

Organometallics Chemistry

(CHEM-753)

Online Lectures (OrganoSi & Sn)

Dr Abdul Rauf Raza
(*Associate Professor*)
Department of Chemistry
University of Sargodha, Sargodha

Periodic Table

s-Block metals

Group-I Group-II

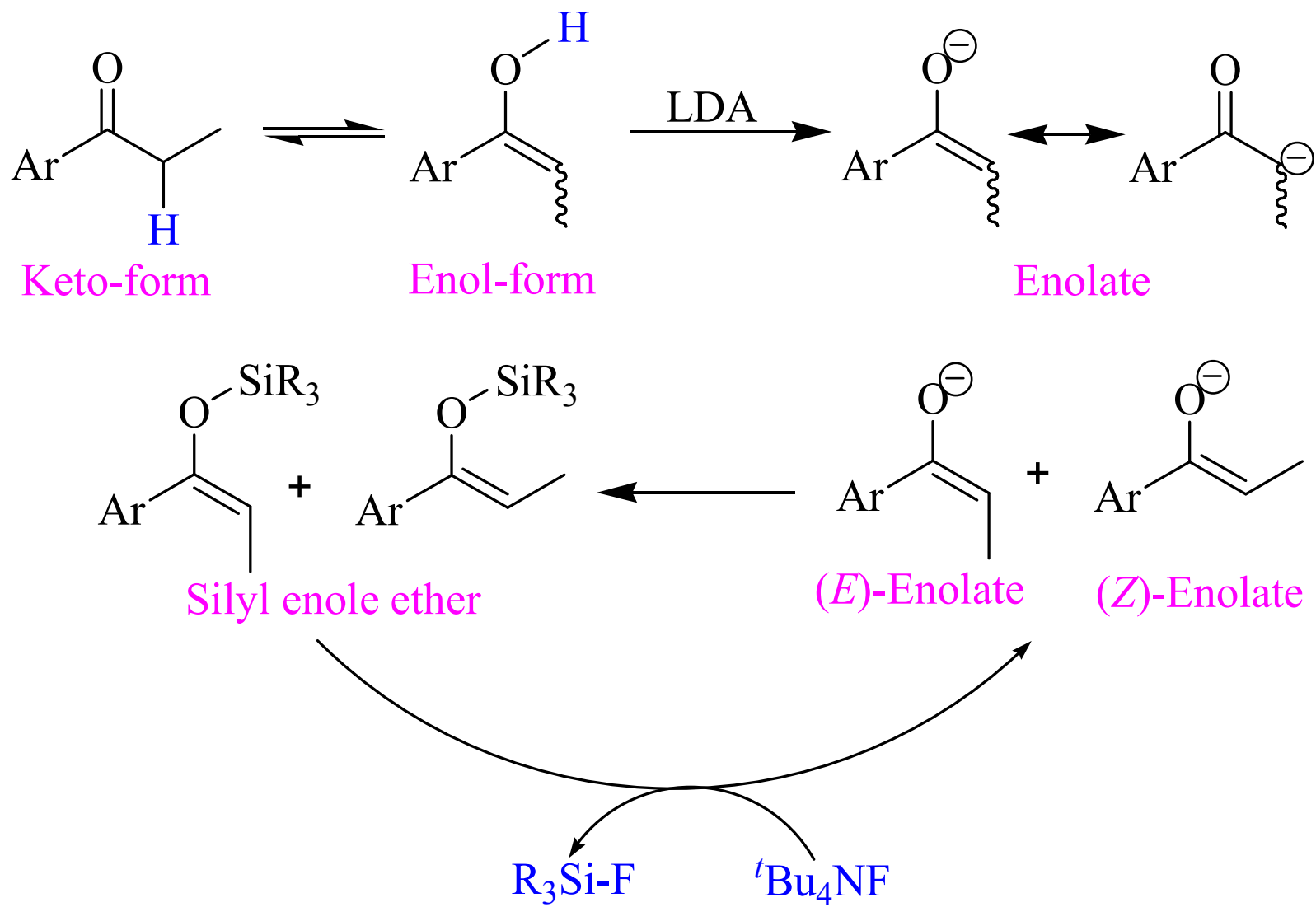
d-Block metals

p-Block Elements

