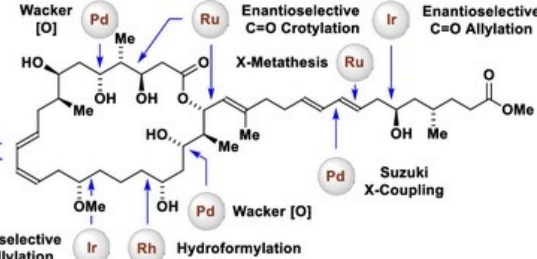


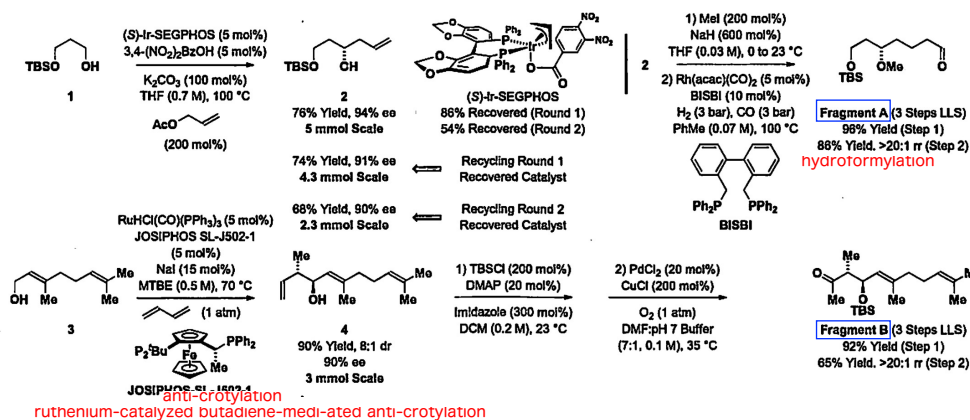
Total Synthesis of iso-Gladiolin Methyl Ester (Lagriene Methyl Ester) via Catalytic Asymmetric C-C Coupling of Alcohols
 Katherine L. Verboom, Yoon Cho, James A. Duncan, Yu Zhang, Lona M. Alkhalaf, Gregory L. Challis,* and Michael J. Krische*

bypassing the atavistic use of covalently bound chiral auxiliaries characteristic of classical

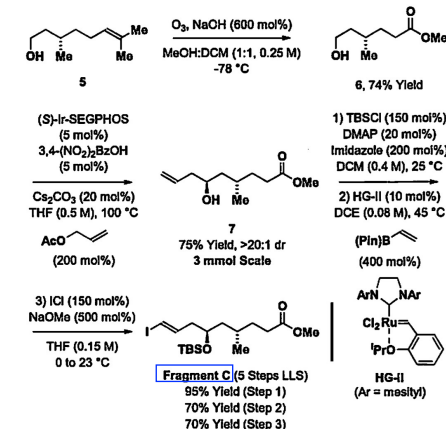
iso-Gladiolin Me-Ester (Lagriene Me-Ester)
 First Total Synthesis
 17 Stereocenters
 16 Steps (LLS)



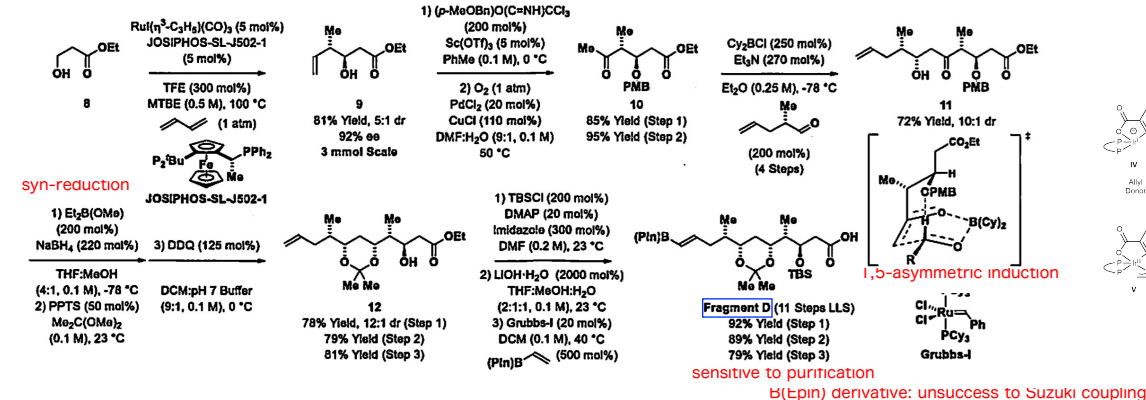
Scheme 1. Synthesis of Fragments A and B via Enantioselective Allylation and Crotylation of Alcohol Proelectrophiles 1 and 3^a



