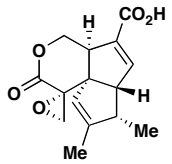
Baran Group Meeting

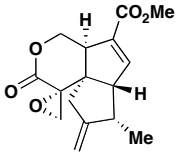
Pentalenolactone

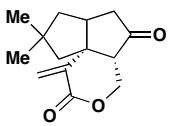
Pentalenolactone
Mike DeMartino

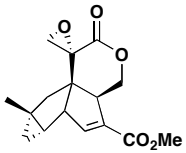
Wednesday, January 21, 2004

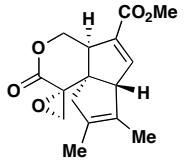
Syntheses discussed:


Pentalenolactone


Pentalenolactone B Methyl Ester


Pentalenolactone E Methyl Ester


Pentalenolactone P Methyl Ester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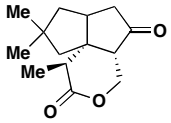
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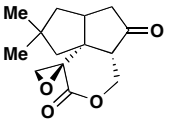

Pentalenolactone F Methyl Ester

(H & O exist also)

Partial list of transforms discussed:

-Rosemund's Catalyst

-Rosemund Reduction

-Darzen-type Acylation

-Beredick's Reagent

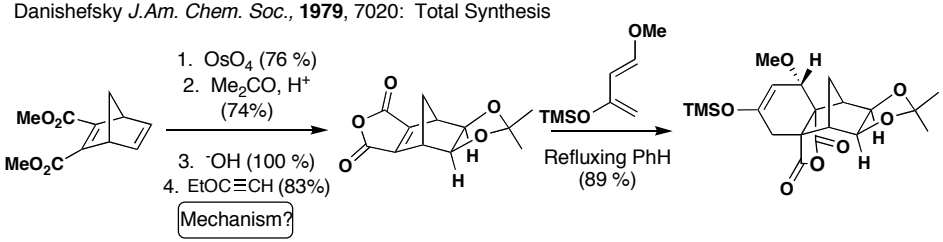
-Dieckmann Condensation

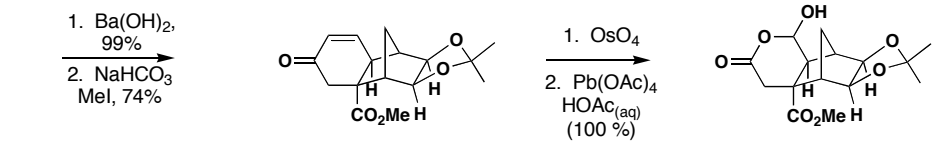
-Knoevenagel Condensation

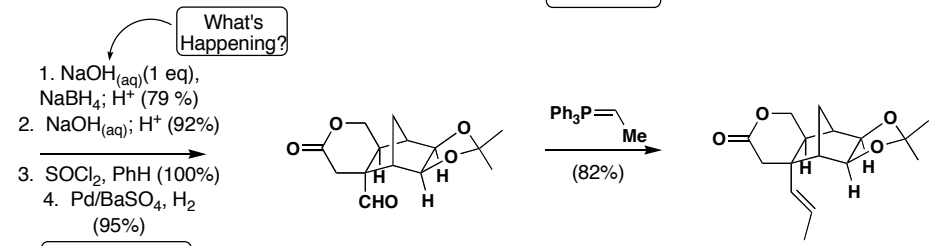
-Barton-McCombie Deoxygenation

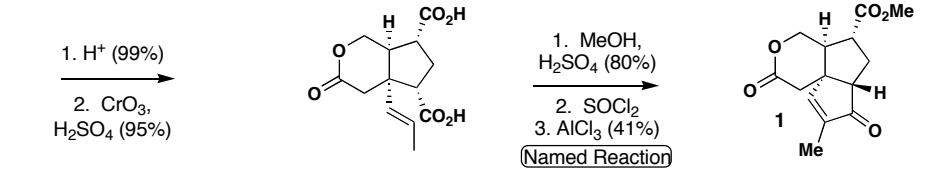
-Eschenmoser's Salt

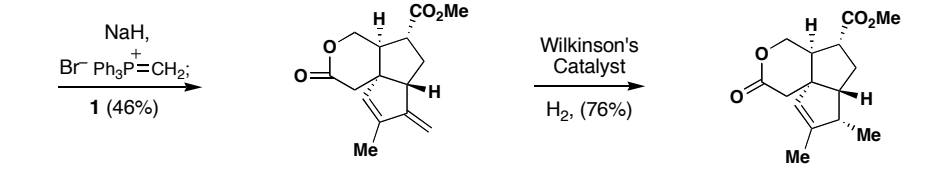
Danishefsky *J.Am. Chem. Soc.,* **1979**, 7020: Total Synthesis











