Total Synthesis of (+)-Pierisketone B
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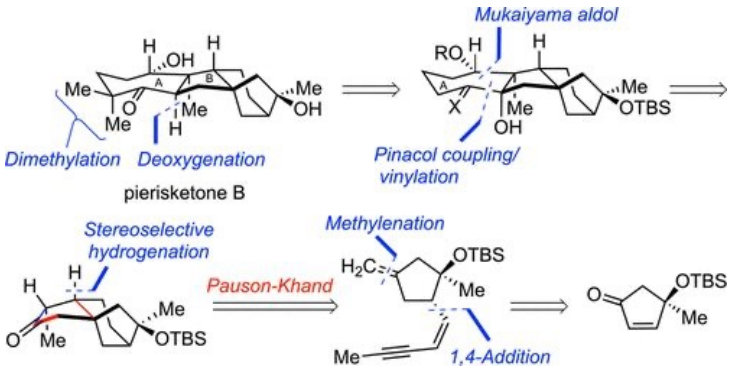
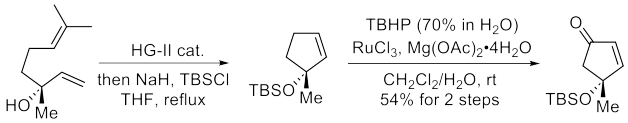
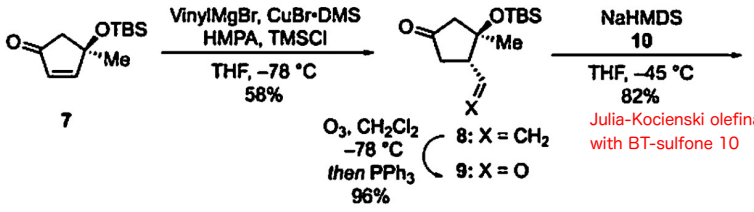
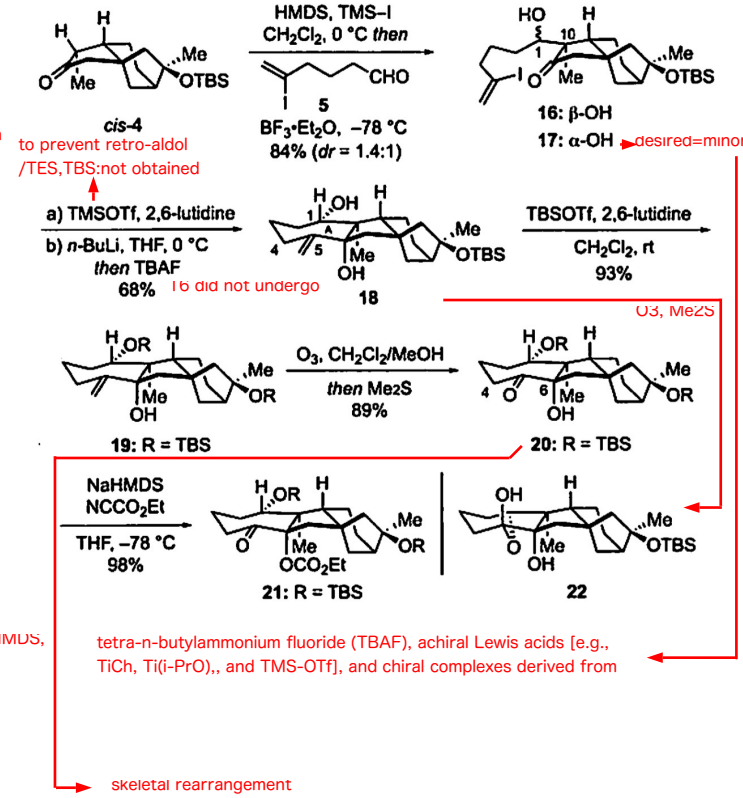




Scheme 1. Synthesis of *cis*-5/6/6 Tricyclic Scaffold



Scheme 2. Synthesis of Pivotal Intermediate



Scheme 3. Total Synthesis of Pierisketone B

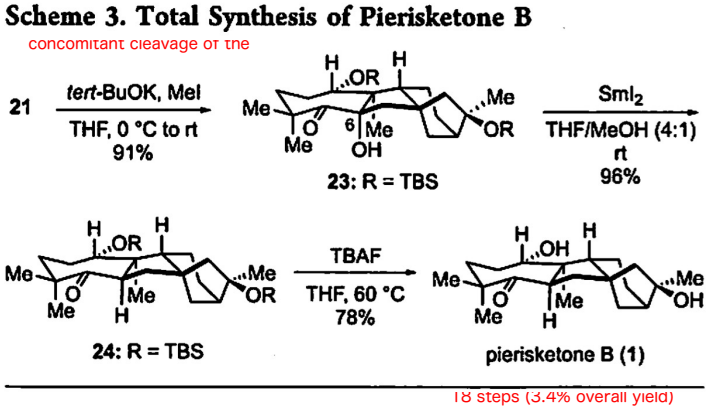
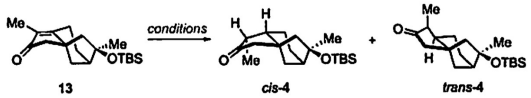


Table 1. Representative Attempts to Directly Reduce 12 to *cis*-4[a]



Entry	Condition[b]	*cis*:*trans*[c]
1	Pd/C, H_2, Et_3N	3:97 (95%)
2	Li, NH_3, ^tBuOH	1:4 (67%)
3	NHC-CuCl,[d] Ph_2SiH_2, PhMe	1:4 (71%)
4	$Co(acac)_2$, $PhSiH_3$, TBHP, ^iPrOH	1:1 (60%)
5	$Mn(dpm)_3$, $PhSiH_3$, TBHP, ^iPrOH	1:1 (91%)