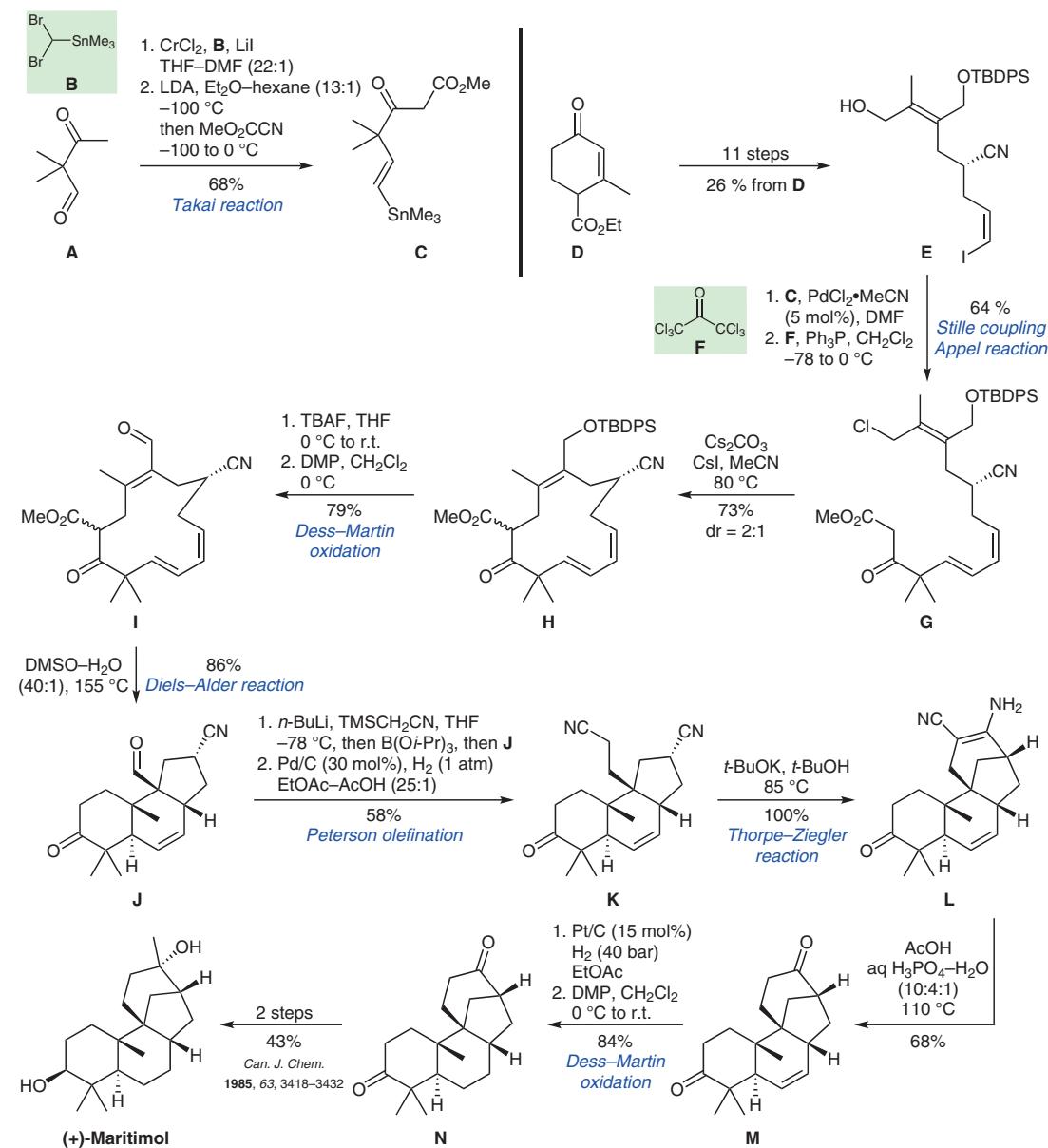


Total Synthesis of (+)-Maritimol



Significance: In 2000, Deslongchamp and co-workers reported the first asymmetric total synthesis of the diterpenoid (+)-maritimol. Key to their approach is a transannular Diels–Alder (TADA) reaction.

Comment: Stille coupling of vinyl iodide E and stannane C, followed by Appel reaction gave access to acyclic tetraene G. Base-mediated macrocyclization, deprotection and oxidation furnished aldehyde I, which undergoes the desired TADA reaction and decarboxylation upon heating.

Category
Synthesis of Natural Products
Key words
(+)-maritimol
diterpenoid
Takai reaction
Stille coupling
Appel reaction
Dess–Martin oxidation
Diels–Alder reaction
Peterson olefination
Thorpe–Ziegler reaction