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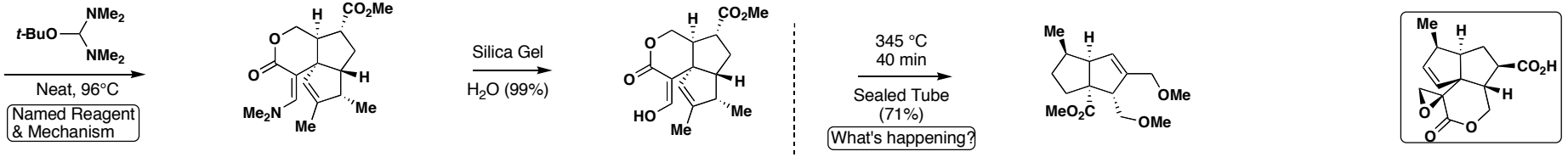
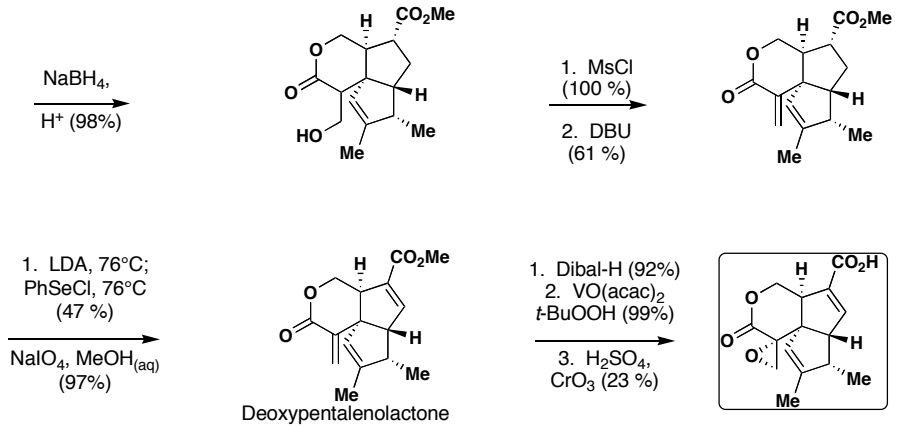
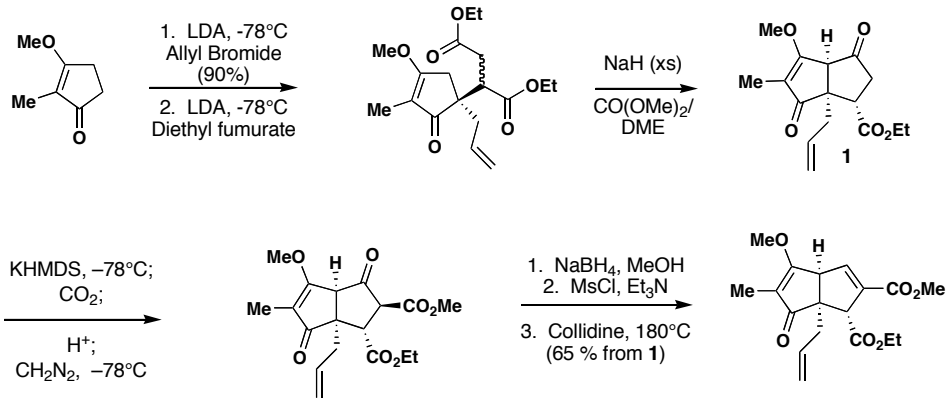
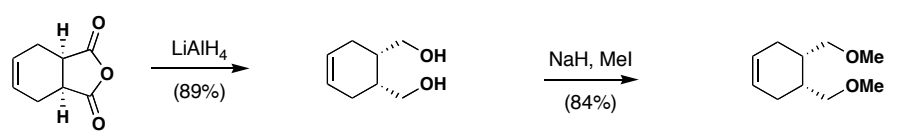