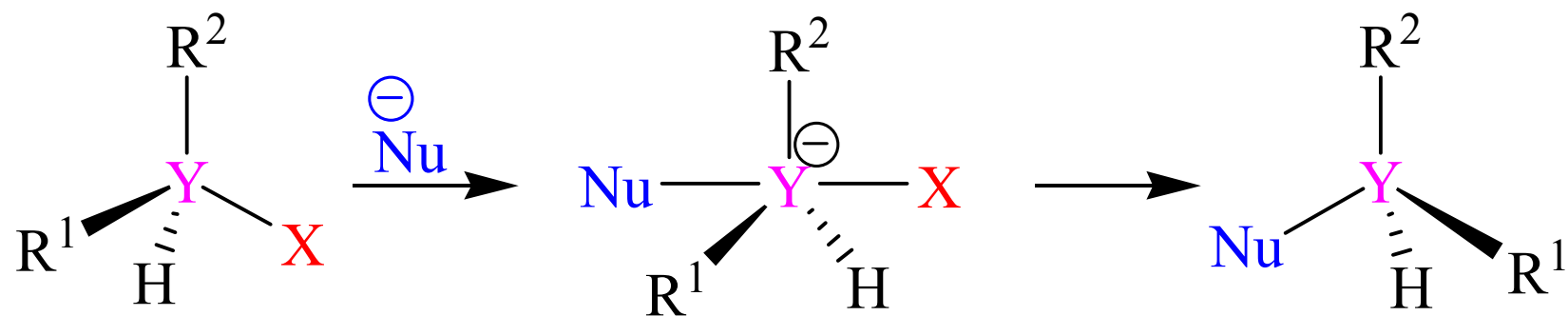
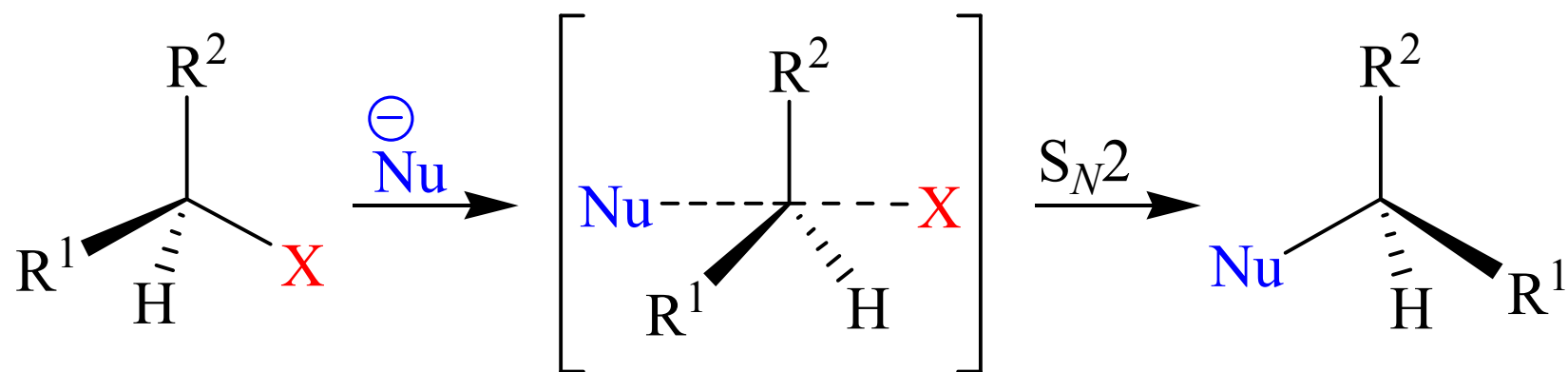
XIII XIV

H														
Li	Be											B	C	
Na	Mg											Al	Si	
		III	IV	V	VI	VII	VIII	IX	X	XI	XII			
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	
Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	
Fr	Ra													

