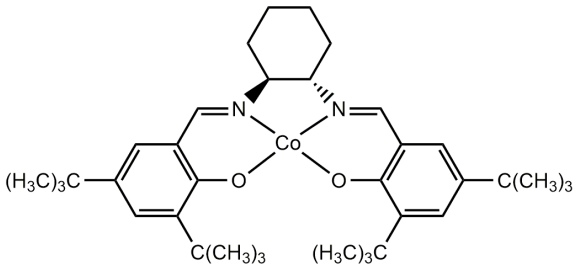
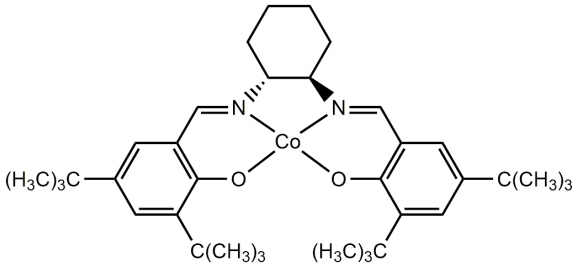
REACTIONS

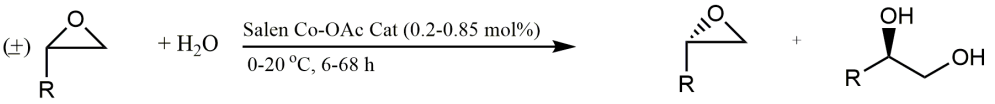


(S, S)-Jacobsen's Salen Co catalyst

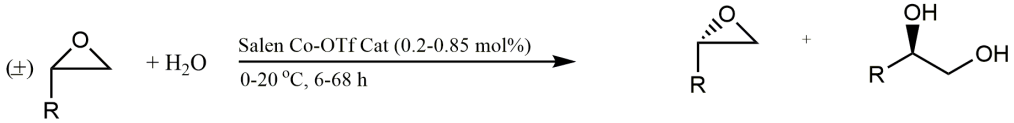


(R, R)-Jacobsen's Salen Co catalyst

A) HYDROLYTIC KINETIC RESOLUTION (HKR) OF TERMINAL EPOXIDES:

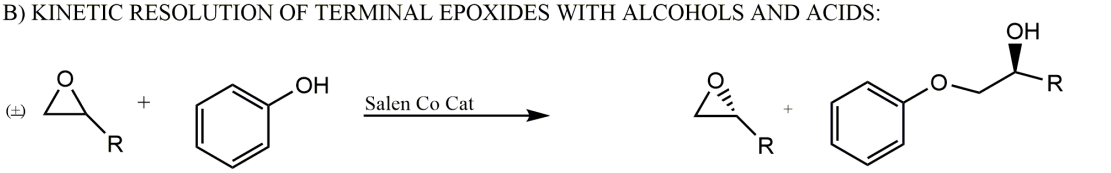


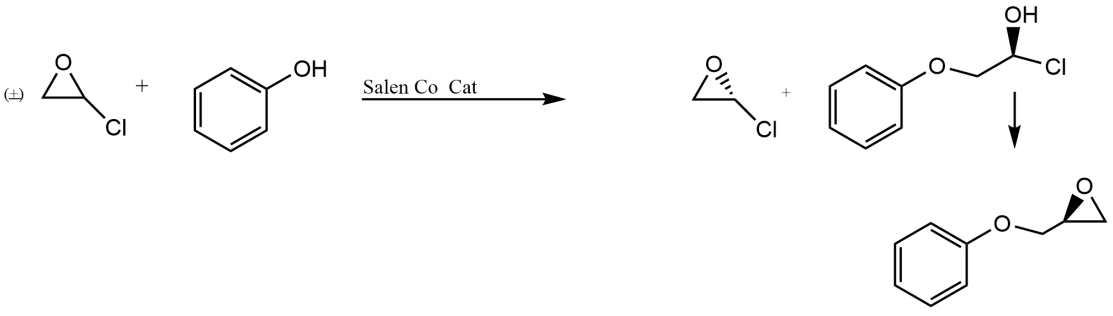
1. Science, 1997, 277, 936-938
2. T. Asymmetry, 1997, 8, 3927-3933
3. J. Org. Chem., 1998, 63, 6776-6778
4. J. Am. Chem. Soc., 2002, 124, 1307-1315

