Concise Four-Step Total Synthesis of (±)-Carpanone

Significance: Isolated from the bark of the carpano tree, (±)-carpanone possesses significant structural complexity in the form of five contiguous stereocenters and six rings. Inspired by the proposed biosynthesis (G. C. Brophy et al. *Tetrahedron Lett.* 1969, 10, 5159), Chapman et al. established that the target can be formed in a single step by oxidation of the simple and achiral precursor D.

Comment: Known 6-allylsesamol (C), accessible from sesamol in two steps, was transformed into phenol D by double bond migration under basic conditions. Treatment with PdCl₂ effected oxidative phenolic coupling, followed by an intramolecular inverse-electron-demand hetero-Diels–Alder reaction to set all five contiguous stereocenters and furnish the target structure.