OrganoSi

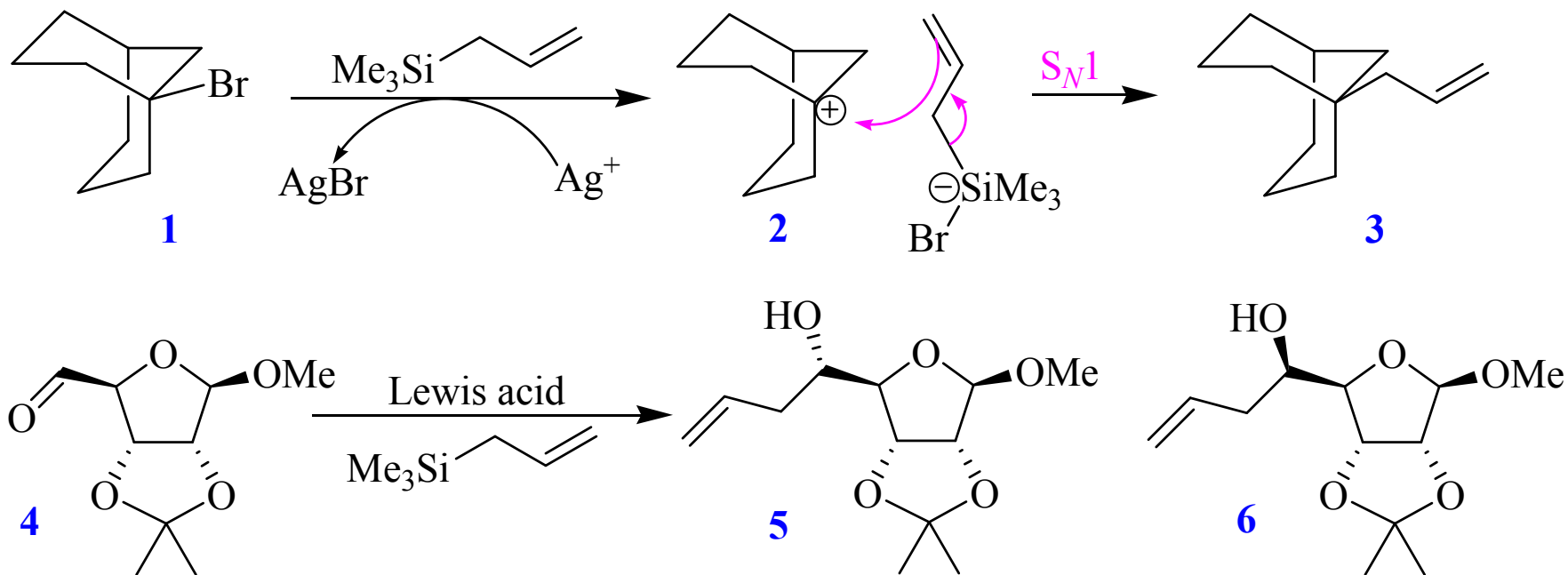


Mechanism of Substitution



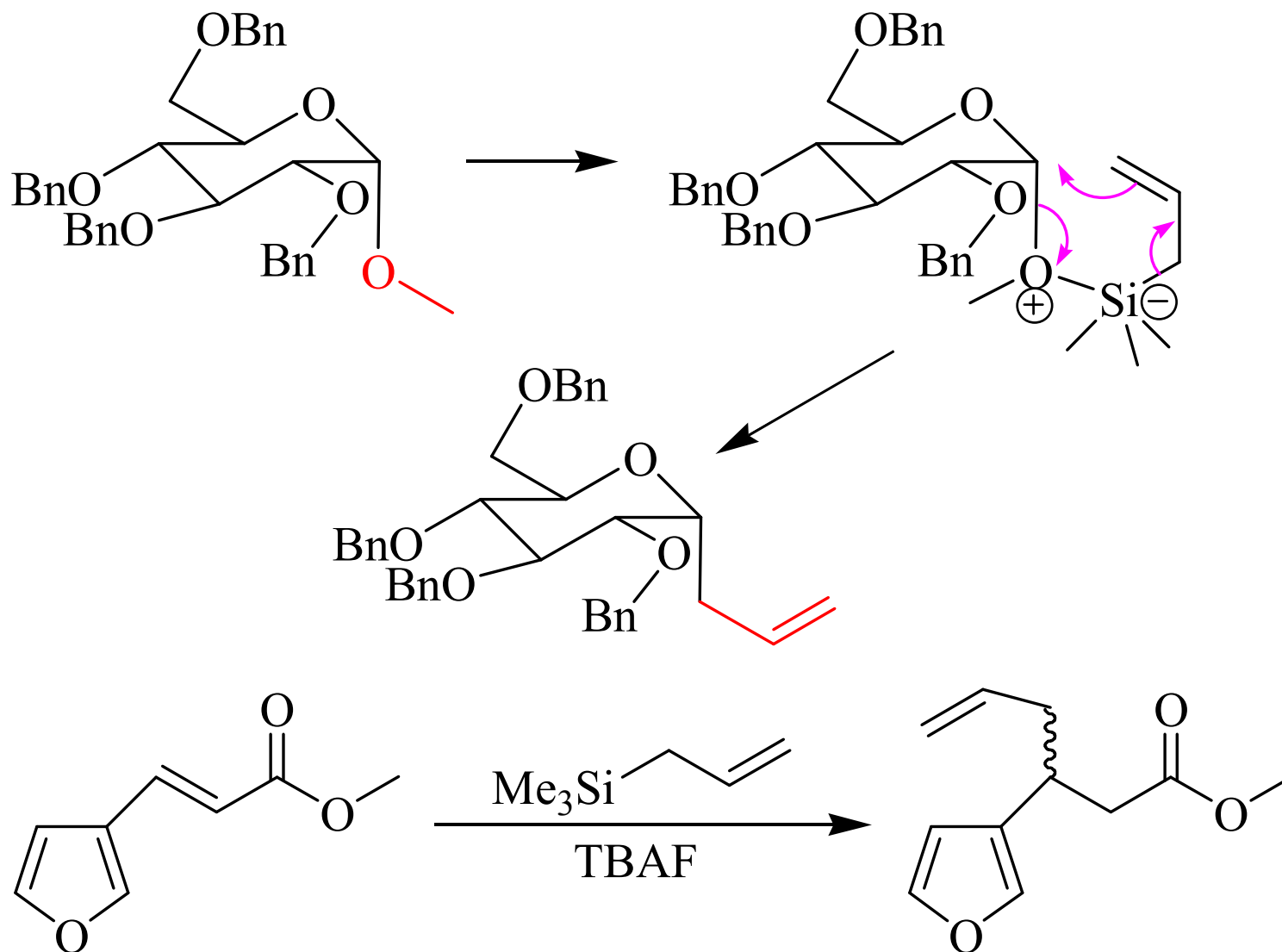
$Y = Si, Sn$

