Synthesis of Strychnine

**Significance:** Strychnine is a highly toxic alkaloid isolated from seeds of the *Strychnos nux vomica* tree. It was first synthesized by Woodward and co-workers in 1954, and has since proved a popular target within the synthetic community. This approach is highly efficient and only requires six steps in the longest linear sequence.

**Comment:** The conversion of Zincke aldehyde \( C \) into tetracycle \( D \) via base-mediated cyclization proceeded efficiently and in good yield (D. B. Martin, C. Vanderwal *J. Am. Chem. Soc.* 2009, 131, 3472). Alkylation of bromide \( G \) (three steps from 1,4-butynediol) with amine \( F \) provided alcohol \( H \). This underwent a 1,4-Brook rearrangement **in situ**, which upon treatment with a copper(I) source provided the core of strychnine. Unfortunately, after extensive optimization, the yield remained low and the major byproduct was due to protodesilylation.