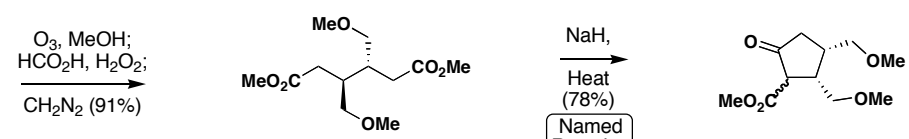


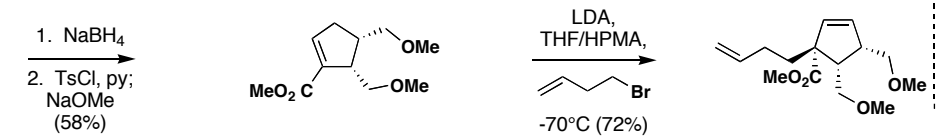
R.H. Schlessinger *J. Am. Chem. Soc.* **1980**, 889: Formal Synthesis

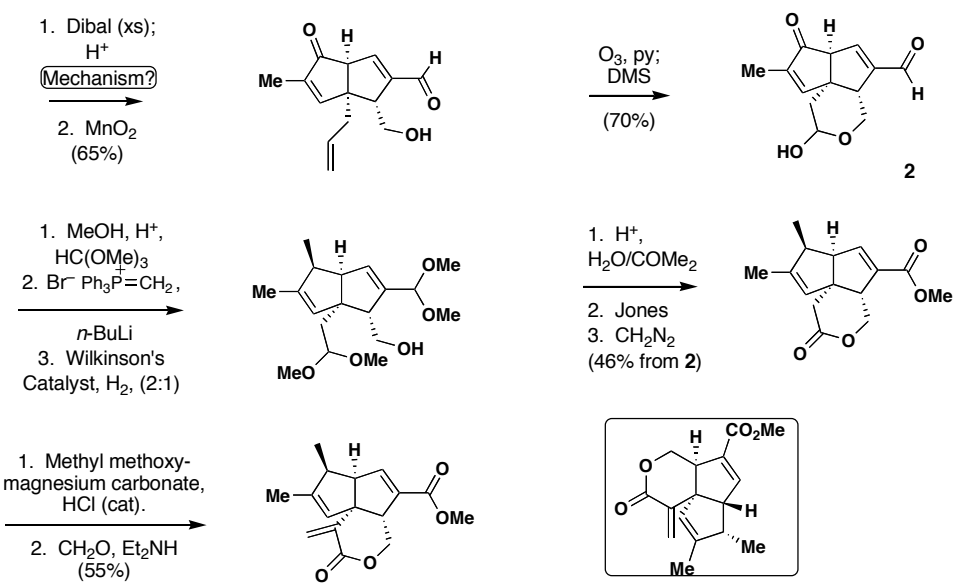


Heathcock *Tet. Lett.* **1979**, 2115: Partial Synthesis









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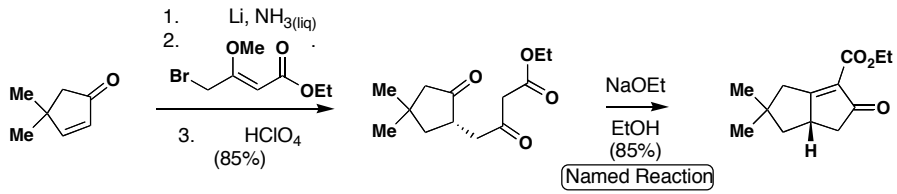
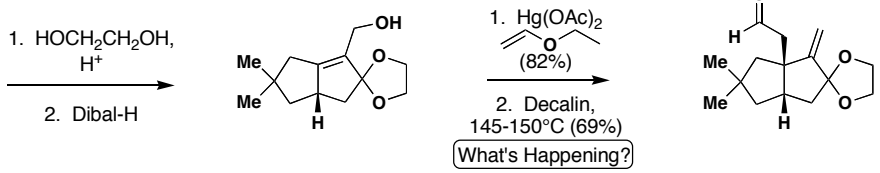
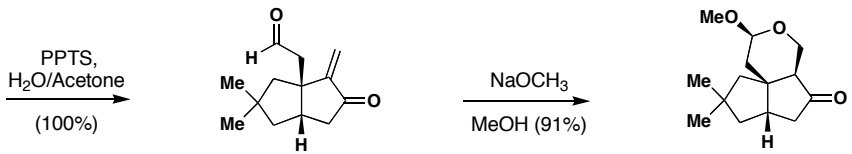
