J. A. M. MERCER, C. M. COHEN, S. R. SHUKEN, A. M. WAGNER, M. W. SMITH, F. R. MOSS, III, M. D. SMITH, R. VAHALA, A. GONZALEZ-MARTINEZ,* S. G. BOXER,* N. Z. BURNS*
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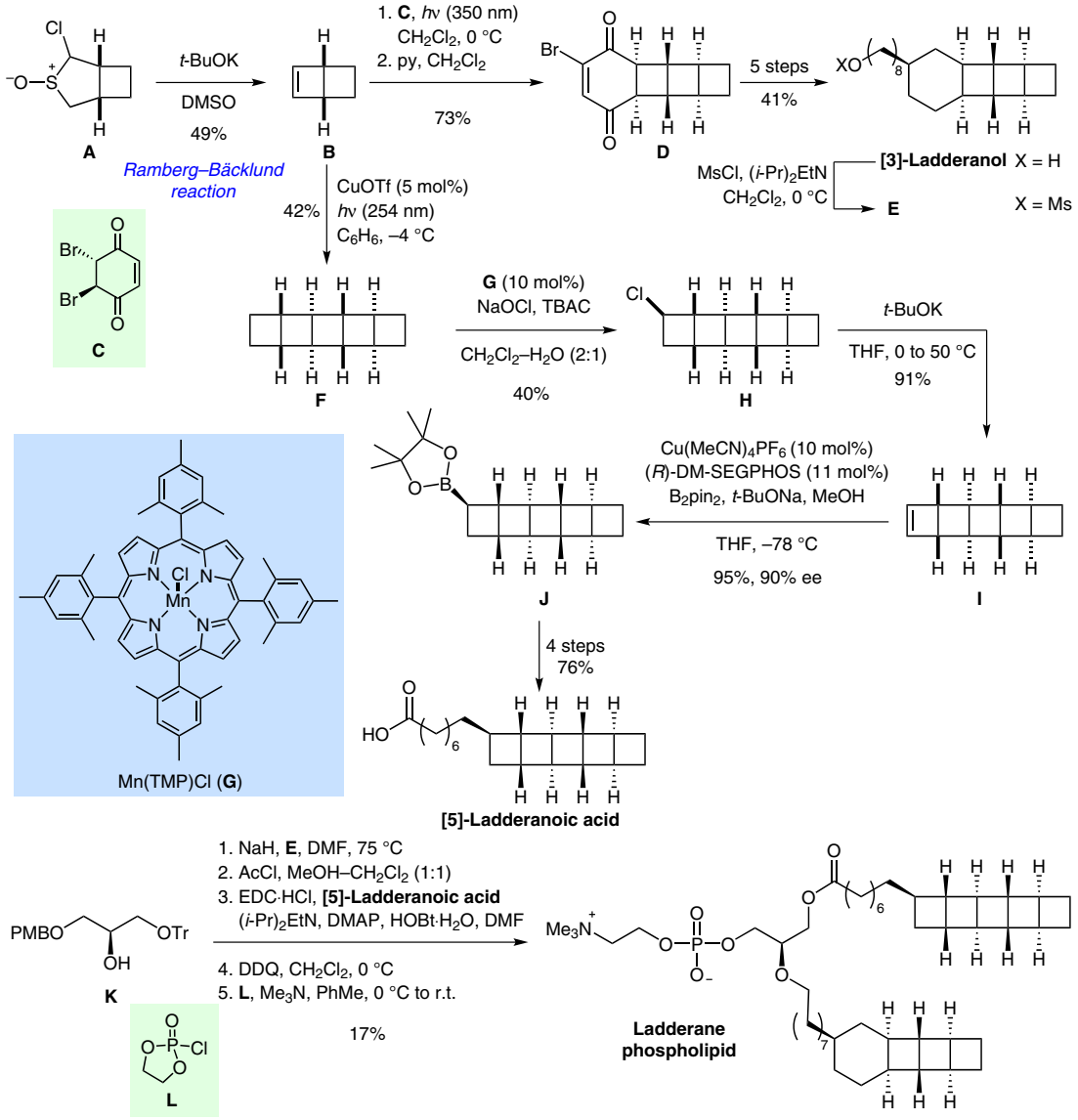
Chemical Synthesis and Self-Assembly of a Ladderane Phospholipid
J. Am. Chem. Soc. **2016**, *138*, 15845–15848.

Total Synthesis of a Ladderane Phospholipid



Significance: Gonzalez-Martinez, Boxer, Burns and co-workers report an impressive total synthesis of a ladderane phospholipid based on strategic [2+2] cycloadditions of bicyclohexene **B**, which is obtained by means of a Ramberg–Bäcklund ring contraction of sulfoxide **A**.

Comment: Bicyclohexene **B** irradiated in the presence of CuOTf gave pentacycle **F**, which was subjected to an oxidative chlorination–elimination sequence to give cyclobutene **I**. Enantioselective hydroboration and four further steps yielded [5]-ladderanoic acid.

SYNFACTS Contributors: Erick M. Carreira, Leonardo J. Nannini
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