NEWTON, H. W. LAM* (UNIVERSITY OF NOTTINGHAM, UK)

Silver(I)-Catalyzed Synthesis of Cuneanes from Cubanes and their Investigation as Isosteres

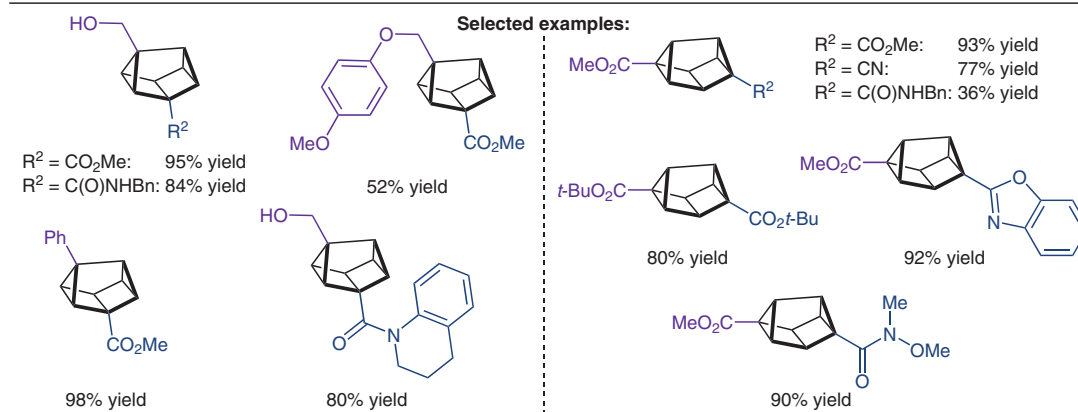
J. Am. Chem. Soc. **2023**, *145*, 16365–16373, DOI: 10.1021/jacs.3c03207.

Silver(I)-Catalyzed Rearrangement of 1,4-Disubstituted Cubanes to 1,3- or 2,6-Disubstituted Cuneanes

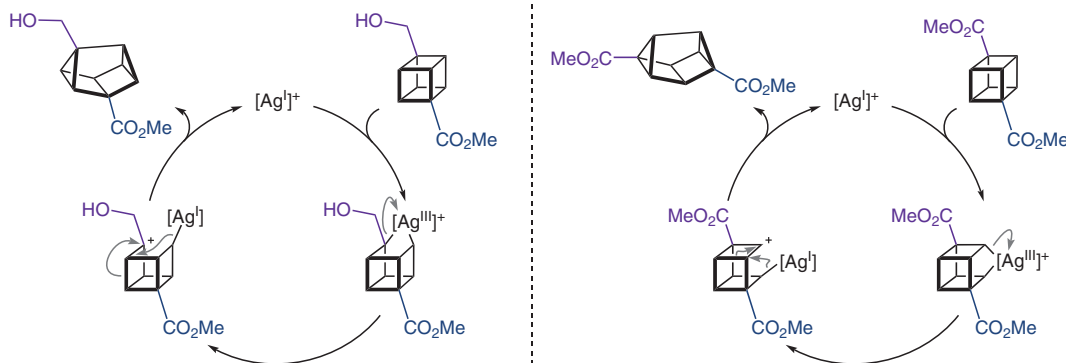


1,3-disubstituted cuneanes

2,6-disubstituted cuneanes



Proposed mechanisms:



Significance: Lam and co-workers disclosed a silver(I)-catalyzed rearrangement of 1,4-disubstituted cubanes to 1,3- or 2,6-disubstituted cuneanes. The regioselectivity is strongly dependent on the electronic character of the substituents.

Comment: To explore those strained hydrocarbons as isosteres of 1,3-disubstituted benzenes, an analogue of the anticancer drug sonidegib was prepared by replacing the 1,2,3-trisubstituted benzene with a 1,3-disubstituted cuneane.

SYNFACTS Contributors: Martin Oestreich, Hendrik F. T. Klare, Phillip Pommerening

Synfacts 2023, 19(10), 0987 Published online: 14.09.2023

DOI: 10.1055/s-0042-1752206; Reg-No.: M12623SF

© 2023, Thieme. All rights reserved.
Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

Category

Metals in Synthesis

Key words

cubanes

cuneanes

rearrangement

silver catalysis

Synfact
of the
Month