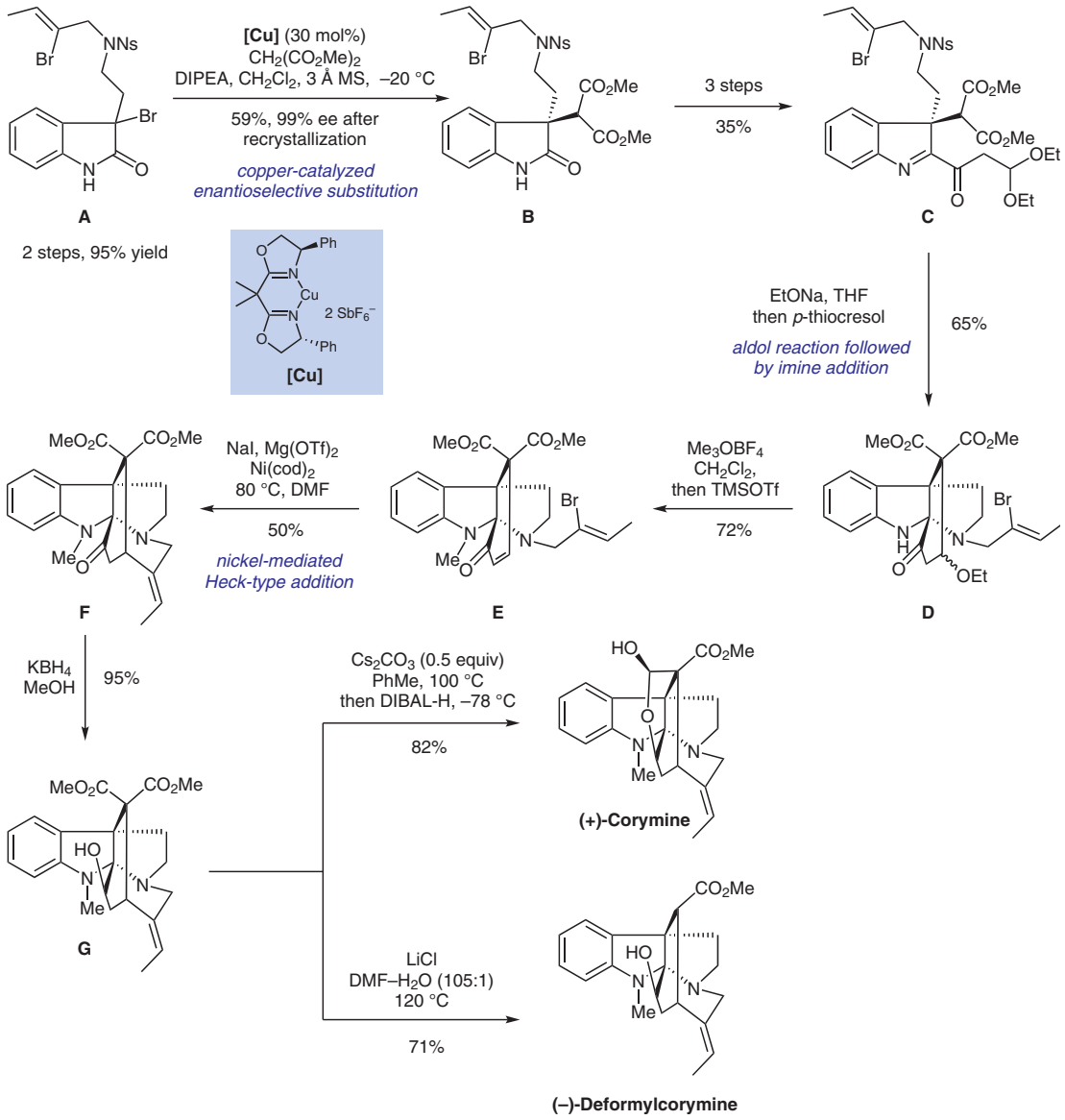
B. ZHANG, X. WANG, C. LI* (SHANGHAI INSTITUTE OF ORGANIC CHEMISTRY, P. R. OF CHINA)

Enantioselective Total Synthesis of (+)-Corymine and (–)-Deformylcorymine
*J. Am. Chem. Soc.* **2020**, *142*, 3269–3274.

# Total Synthesis of (+)-Corymine and (–)-Deformylcorymine




**Significance:** The authors report the first total synthesis of the two natural products (+)-corymine and (−)-deformylcorymine. These structurally complex alkaloids pose an interesting synthetic challenge due to their intriguing caged molecular structure.

**Comment:** Copper-catalyzed enantioselective substitution allows the preparation of malonate **B**. A sequence of four steps yields ketone **D**. Nickel-mediated Heck-type reaction gives access to **F**, which is subsequently transformed into the advanced intermediate **G**. This caged product can then be converted into (+)-corymine or (–)-deformylcorymine.

**SYNFACTS Contributors:** Erick M. Carreira, Felix Pultar
Synfacts 2020, 16(04), 0373 Published online: 18.03.2020
**DOI:** 10.1055/s-0039-1690083; **Reg-No.:** C01120SF



**Category**
Synthesis of Natural Products and Potential Drugs

**Key words**
(+)-corymine
(–)-deformyl-corymine
copper catalysis
nickel
Heck reaction

Synfact of the Month