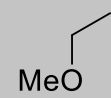




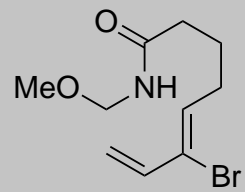
10 ep (Overall)  
8 ep (LLS)



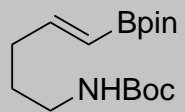
4



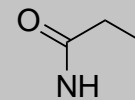
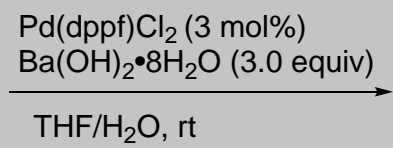




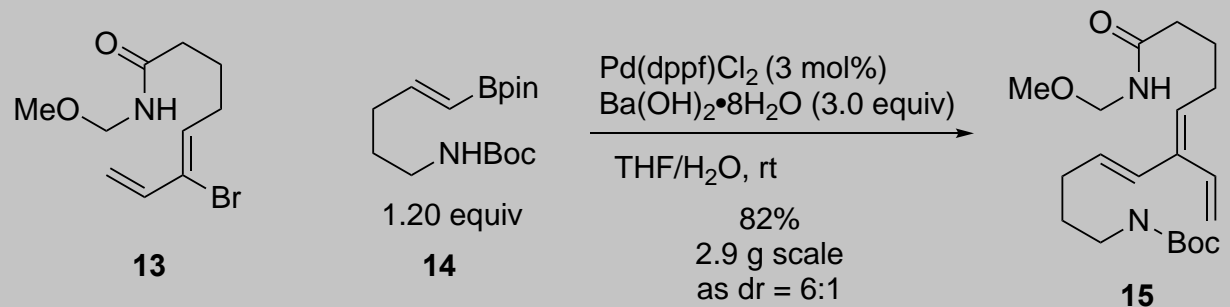
**13**



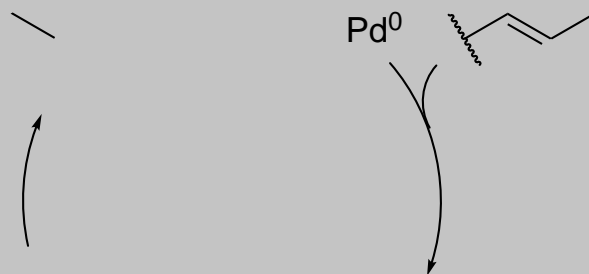
**14**



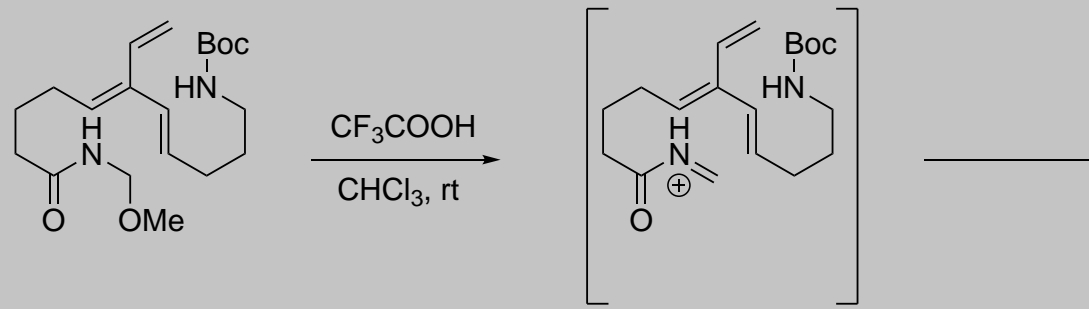


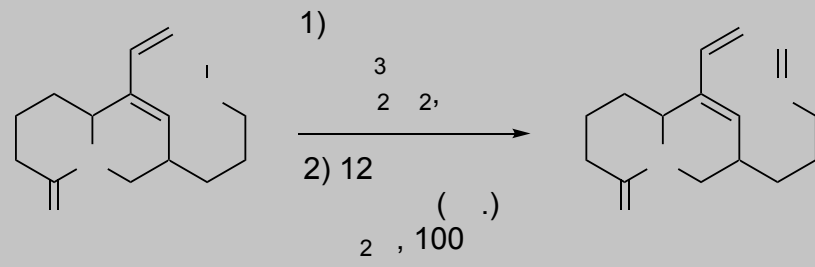


Stereoinvertive Suzuki coupling

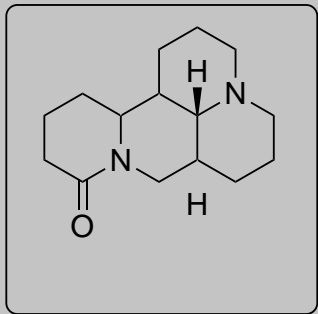


This procedure, which is a guided by our experience in related Negishi-Hiyama methodology, is a well-known example of a stereoinvertive Suzuki-Miyaura cross-coupling





