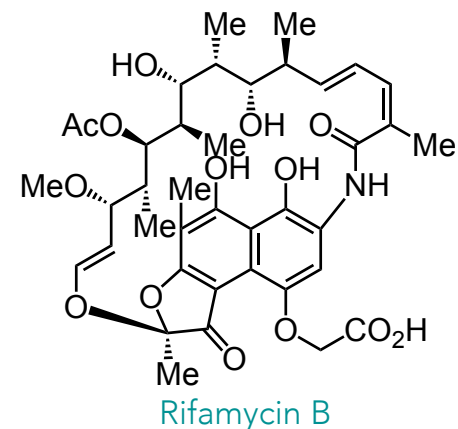

Oppolzer Sultam Chiral Auxiliary

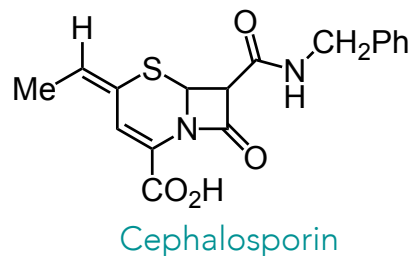
Samantha Grosslight
Reagent of the month
2018-09-25

Wolfgang Oppolzer

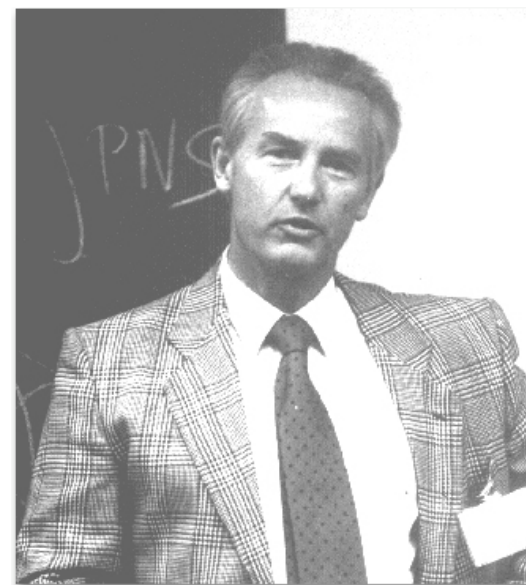
- 1964: PhD ETH Zurich
Dr. V. Prelog
Determining the structure of rifamycinins
- 1964-1965: Postdoc Harvard
Dr. E.J. Corey
Alkylidene transfer from sulfonium ylides



- 1965-1967: Postdoc
Dr. R.B. Woodward (in Basel)
Synthesis of cephalosporin
- 1967-1974: Research chemist at Sandoz
Synthesis of N-heterocycles

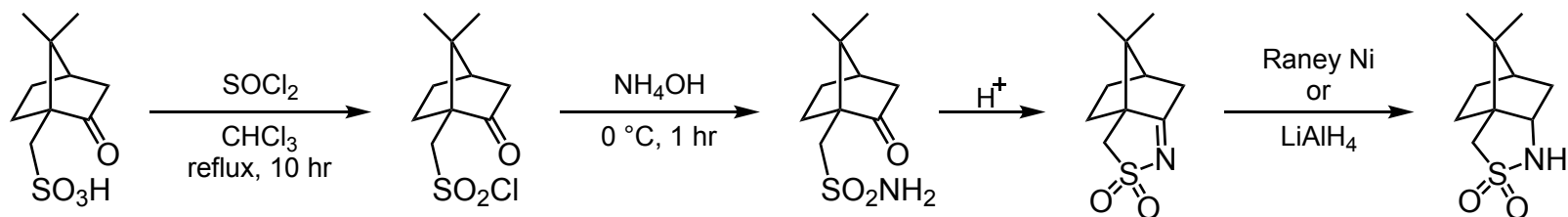


- 1974-1996: University of Geneva
Focused on: stereocontrolled cycloadditions
Asymmetric synthesis



Oppolzer sultam

Synthesis of Oppolzer sultam (Camphor sultam)

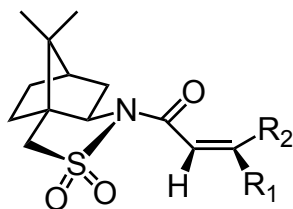


- Oppolzer- LiAlH_4 method
- Also known as bornanesultam
- Enantiomers are commercially available