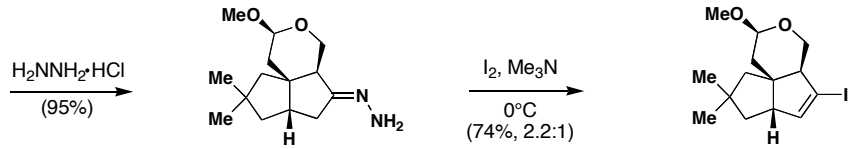
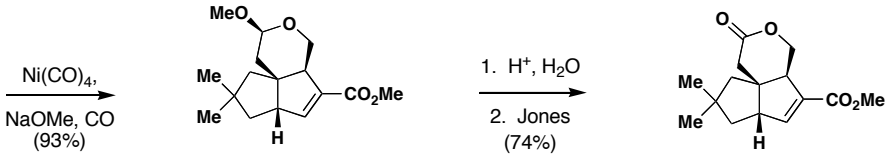
Paquette *J. Am. Chem. Soc.* **1981**, 6526: Total Synthesis

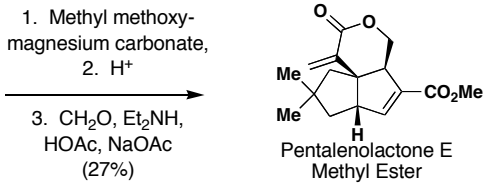




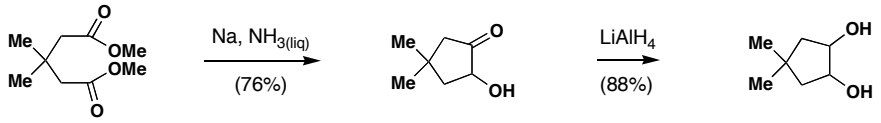


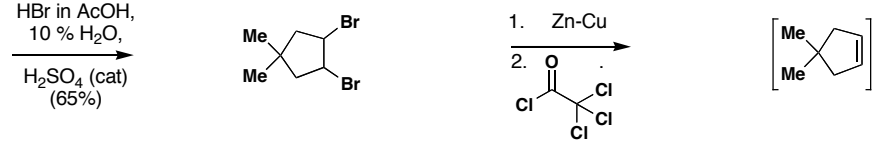


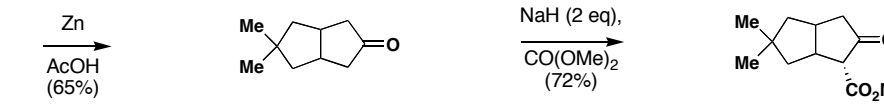


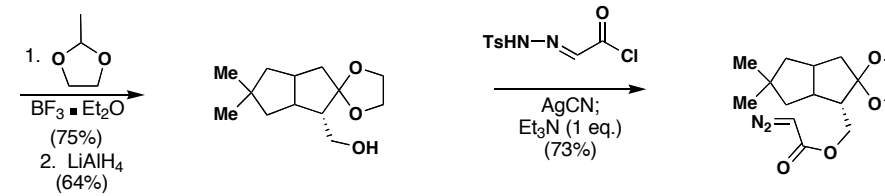


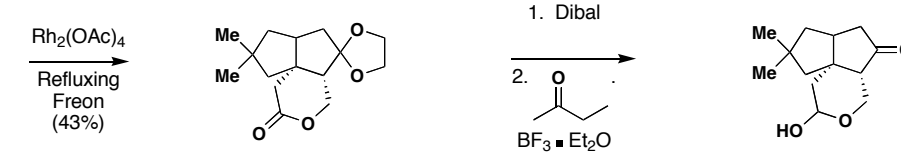
David Cane (Brown Univ.) *J. Am. Chem. Soc.* **1984**, 5295: Formal Synthesis