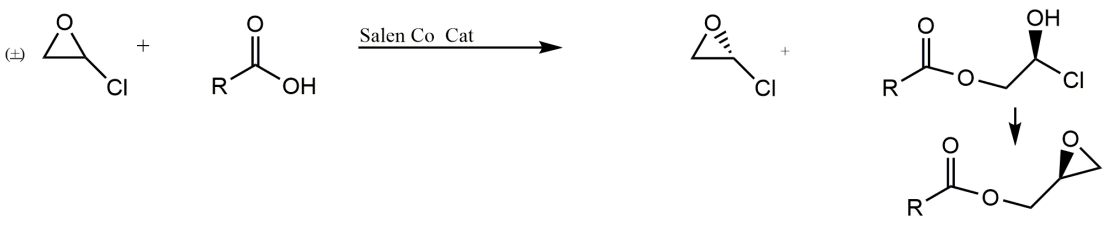


1. J. Am.Chem.Soc., 2004, 126, 1360-1362
2. Org. Synth., 2006, 83, 162
3. J. Org. Chem, 2012, 77, 2486-2495

B) KINETIC RESOLUTION OF TERMINAL EPOXIDES WITH ALCOHOLS AND ACIDS:

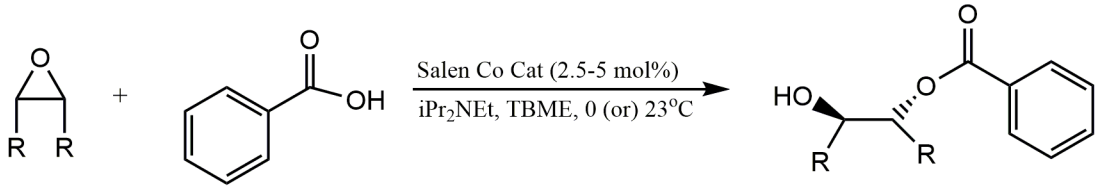






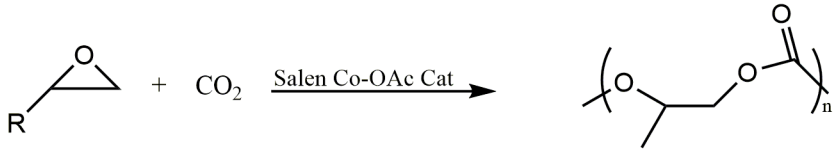
J. Am. Chem.Soc., 1999, 121, 6086

C) ASYMMETRIC RING OPENING OF MESO EPOXIDES:



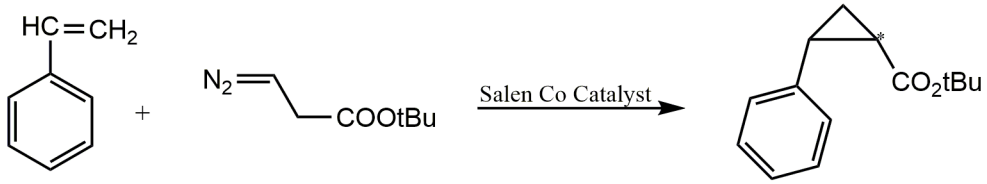
T. Lett., 1997, 38, 773-776

D) COPOLYMERIZATION OF EPOXIDE AND CARBON DIOXIDE:



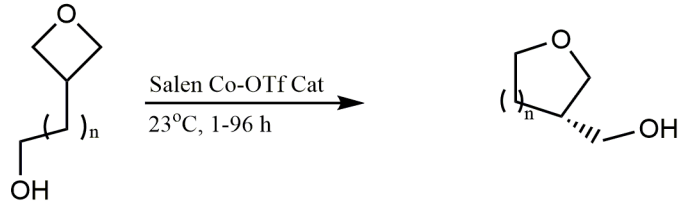
J. Am. Chem.Soc., 2005, 127, 10869

E) ASYMMETRIC CYCLOPROPANATION OF STYRENE:



Adv. Synth. Catal., 2001, 343, 79

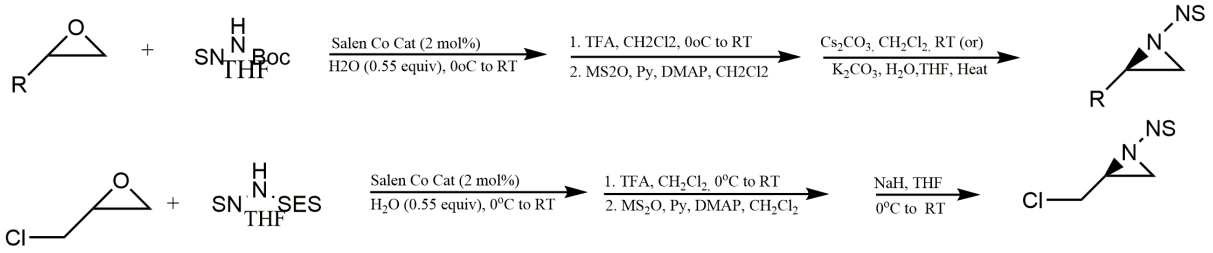
F) ASYMMETRIC OXETANE RING OPENING REACTIONS:



J. Am. Chem.Soc., 2009, 131, 2786-2787

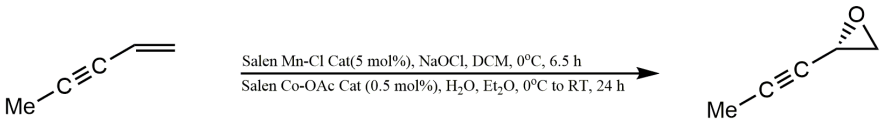
APPLICATIONS

1) PREPARATION OF TERMINAL AZIRIDINES:



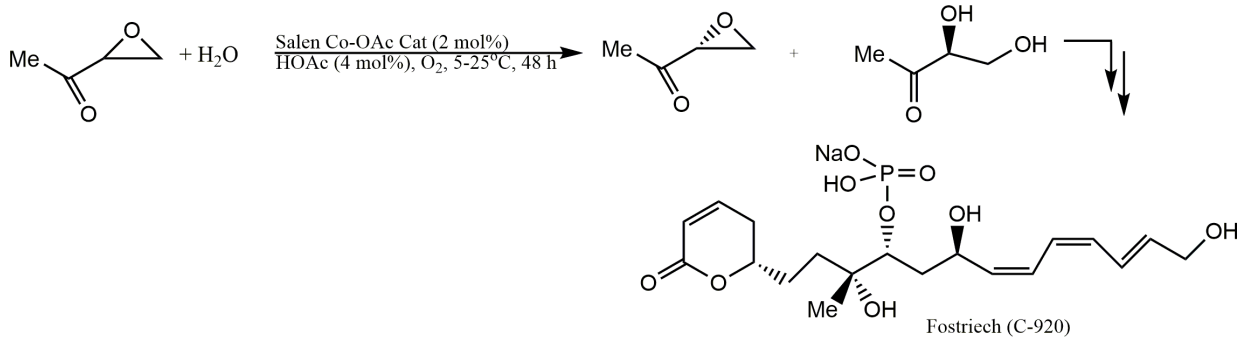
Angewd. Chem. Intl. Ed., 2004, 43, 3952-3954

2) PREPARATION OF TERMINAL ALKYNYL EPOXIDES:



Angewd. Chem.Intl. Ed., 2010, 49, 6147-6150

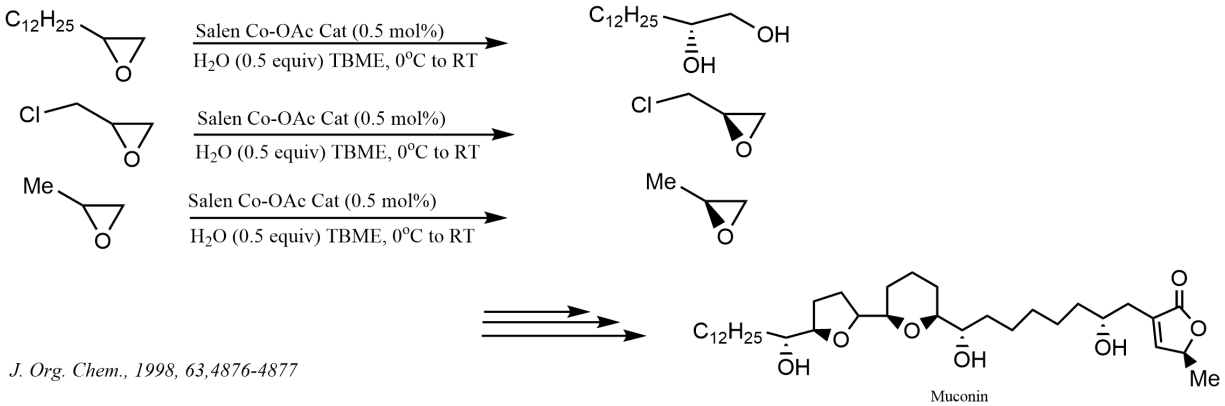
3) TOTAL SYNTHESIS OF FOSTRIECH:



Fostriech (C-920)

Angewd. Chem. Intl. Ed., 2001, 40, 3667-3670

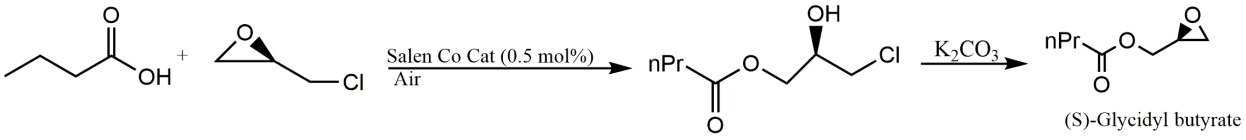
4) TOTAL SYNTHESIS OF MUCONIN:



