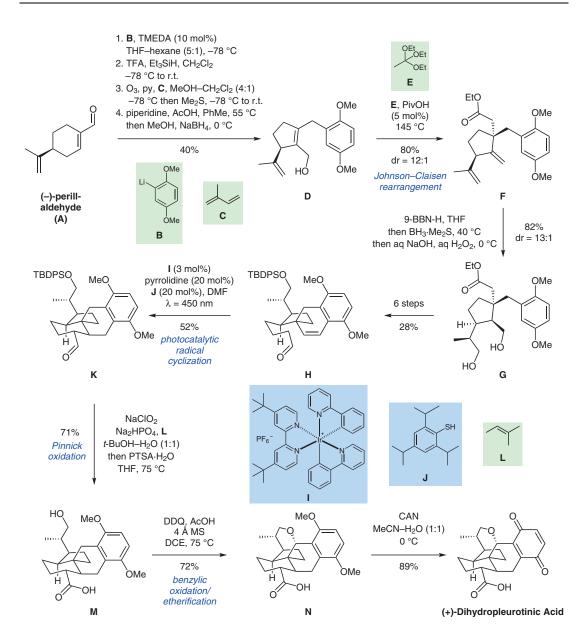
Y. GAO, Q. XIA, A. ZHU, W. MAO, Y. MO, H. DING*, J. XUAN* (ZHEJIANG UNIVERSITY, HANGZHOU, P. R. OF CHINA)

A Unified Synthetic Approach to the Pleurotin Natural Products

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Total Synthesis of (+)-Dihydropleurotinic Acid



Significance: Ding, Xuan, and co-workers present the total synthesis of four pleurotin natural products. The natural products featuring a 5/6/6/6-tetracyclic carbon skeleton were assembled through Johnson-Claisen rearrangement, photocatalytic radical cyclization and benzylic oxidation/etherification.

Comment: The allylic alcohol D was converted into the ester **F** by Johnson–Claisen rearrangement. Subsequent hydroboration and elaboration gave rise to aldehyde H, which underwent radical cyclization under blue light irradiation in the presence of Ir-photoctalyst I, thiol I and pyrrolidine to afford al-

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Category

Synthesis of Natural

Key words

(+)-dihydropleurotinic acid

pleurotin natural products

Johnson-Claisen rearrangement

photocatalytic radical cyclization

Pinnick oxidation

benzylic oxidation/ etherification



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