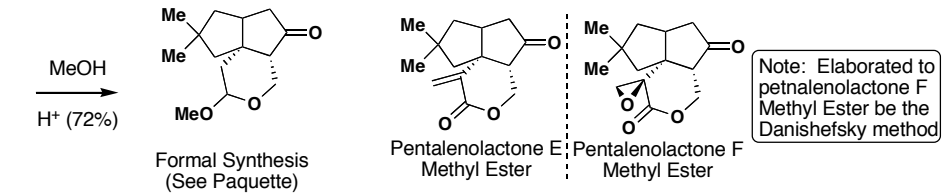












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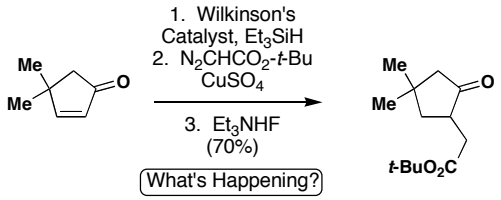
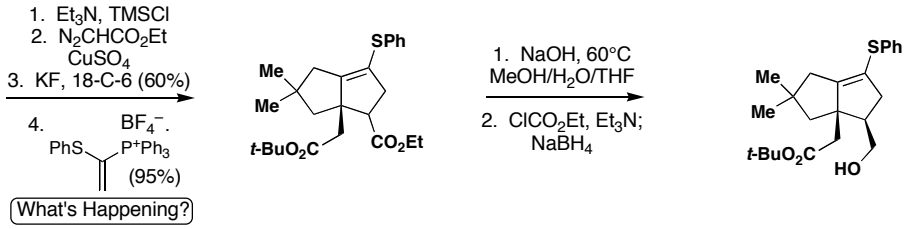
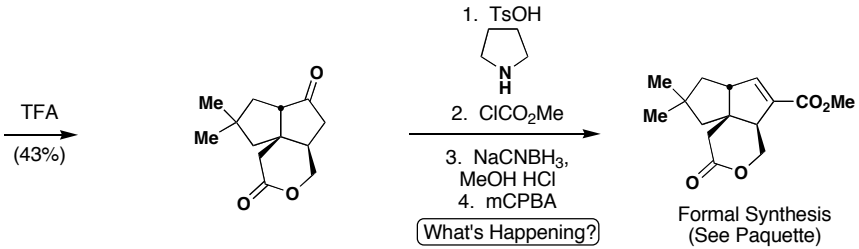
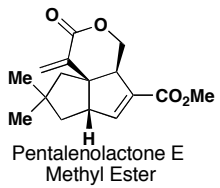
Marino, *et. al. J. Org. Chem.* **1987**, 4140: Formal Synthesis