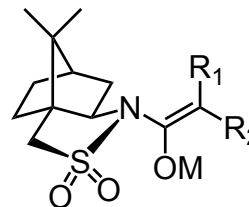
Oppolzer sultam

■ Oppolzer sultam reactivity

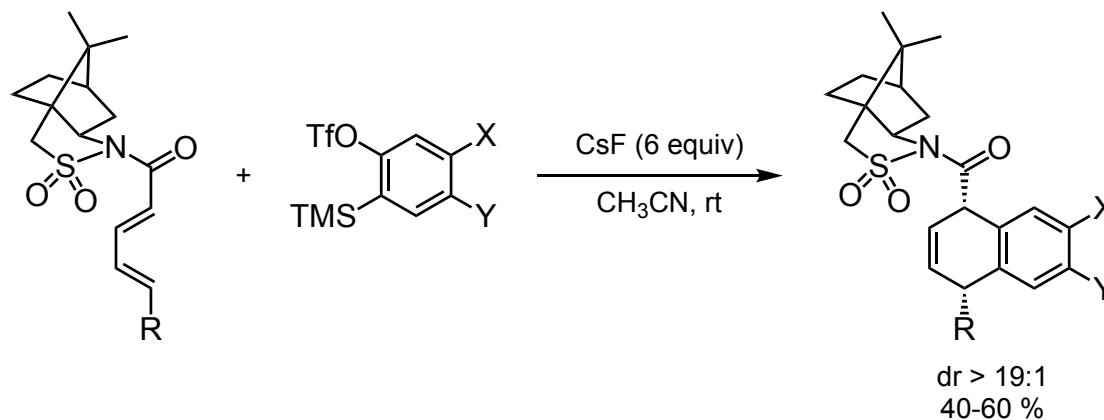
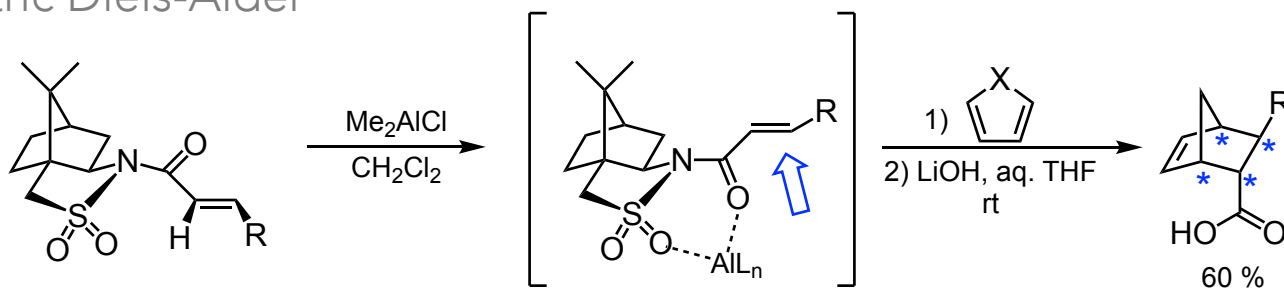
N- α,β -Enone Sultams



