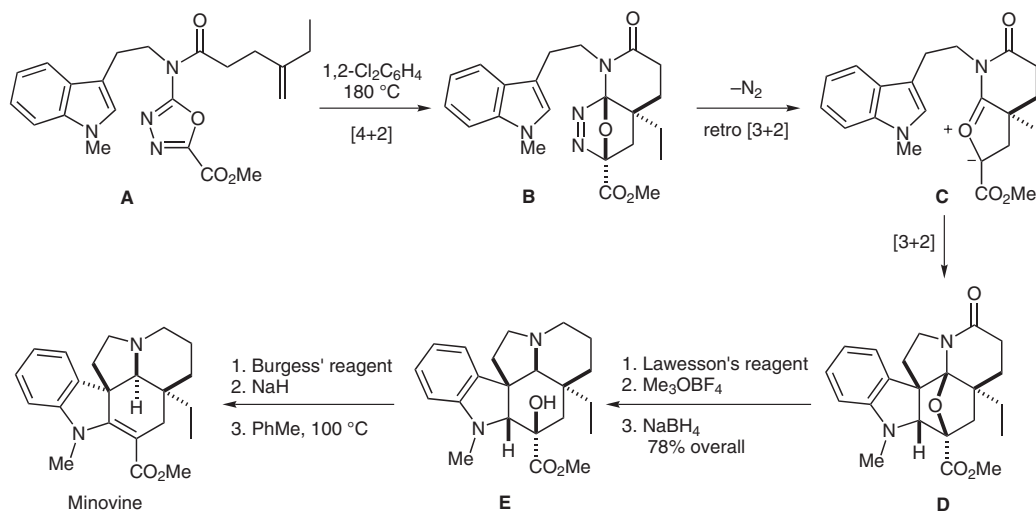


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Total Synthesis of Natural (-)- and *ent*-(+)-Desacetoxy-6,7-dihydrovindorosine and Natural and *ent*-Minovine:
Oxadiazole Tandem Intramolecular Diels-Alder/1,3-Dipolar Cycloaddition Reaction
Org. Lett. **2005**, *7*, 741-744.

Total Synthesis of (-)-Minovine



Significance: Three rings in the target molecule together with five stereogenic centers were created in a single operation by heating the 1,3,4-oxadiazole **A** in 1,2-dichlorobenzene. Three tandem pericyclic processes were involved: a Diels-Alder reaction to form **B**, a retro [3+2] reaction to form dipole **C**, and a dipolar cycloaddition to form **D** in 74% yield.

Comment: Natural Minovine was reported to have an $[\alpha]_D = 0$. Minovine prepared from enantiopure (+)-**D** (chromatographic resolution) displayed remarkable solvent-dependent but concentration-independent optical rotations accounting for the observed rotation. These studies established that natural Minovine is a single enantiomer which does not racemize on heating.