Synthesis of (+)-Haplophytine

Significance: The first of the five quaternary centers in haplophytine was installed by an oxidative coupling reaction \((A + B \rightarrow C)\) mediated by phenyliodonium bis(trifluoroacetate) (PIFA).

Comment: The oxidative semi-pinacol rearrangement \((D \rightarrow E)\) was also used in Fukuyama’s synthesis of haplophytine (Angew. Chem. Int. Ed. 2009, 48, 7600; Synfacts 2010, 3). The lactone ring was created by an oxidative cyclization mediated by \(K_3[Fe(CN)_6]\).