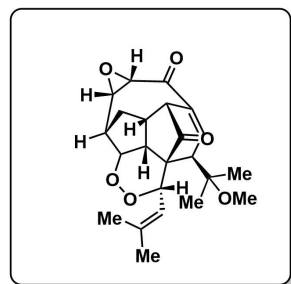
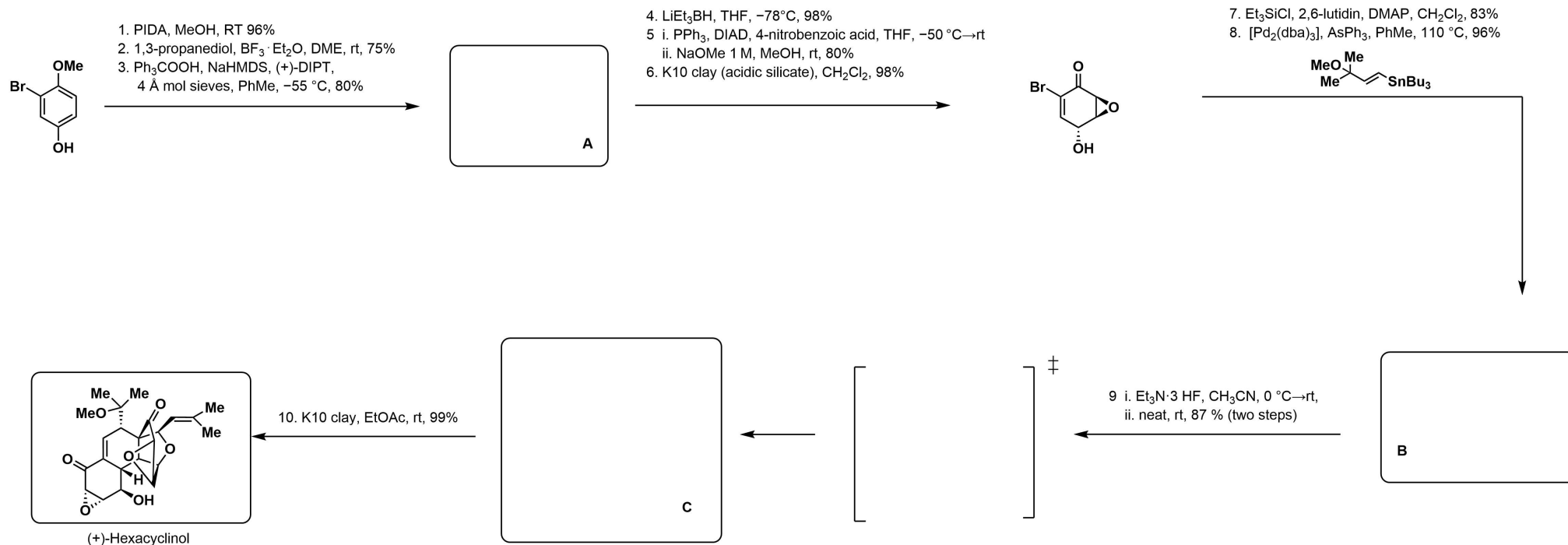


Total Synthesis and Structure Assignment of (+)-Hexacyclinol

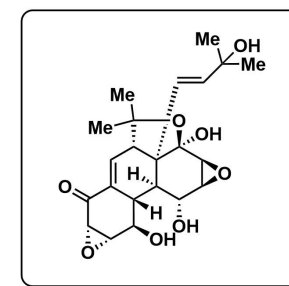
Porco, J.A., Jr.; Su, S.; Lei, X.; Bardhan, S.; Rychnovsky, S.D.

Angew. Chem. Int. Ed. **2006**, 35, 5790 – 5792



Proposed structure for Hexacyclinol by U. Gräfe

- Structure proposed by U. Gräfe (*J. Antibiotics* **2002** 814) isolated from fungus *panus rudis* found in sibiria
- Allegedly first total synthesis by J.J. La Clair (34 Steps) (*Angew. Chem. Int. Ed.* **2006** 2769-2773 **Retracted 2012**)
- NMR DFT prediction by S.D. Rychnovsky (*Org. Lett.* **2006** 2895–2898) shows discrepancy between NMR spectra from naturally obtained hexacyclinol and Gräfes proposed structure
- S.D. Rychnovsky noted similarities of the spectral data to previously synthesized panepophenanthrin by J.A. Porco
- Rychnovsky also believed that hexacyclinol could be an isolation artefact deriving from panepophenanthrin (later refuted by J.A. Porco)



Panepophenanthrin

Bonus question: How could panepophenanthrin react to hexacyclinol during silica gel chromatography purification?