
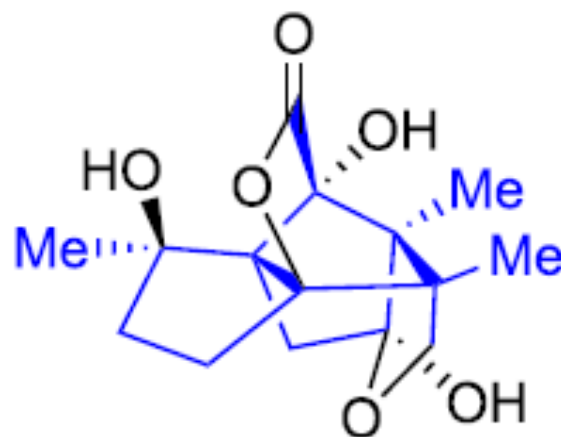


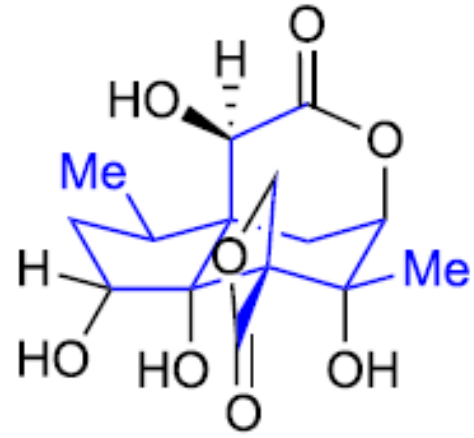
Total Synthesis and Structure Revision of (–)-Illisimonin A, a Neuroprotective Sesquiterpenoid from the Fruits of *Illicium simonsii*

Alexander S. Burns and Scott D. Rychnovsky* 

Department of Chemistry, University of California, Irvine, 1102 Natural Sciences II, Irvine, California 92697, United States



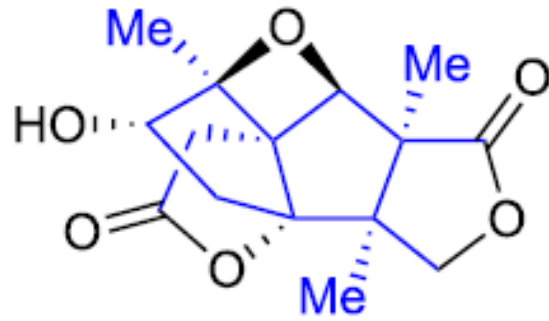
illisimonin A (1)