Application of OrganoSi

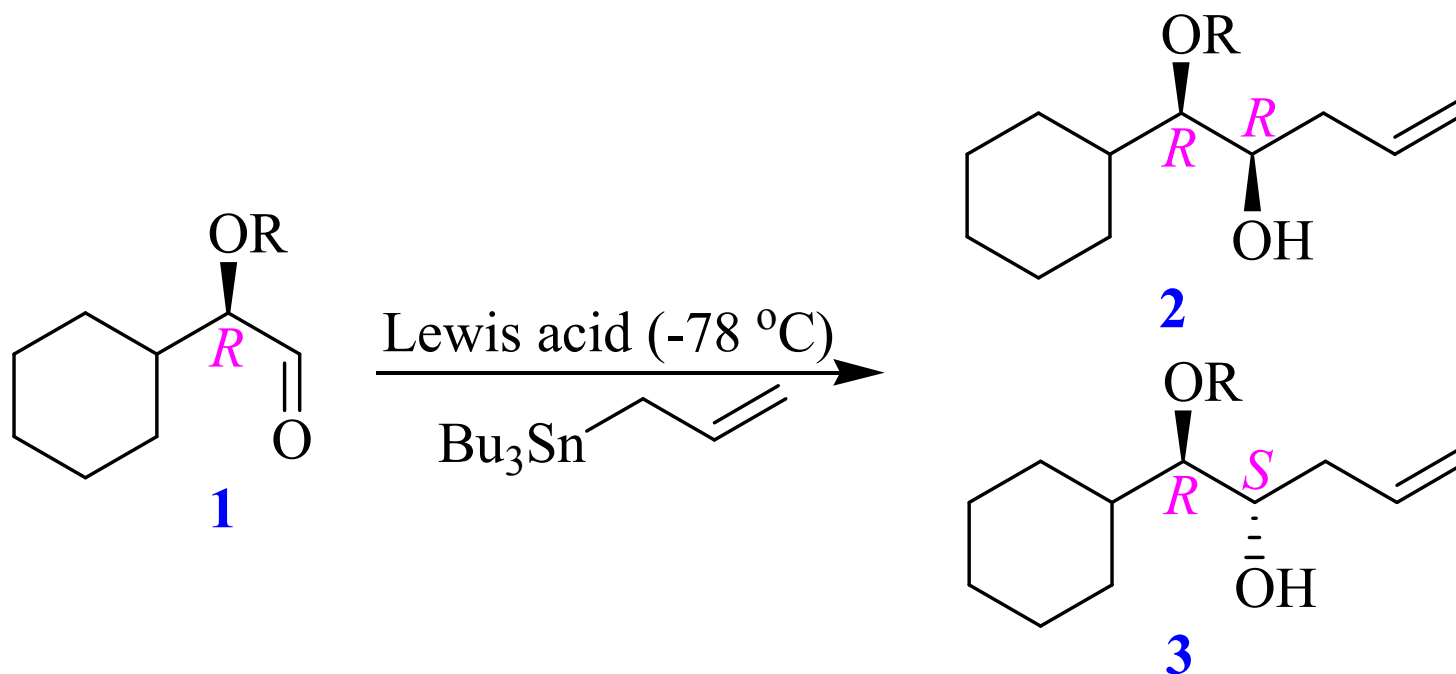


Lewis acid	5	6
TiCl_4	20	1 (89%)
$\text{F}_3\text{B}\cdot\text{OEt}_2$	1	90 (80%)

