Synthesis of (–)-Epicoccin G and (–)-Rostratin A

Significance: (–)-Epicoccin G and (–)-rostratin A are members of the dithiodiketopiperazine family of natural products, whose members exhibit several biological activities, including in vitro anti-HIV-1 activity. The reported synthesis uses a C(sp³)–H activation to construct a common intermediate utilized in the synthesis of both natural products.

Comment: Asymmetric nucleophilic epoxidation of A followed by vinyl triflate formation afforded intermediate C. C(sp³)–H activation of F led to G, which was subsequently transformed into H, a common precursor for (–)-epicoccin G and (–)-rostratin A. Further insights can also be found in this issue: Synfacts 2019, 15, 1423.