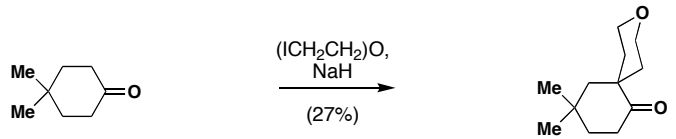


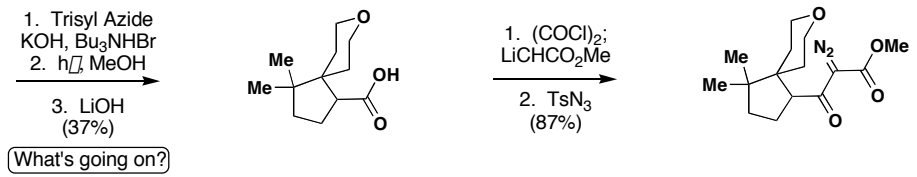


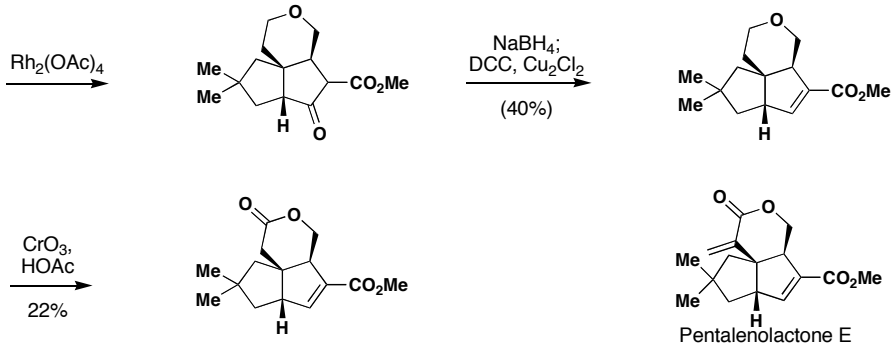




Taber *J. Am. Chem. Soc.*, **1985**, 5289: Formal Synthesis







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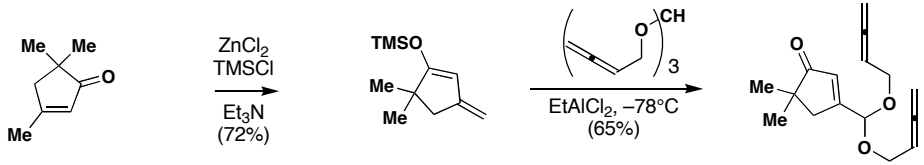
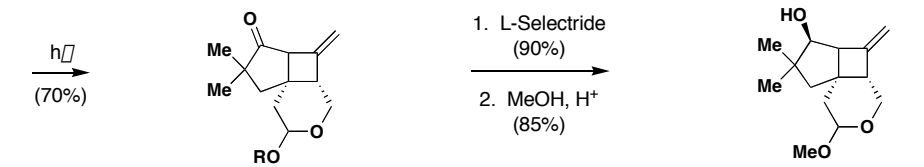
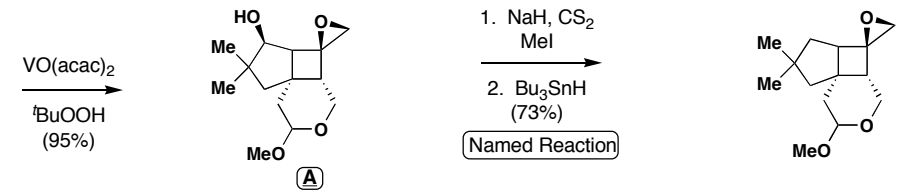
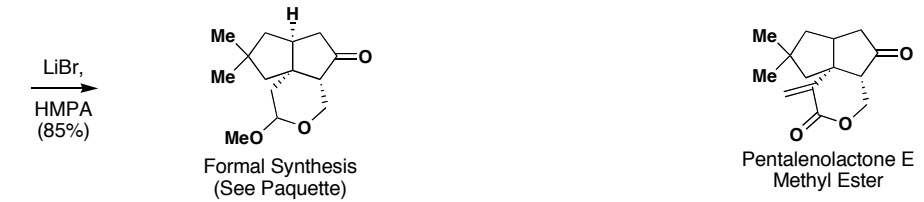
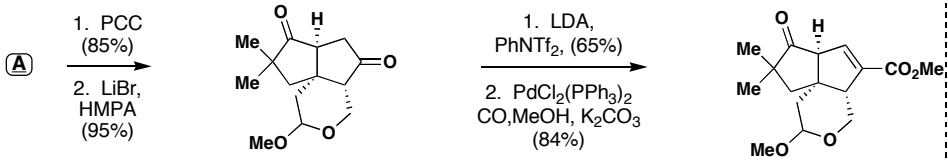
Pirrung *J. Org. Chem.* **1988**, 227: Formal Syntheses