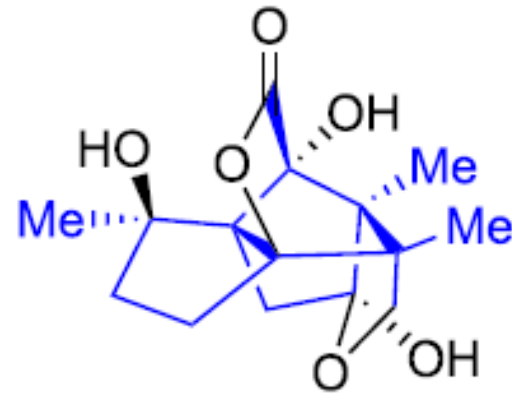
anisatin



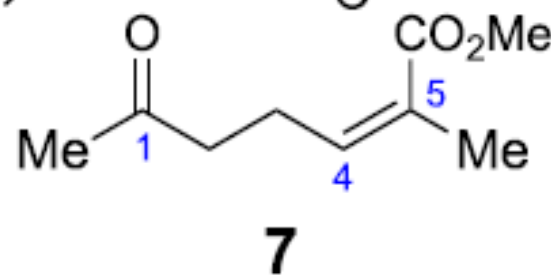
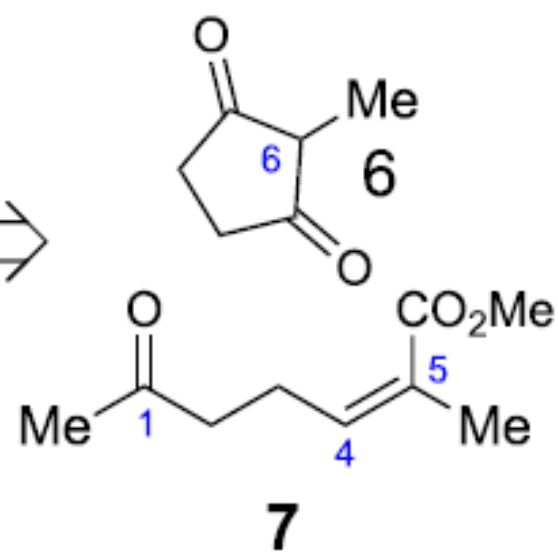
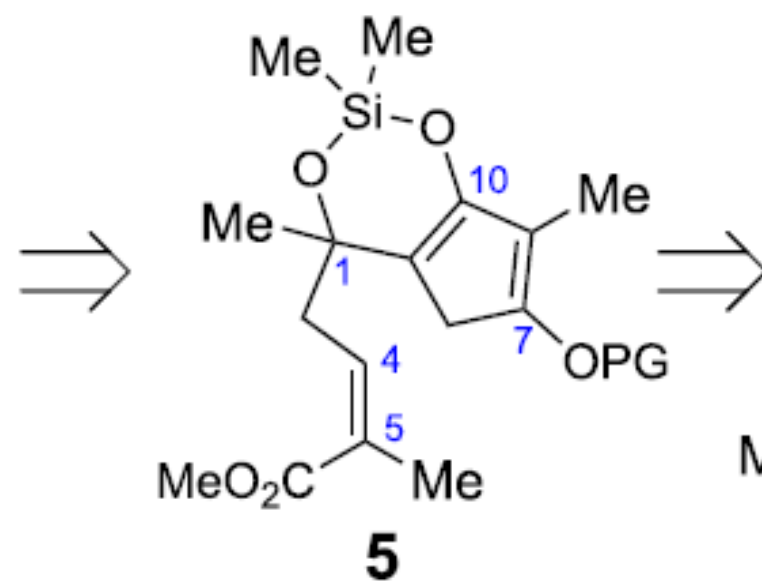
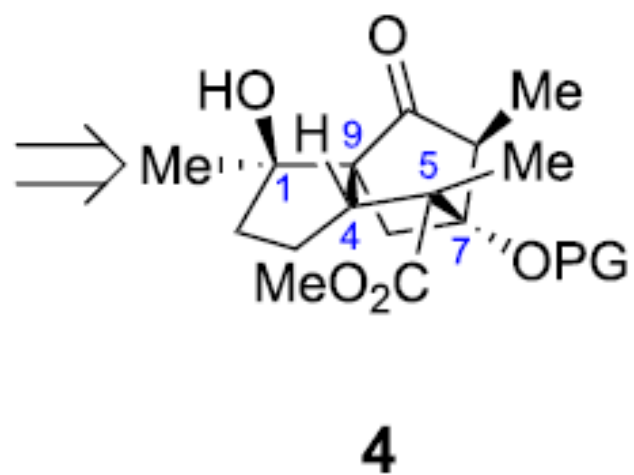
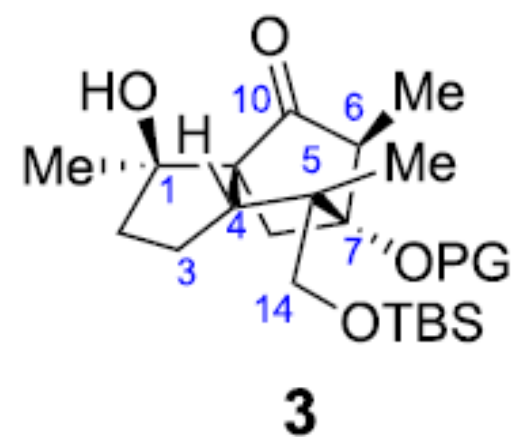
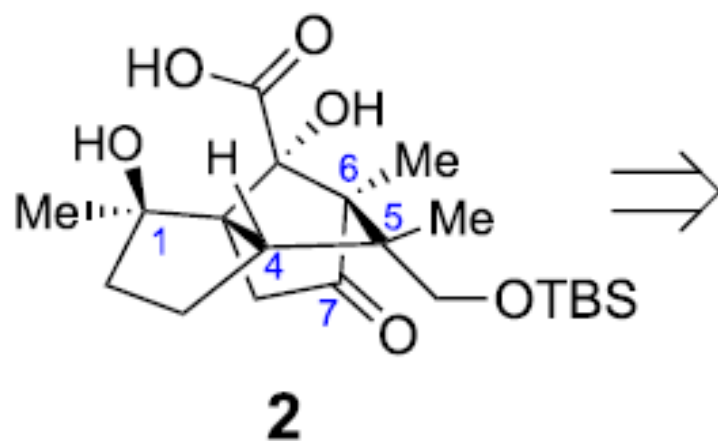
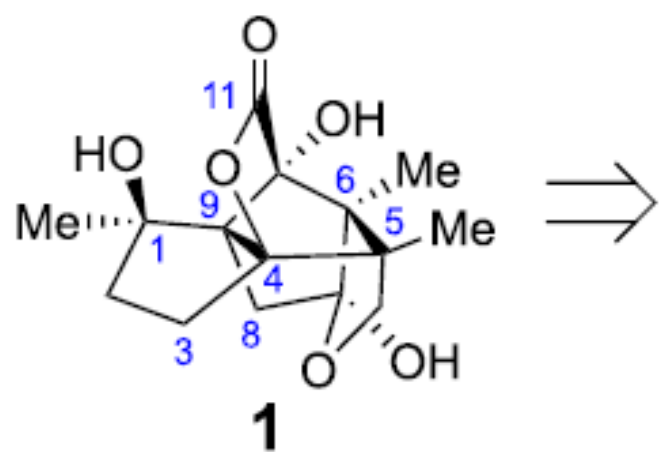
(-)-11-*O*-debenzoyltashironin



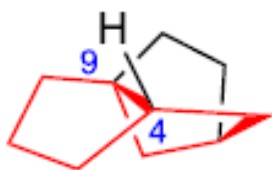
merrilactone A



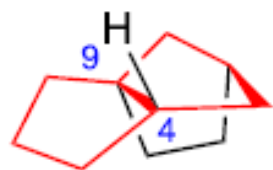
illisimonin A (1)



calculations:

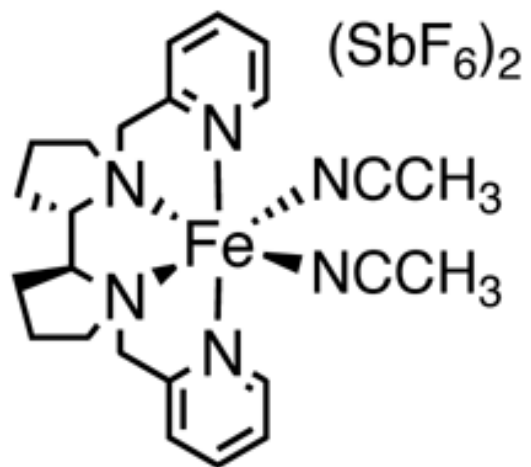


8-cis fused:
0.00 kcal/mol

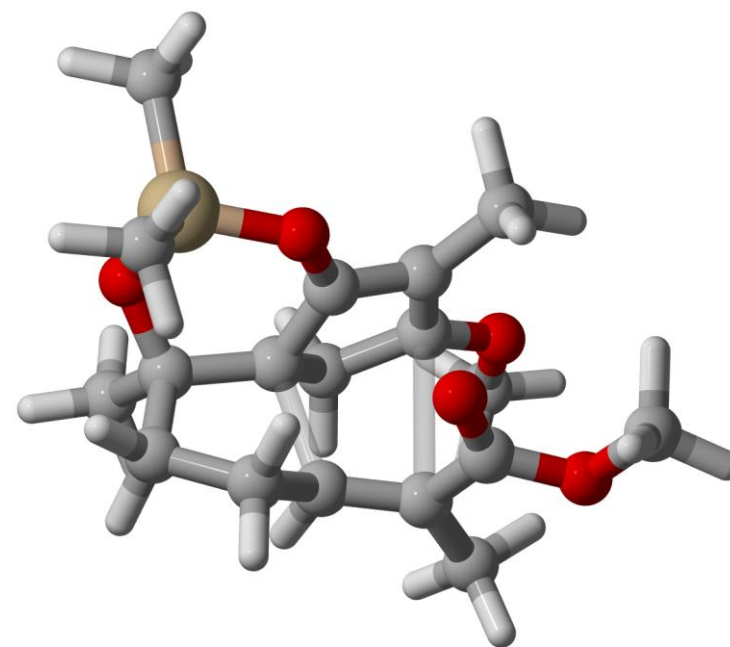


9-trans fused:
7.03 kcal/mol

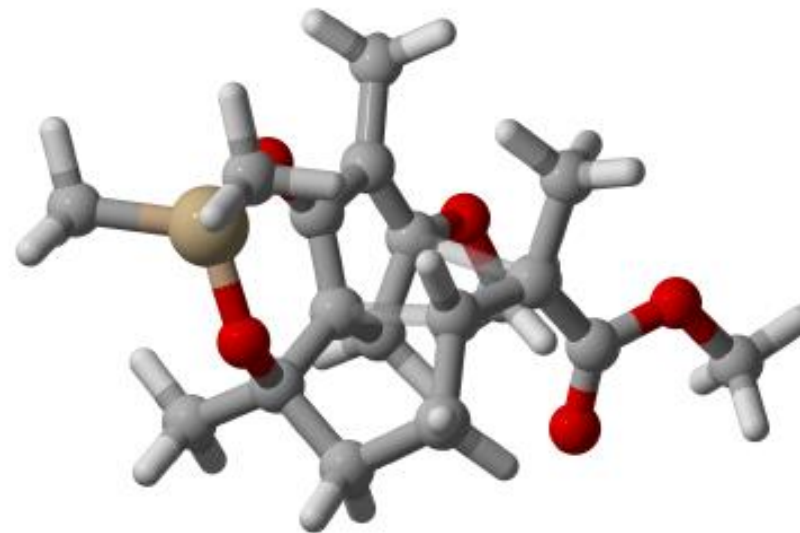
MP2/6-31+G(d)



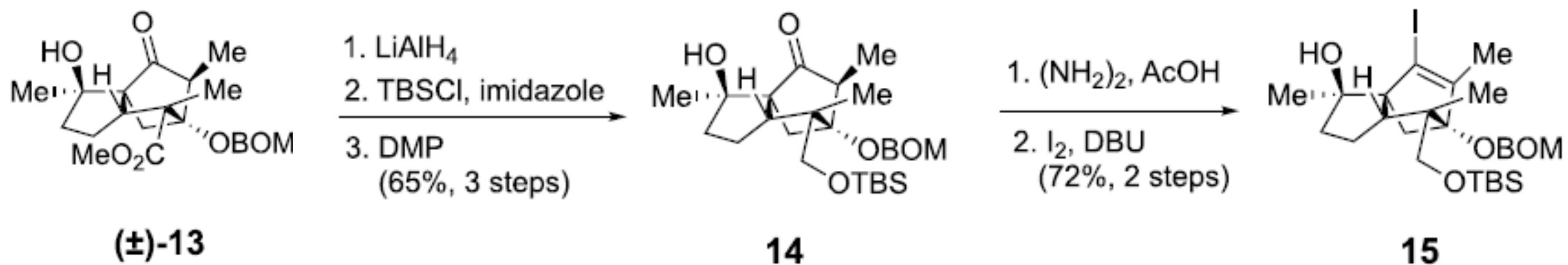
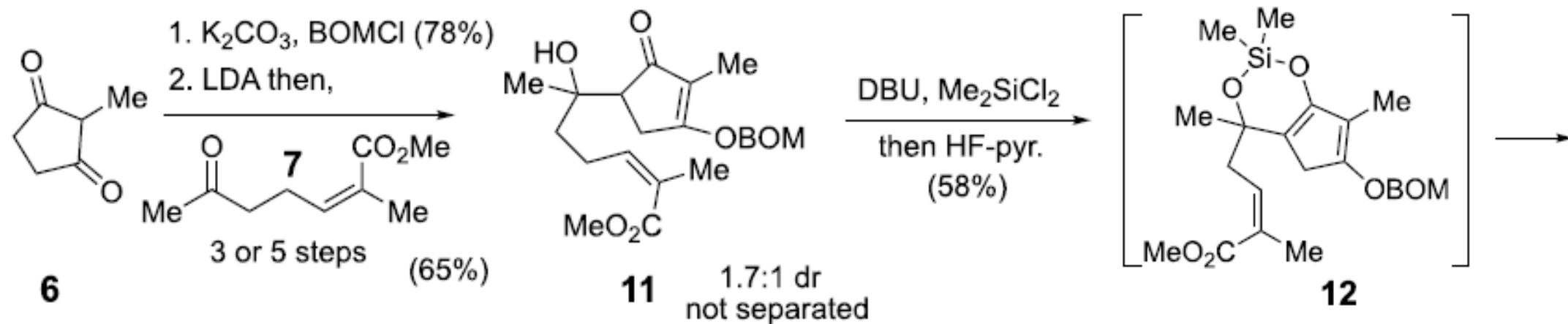
White FePDP Catalyst