Application of OrganoSi

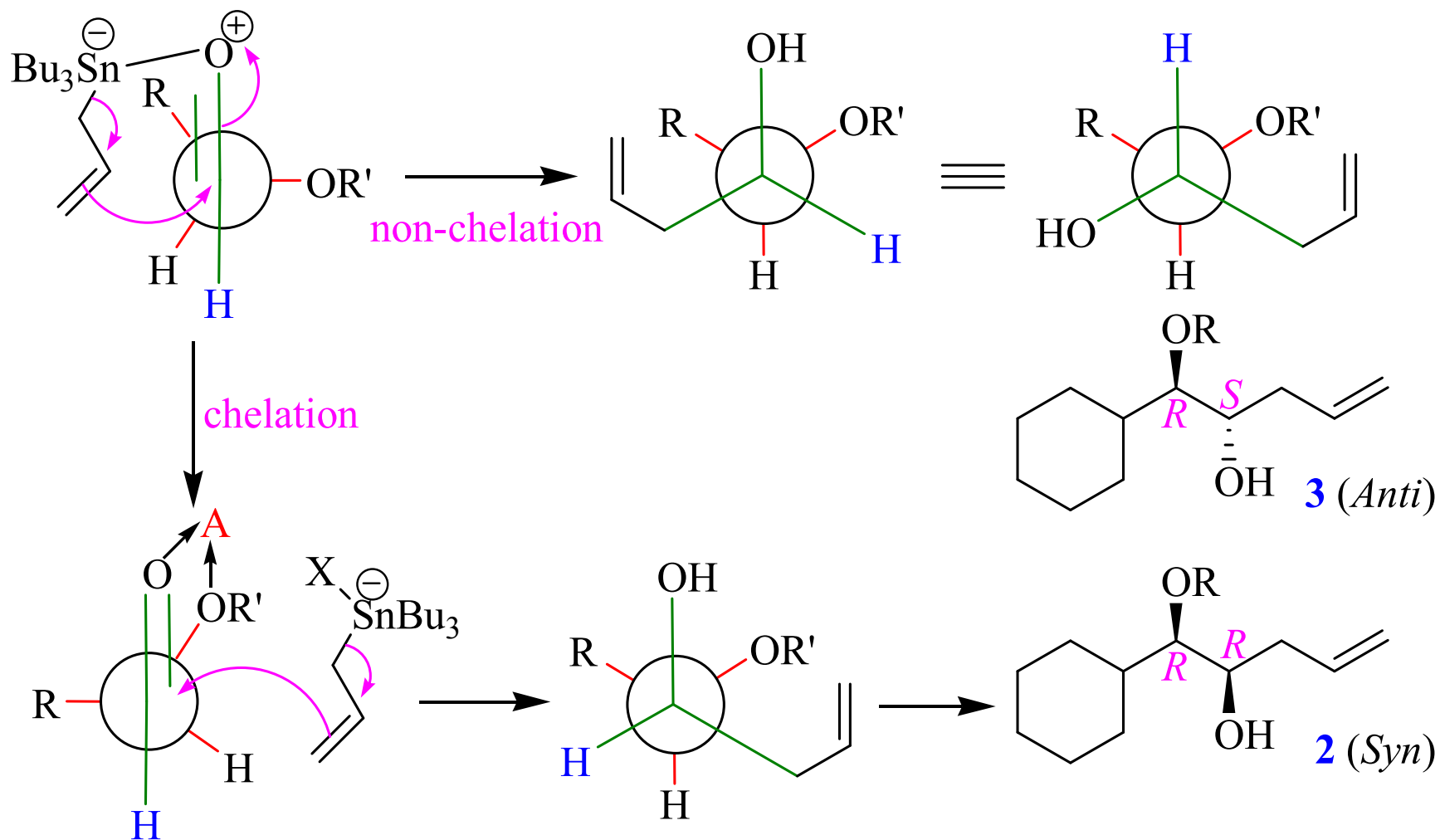


Application of OrganoSn



R	Lewis acid	2 : 3
Bn	MgBr_2	250 : 1
	$\text{F}_3\text{B.OEt}_2$	39 : 61
$\text{Si}(\text{M}_2)_2^t\text{Bu}$	MgBr_2	21 : 79
	$\text{F}_3\text{B.OEt}_2$	9 : 91

Mechanism



Application of OrganoSn