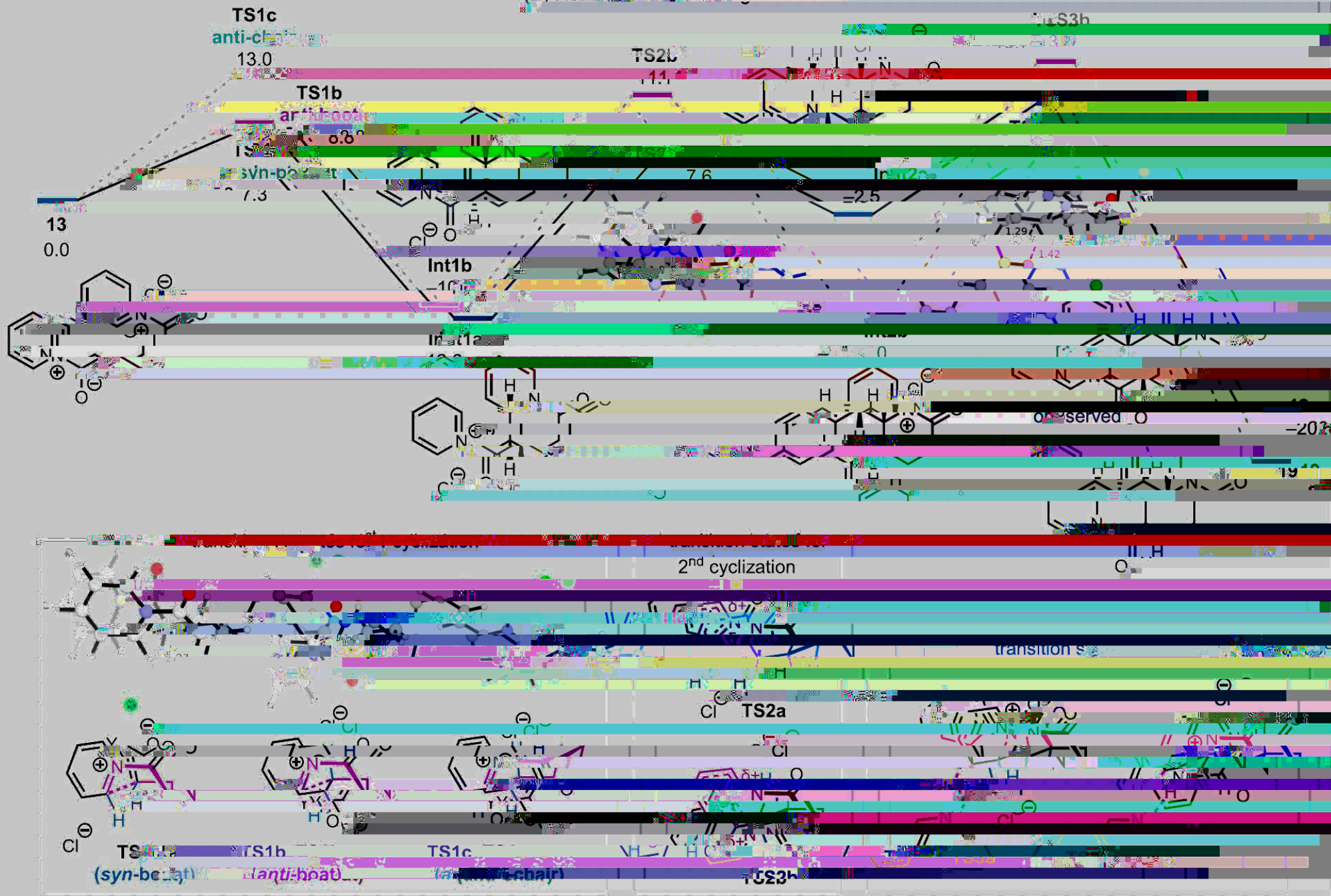


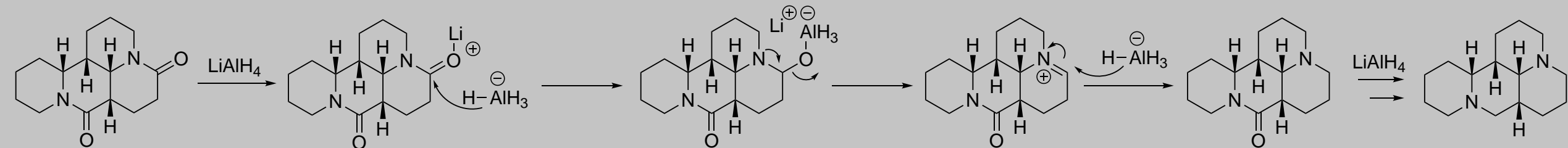
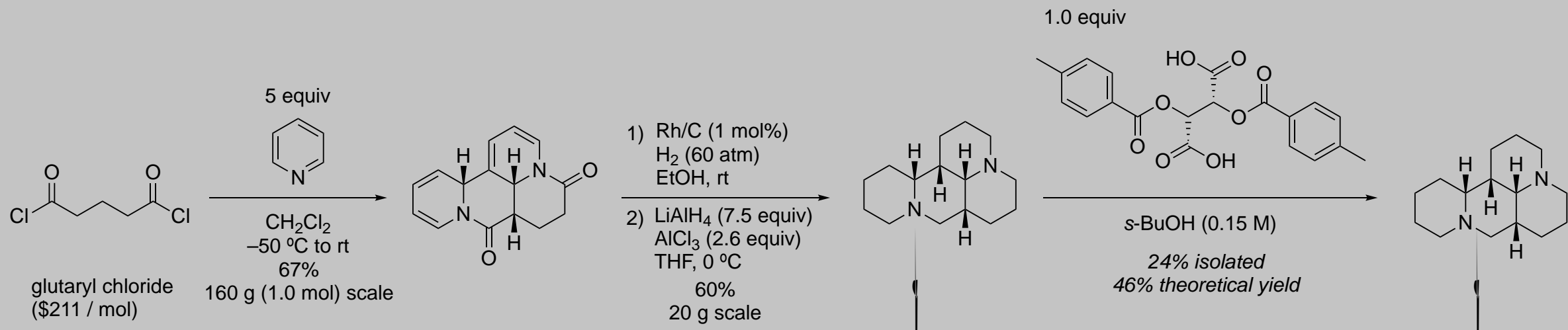


4 ep (Overall)!!

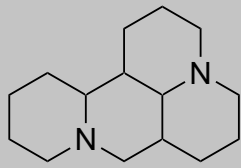


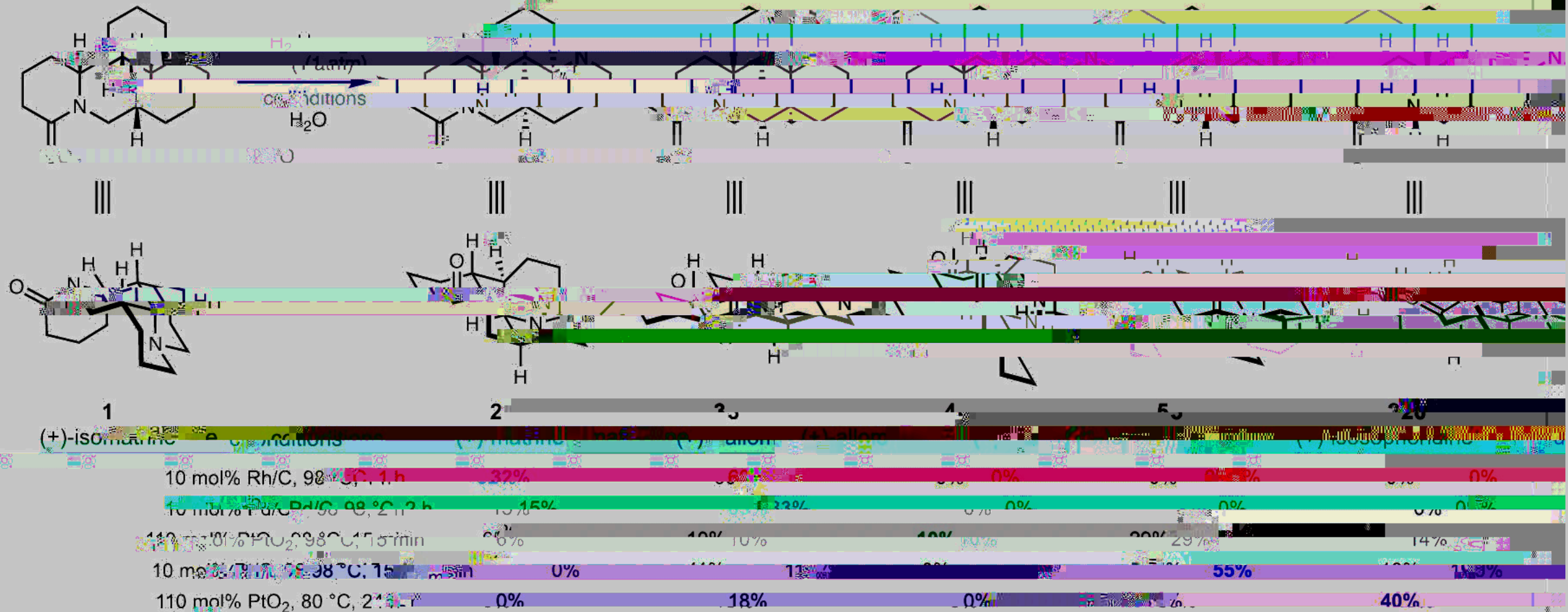
(D) Reaction coordinate diagram for the synthesis of ...











the first total synthesis of the l-piperidine alkaloid (-)-ophoridine, and the first synthesis of (+)-isomarine, (+)-marine, (+)-allomarine, and (+)-