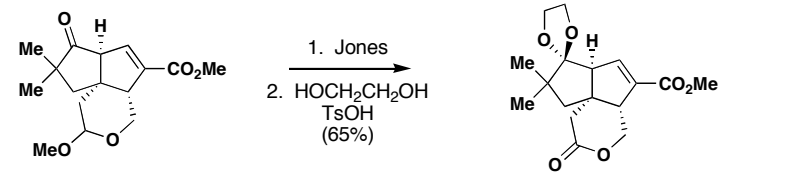


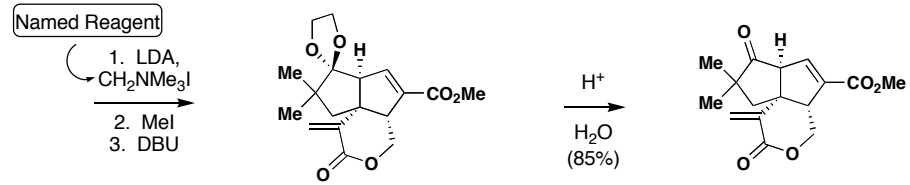


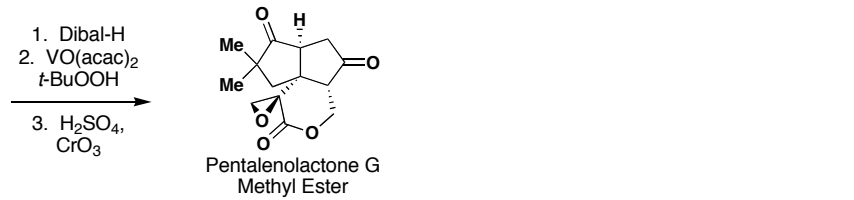












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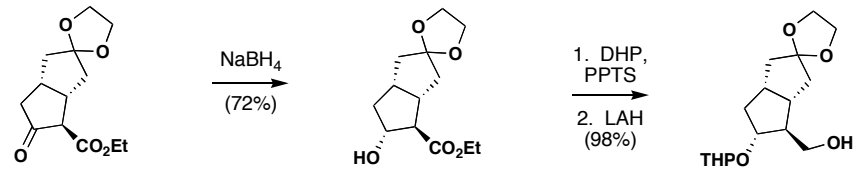
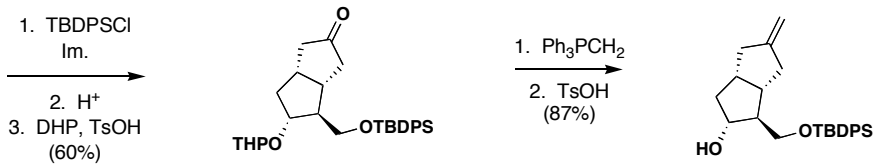
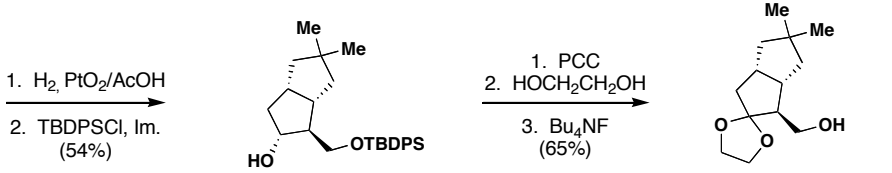
Tsuji *Tet.* **1988**, 2835: Total Synthesis

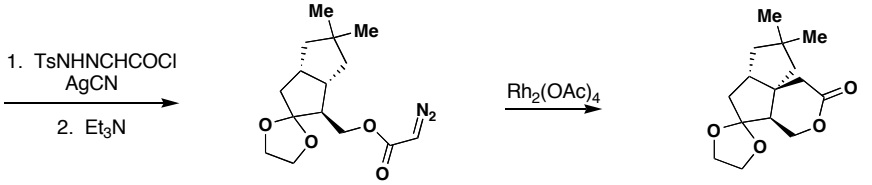


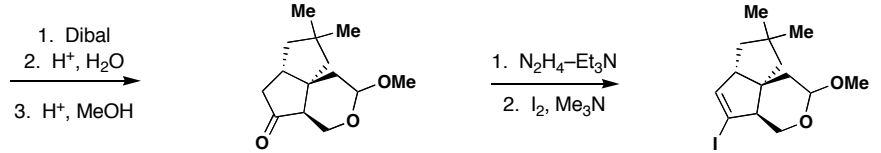
Obtained enantiopure by the "magic" of biology: Saccharomyces Bailii KI 0166

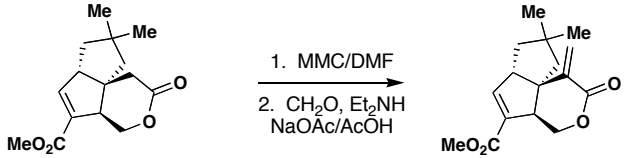




Paquette Chemistry from here







(–)-Pentalenolactone F Methyl Ester

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Paquette *J.Am. Chem. Soc.* **1991**, 9384: Total Synthesis