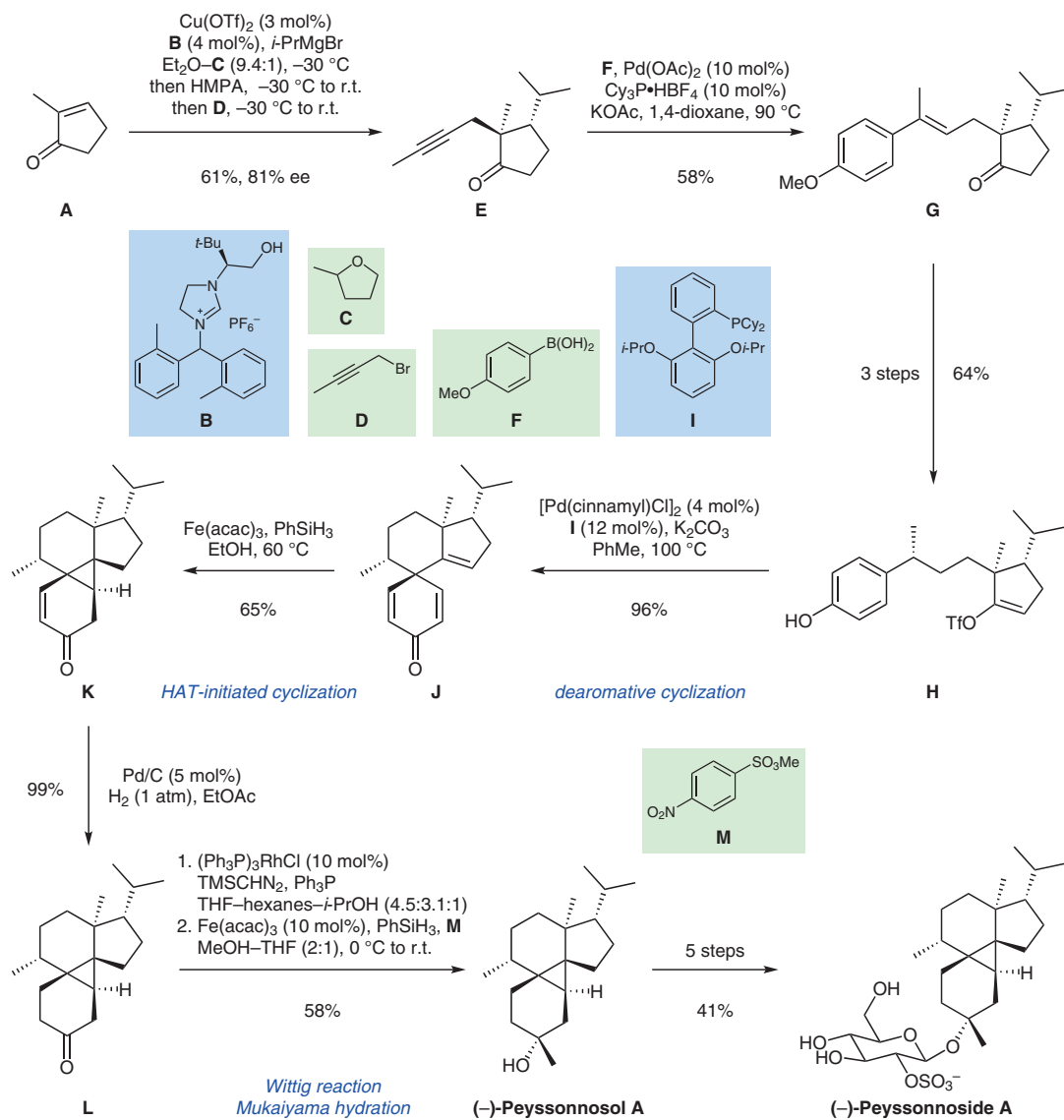


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Catalysis-Enabled 13-Step Total Synthesis of (-)-Peyssonoside A

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Total Synthesis of (-)-Peyssonoside A



Significance: Dai and co-workers present a concise synthesis of (-)-peyssonoside A, a sulfated diterpene glycoside which was isolated in 2019 from the red alga *Peyssonnelia* sp. (-)-Peyssonoside A stands out through its sterically encumbered, pentasubstituted cyclopropane ring which represents a key synthetic challenge.

Comment: Enantioselective conjugate addition to enone **A** and subsequent enolate trapping with propargyl bromide **D** furnished ketone **E**. Palladium-catalyzed hydroarylation and functional group interconversion to phenol **H** set the stage for dearomative cyclization to dienone **J**. HAT-initiated cyclization secured the encumbered cyclopropane **K** and paved the way to (-)-peyssonoside A.

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Category

Synthesis of Natural Products

Key words

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dearomative cyclization

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Wittig reaction

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