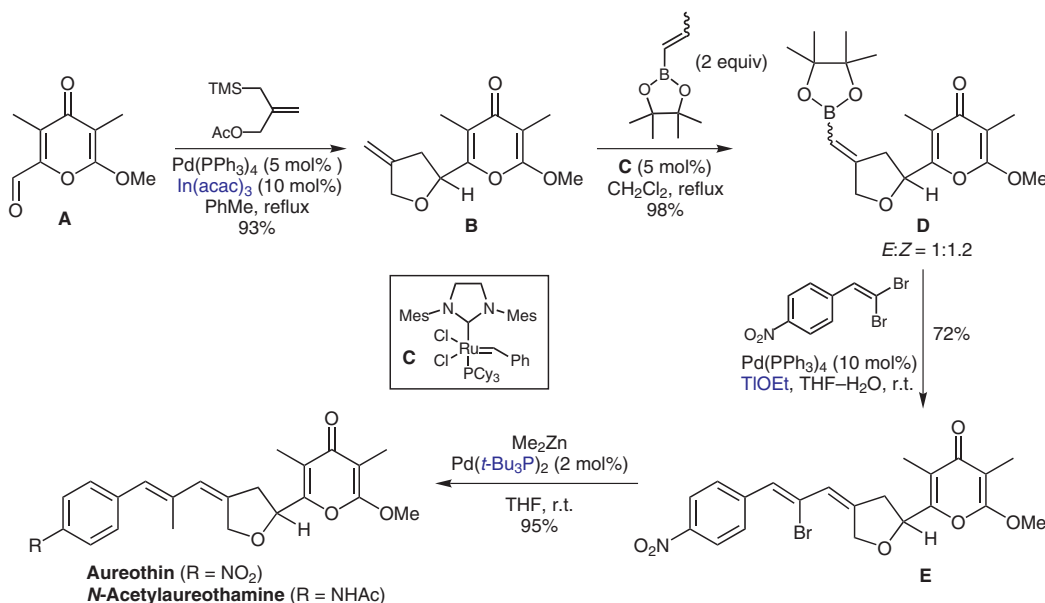


Total Synthesis of Aureothin and *N*-Acetylaureothamine



Significance: Aureothin is an unusual nitroaryl metabolite of *Streptomyces netropis*. It has anti-tumor, antifungal and pesticidal activity. *N*-Acetylaureothamine is active against *Helicobacter pylori*, the cause of chronic gastritis.

Comment: A remarkably short and efficient synthesis of (±)-Aureothin (23% overall) features three Pd-catalyzed reactions and a Ru-catalyzed cross metathesis. The precipice of failure in the three Pd-catalyzed reactions was avoided by deft use of additives: In(acac)₃ for the [3+2] cycloaddition leading to tetrahydrofuran **B**; TIOEt for the Suzuki cross-coupling to form **E**; the highly hindered ligand *t*-Bu₃P for the final Negishi cross-coupling.