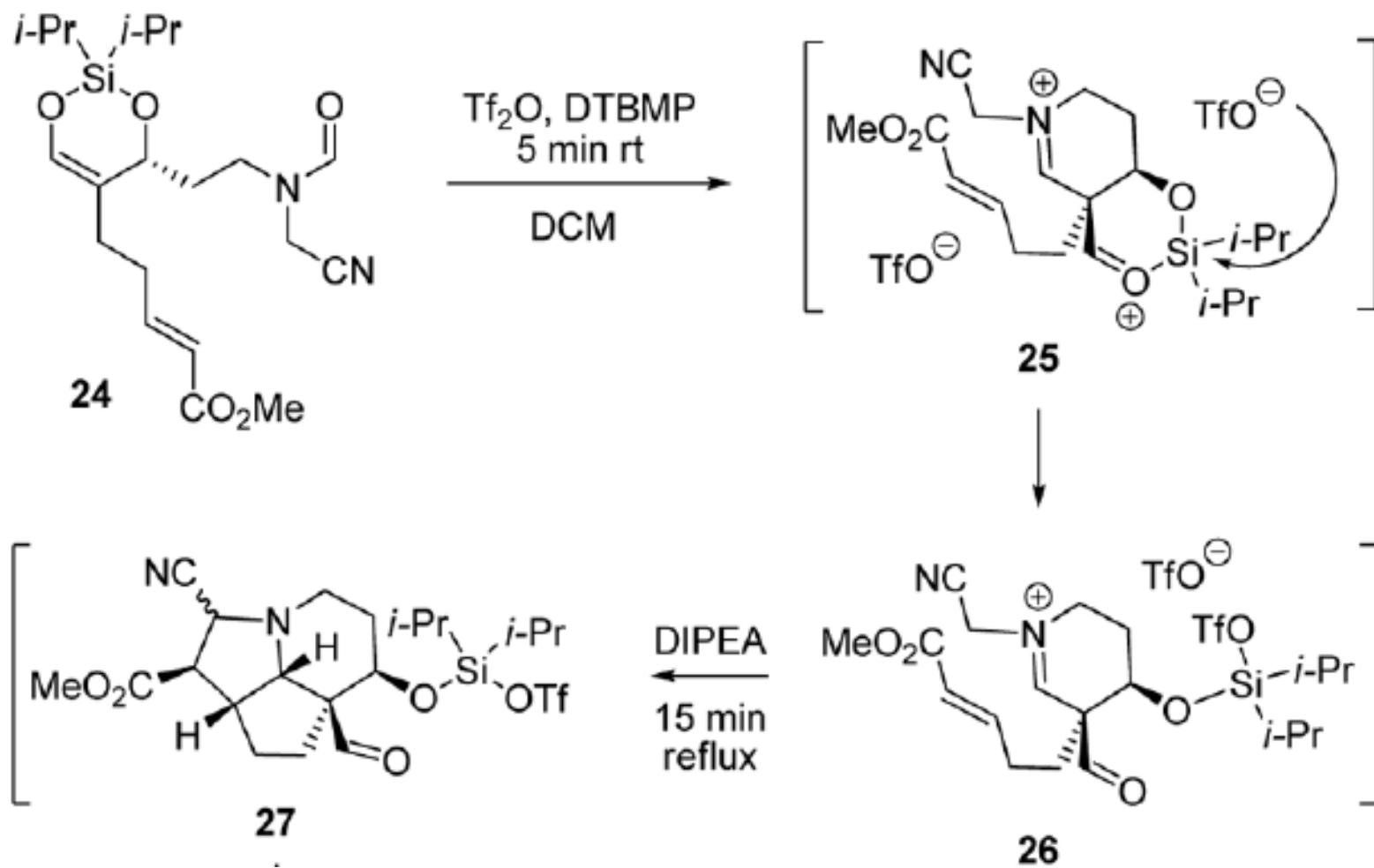
endo



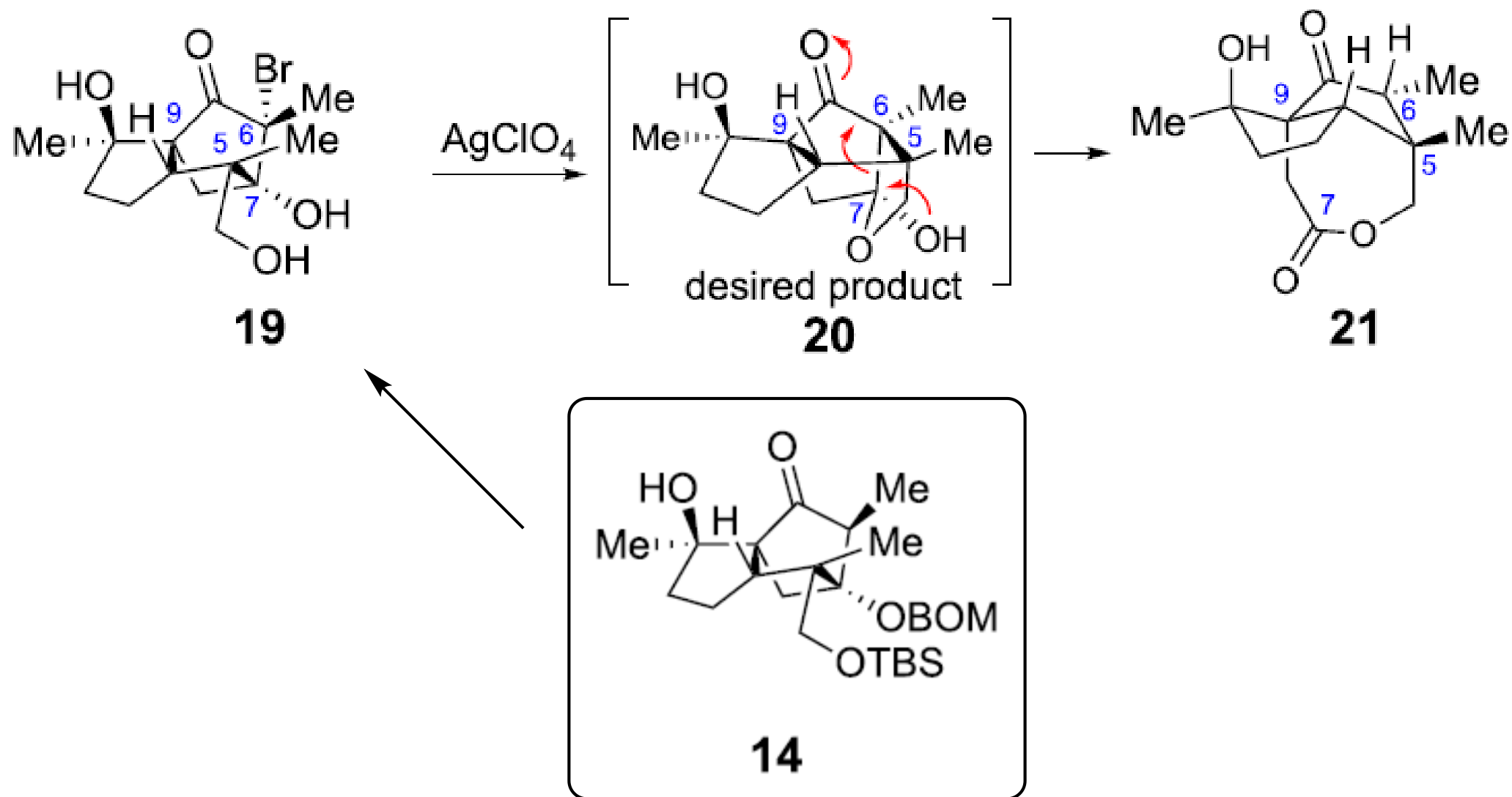
exo

