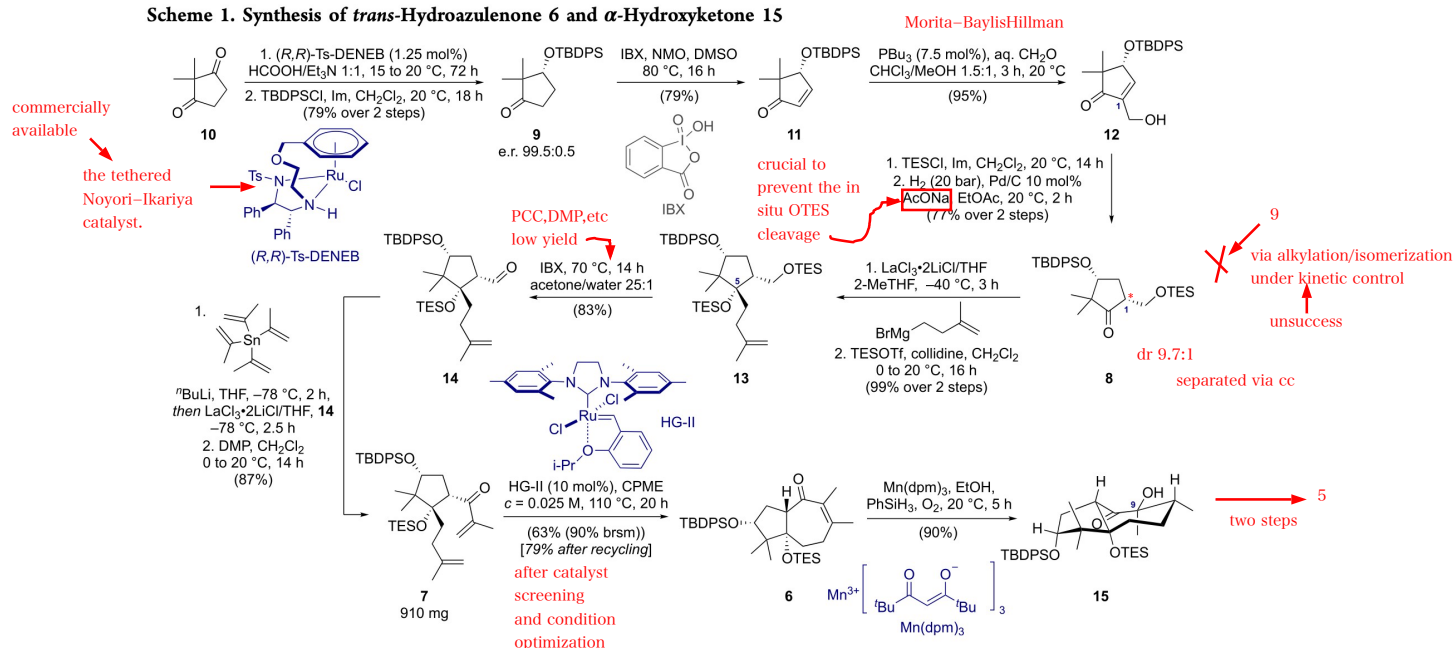
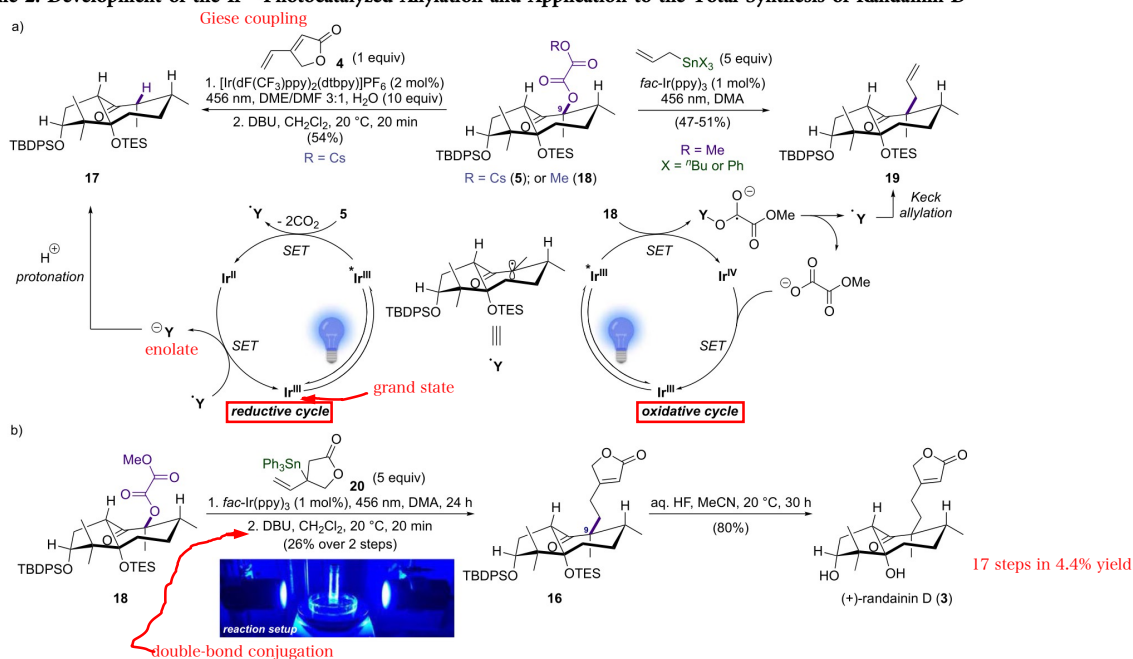


Scheme 1. Synthesis of *trans*-Hydroazulenone 6 and α -Hydroxyketone 15



Scheme 2. Development of the Ir^{III}-Photocatalyzed Allylation and Application to the Total Synthesis of Randainin D



Scheme 3. Seven-Step Synthesis of (+)-Barekoxide