Sultams Enolates

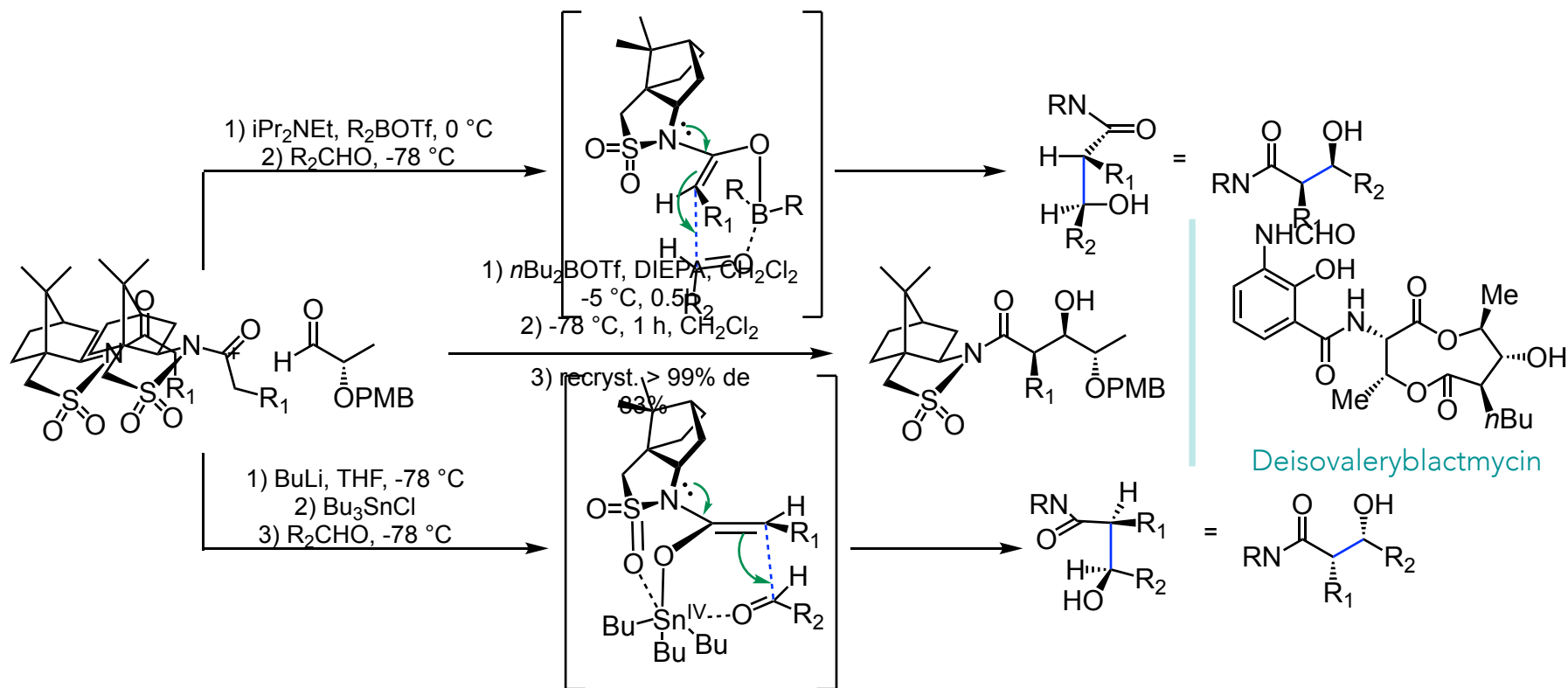


■ Asymmetric Diels-Alder



Oppolzer sultam

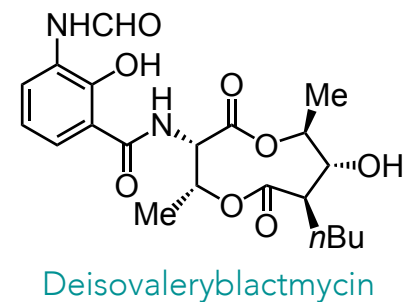
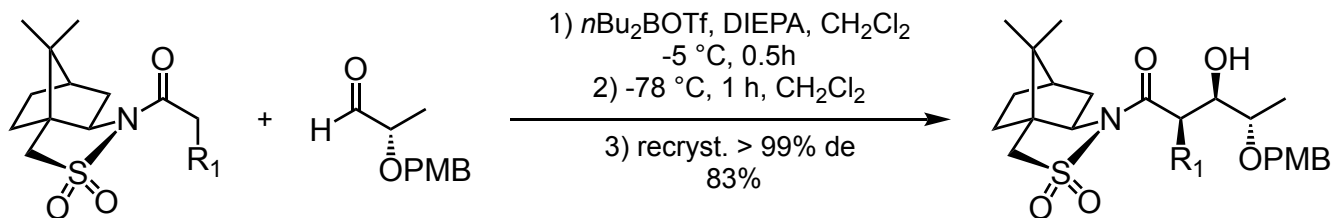
- Selectivity based on chelation



- Yields following removal of sultam ranged from 70-90%

Oppolzer sultam

- Selectivity based on chelation



- Recent example α -hydroxylation of amides