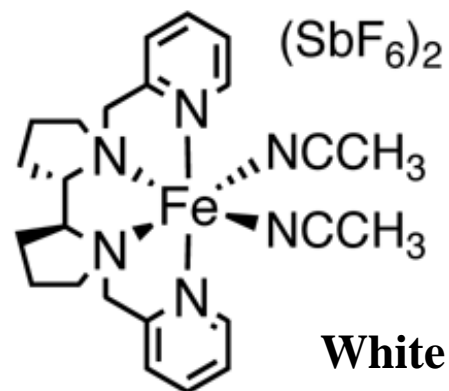
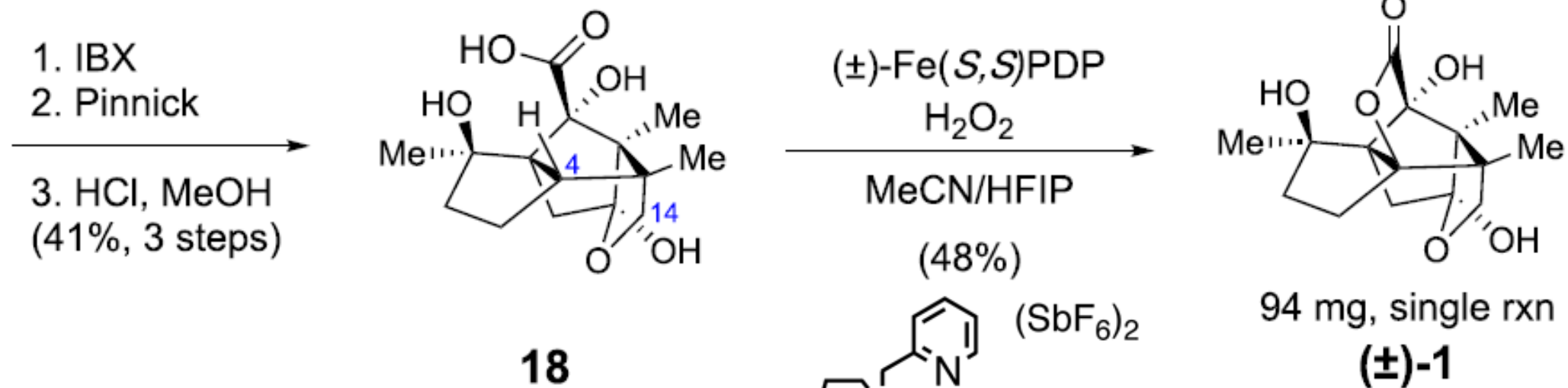
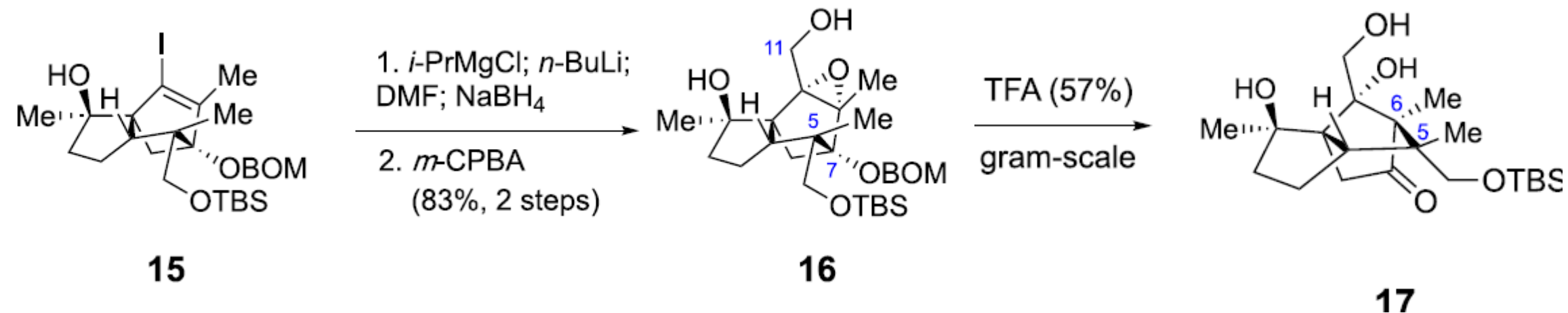