Muconin

J. Org. Chem., 1998, 63,4876-4877

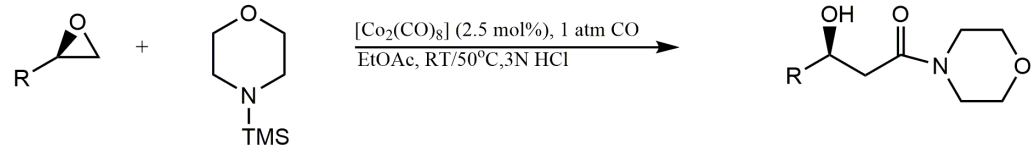
5) SYNTHESIS OF GLYCIDYL BUTYRATE BY REGIOSELECTIVE RING OPENING OF RESOLVED EPICHLOROHYDRIN WITH BUTYRIC ACID:



(S)-Glycidyl butyrate

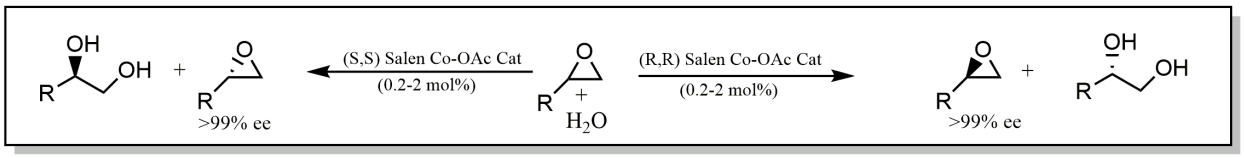
J.Am. Chem. Soc., 1999,121,6086

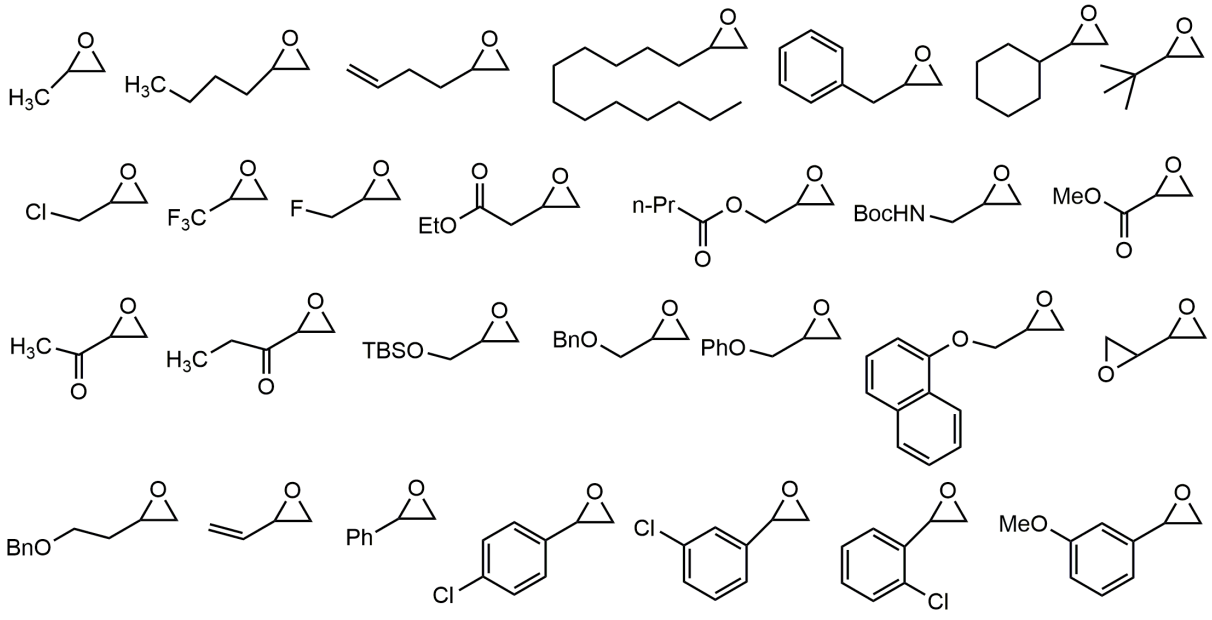
6) CONVERSION OF EPOXIDES TO B-HYDROXY MORPHOLINO AMIDES:



Angewd. Chem. Intl. Ed., 2002, 41, 4703-4705

LIST OF EPOXIDES SUCESSFULLY SEPARATED THROUGH HKR BY USING JACOBSENS SALEN COBALT CATALYST:





Adv. Synth. Catal., 2001, 343, 5