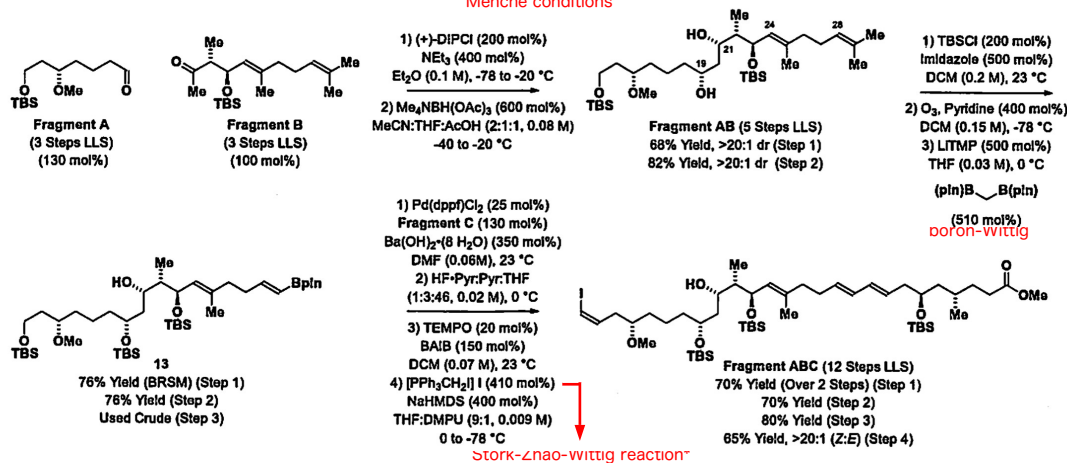
Scheme 2. Synthesis of Fragment C via Asymmetric Allylation of (-)-Citronellol-Derived Alcohol 6^a



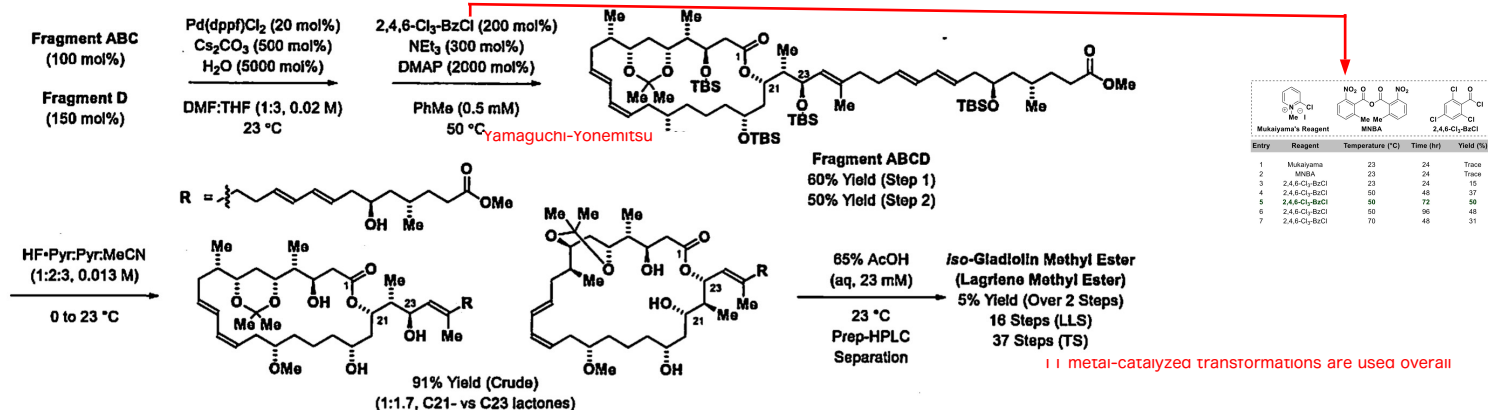
Scheme 3. Synthesis of Fragment D via Enantioselective Crotylation of Alcohol 8 and Boron-Mediated Aldol Addition^a



Scheme 4. Sequential Union of Fragments A, B, and C^a



Scheme 5. Total Synthesis of iso-Gladiolin Methyl Ester (Lagriene Methyl Ester)^a



11 metal-catalyzed transformations are used overall