Guillaume's Work

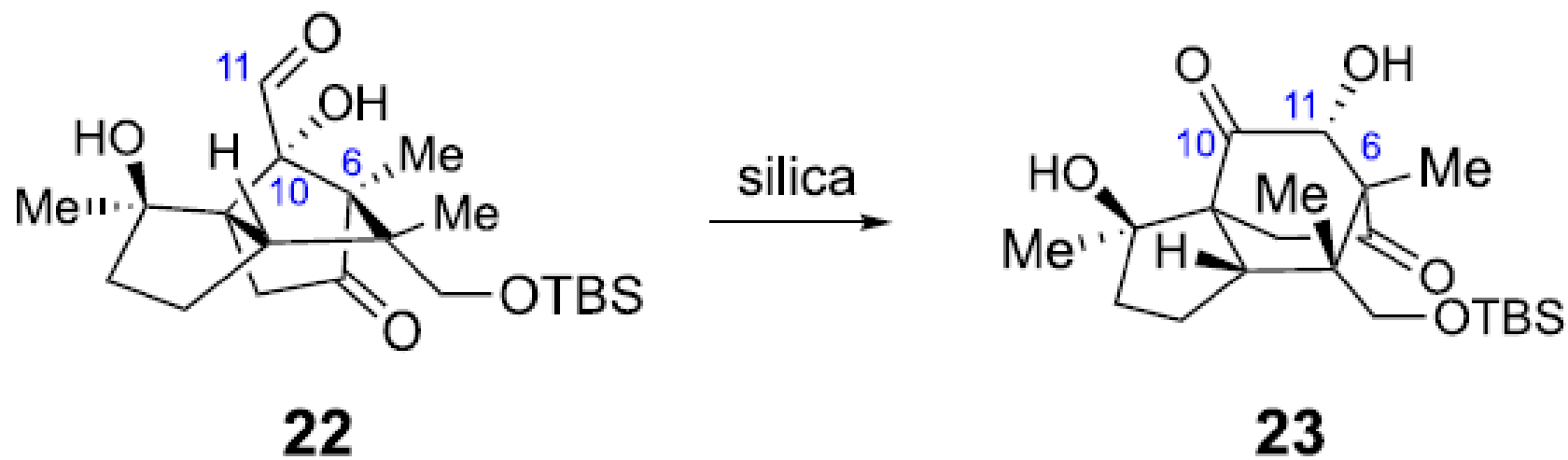


semipinacol rearrangement and fragmentation:

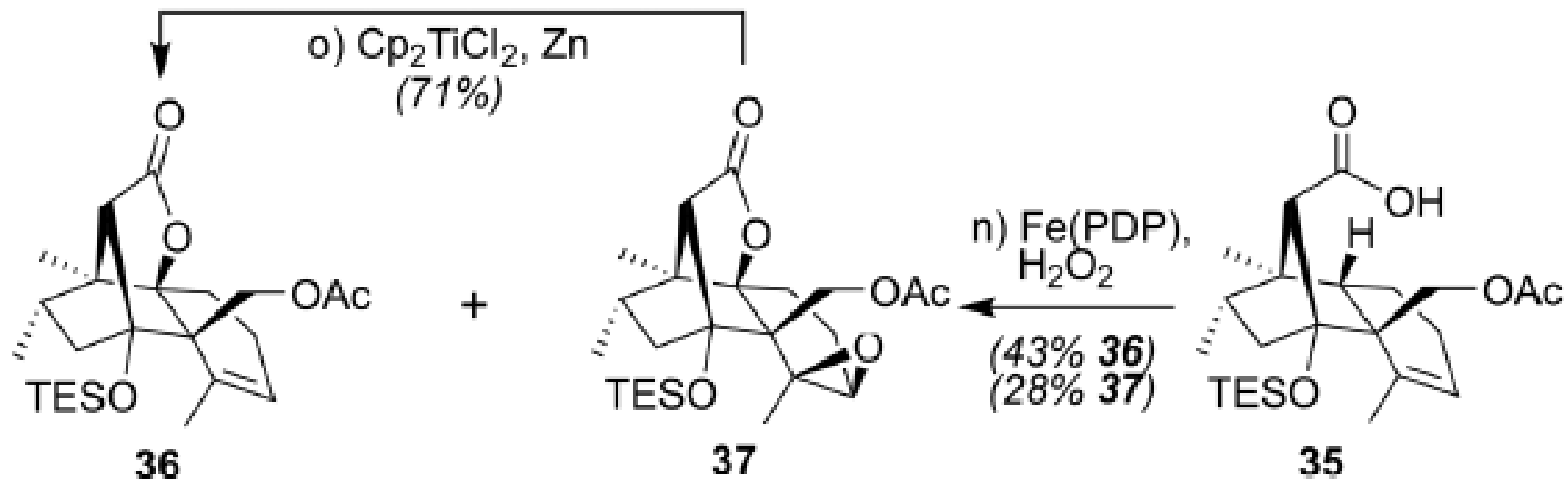




α -ketol rearrangement of hydroxy-aldehyde 22

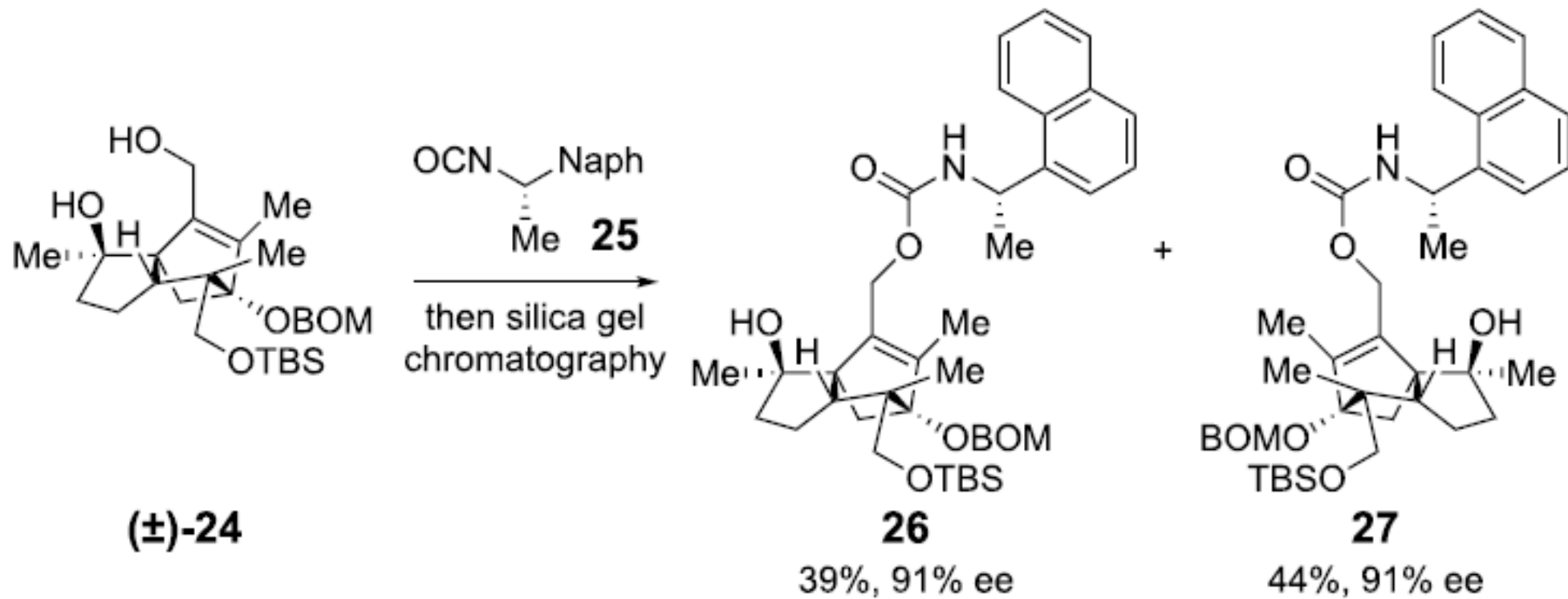


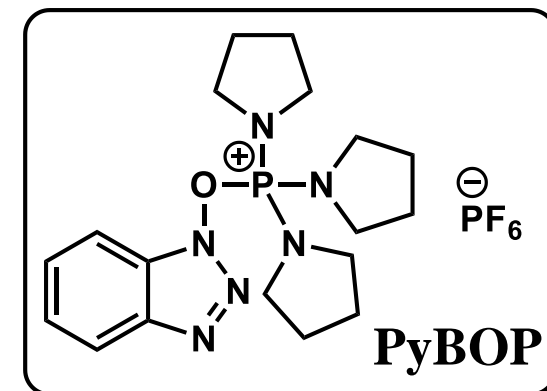
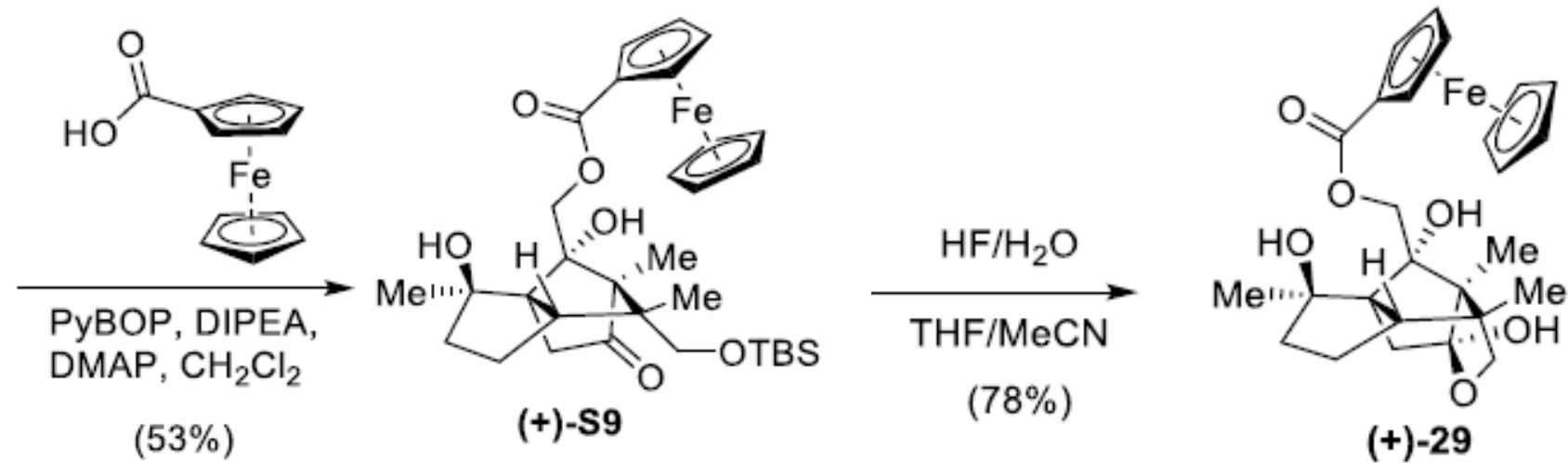
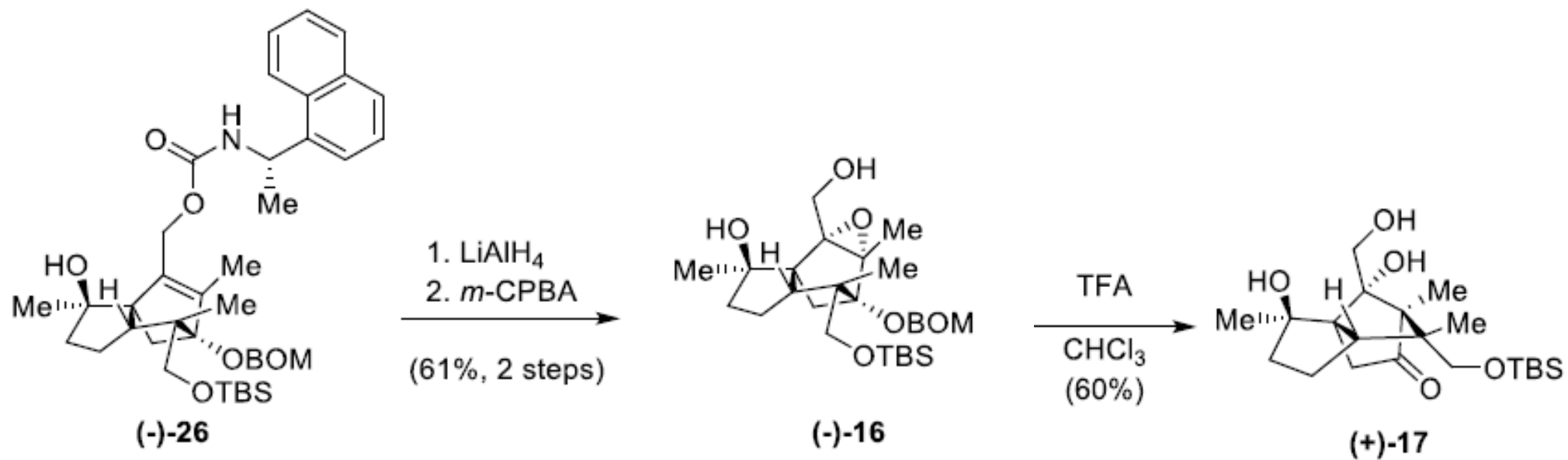
Synder' s work

