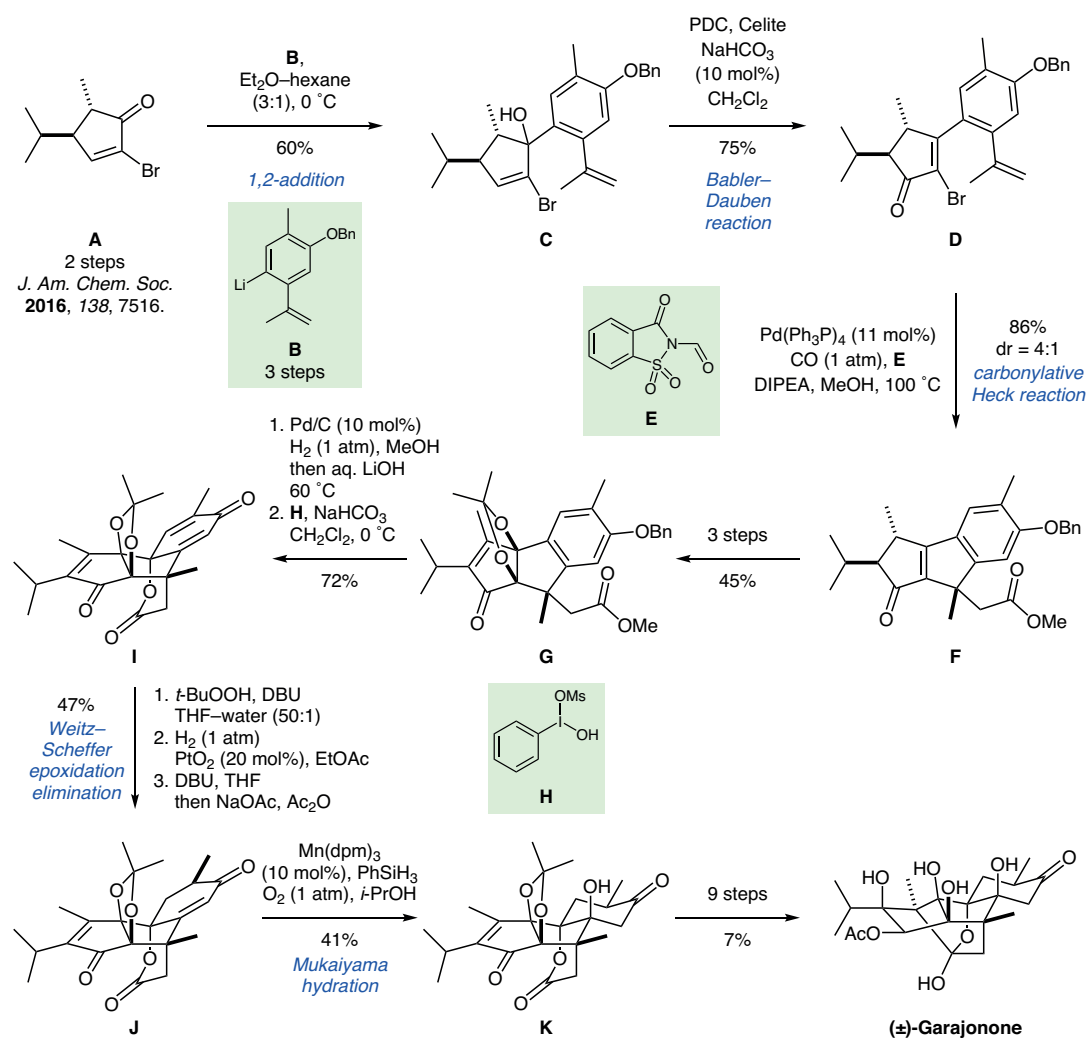


# Total Synthesis of (+)-Garajonone



**Significance:** Zhao and co-workers report the synthesis of the ryanodane diterpenoid (+)-garajonone as well as its non-natural epimer 3-*epi*-garajonone. Key to the synthesis is a 1,2-addition and carbonylative Heck reaction to construct the carbocycle of the natural product. From a common intermediate, both (+)-garajonone and 3-*epi*-garajonone were accessed.

**Comment:** Allylic alcohol **C** was obtained through 1,2-addition of metalated arene **B** to enone **A**. Subsequent Babler–Dauben reaction gave rise to vinyl bromide **D**, which underwent a Pd-catalyzed carbonylative Heck reaction furnishing ester **F**. Upon debenzoylation, ester hydrolysis, and phenol oxidation, dienone **I** was obtained. Weitz–Scheffer epoxidation of **I** was used to mask the bridging olefin and enable regioselective hydrogenation with concomitant epoxide opening. The obtained alcohol was inverted through elimination and Mukaiyama hydration furnishing tertiary alcohol **K**.