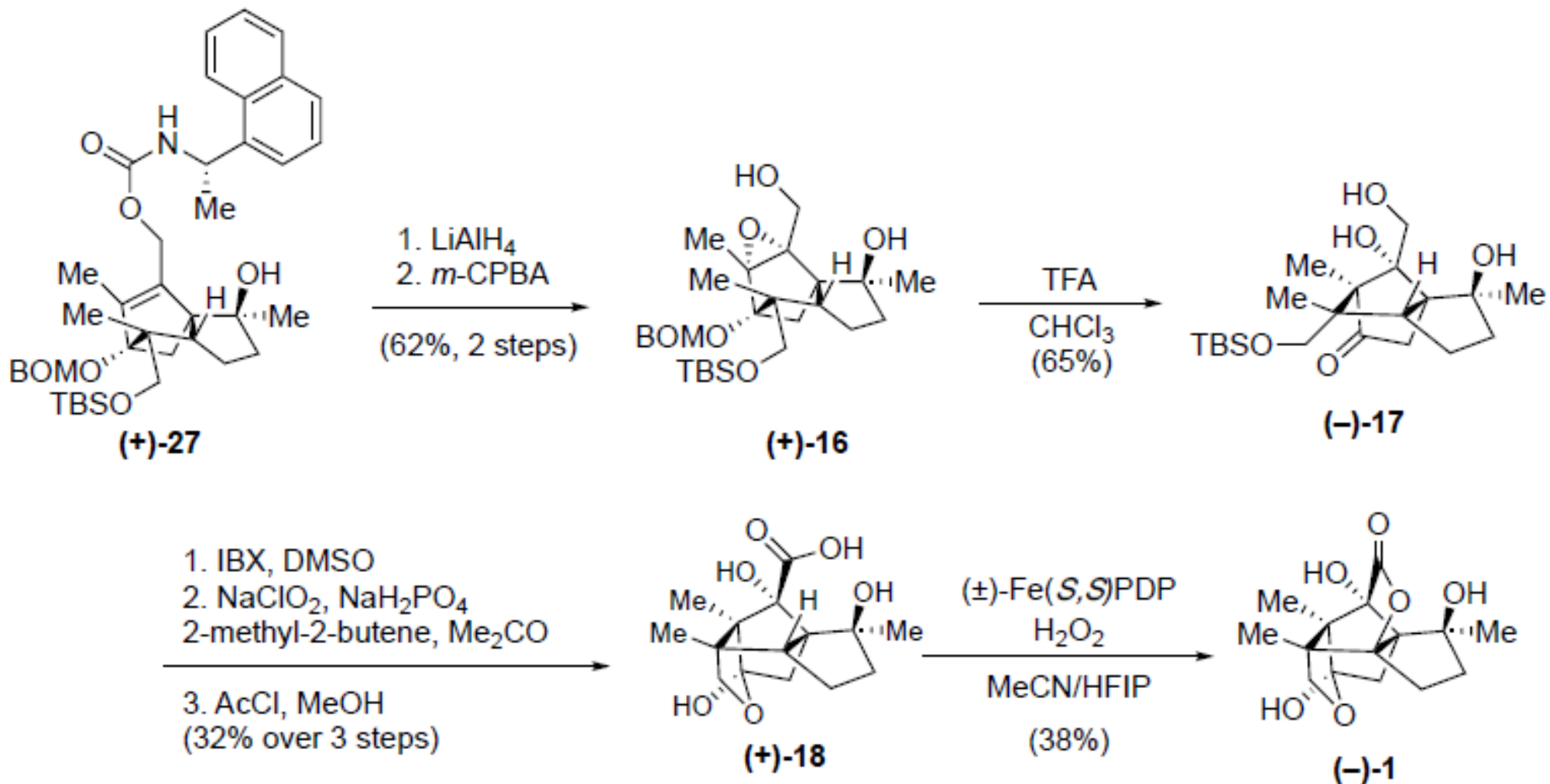


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Enantioselective Synthesis and Structure Revision







(-)-illimonin A (1), is revised to **1S,4S,5S,6S,7R,9R,10R.**