Summary of alkene reaction

Alkene to alkyl halidealkene + HX (hydrogen halide)HalohydrinX^2 + H2O , antiaddition, halonium intermediate (bromonium ion, andAlcohol oxymercurationHg(OAc)2 +H2O+ NaBH4 (markonikov)HydroborationBH3 + H2O2 H---C----C---OHHydrogenation (alkene to Alkane)syn-addition (reduction) , adding H2 platinum palladium

syn stereochemistry- both hydrogens add to the double bond

Alkene --> Epoxyalkene + peroxyAlkene --> CarbonylO3 +Zn

Cleavage to carbonyl compounds

Generating Carbenechloroform + KOH or NaOH, OH takes away hydrogen from Chloroform, and Cl leaves CCl3, attaches to Na or K, leaving CCl2 (a carbene), which goes on to attach to an alkene, forming a cyclopropaneCyclopropanealkene +carbeneAlkene --> 1, 2 Diolsepoxide + H30+syn addition(for hydrogenation)- both hydrogens add to the double bond from the same faceHydrogenation is heterogenous, why? hydrogenation occurs onthe surface of a solid catalyst (platinum or paladium)dehydrohalogenationloss of an HX from an alkyl halide (elimination reaction) usually occurs by reaction of alkyl halide with strong base such as KOHdehydrationloss of water from an alcohol (elimination), often carried out in the lab by treatment of an alcohol with a strong acidanti-stereochemistrythe two bromine atoms in a halogenation of alkenes reaction come from opposite faces (trans 1, 2-Dibromo-cyclopentadiene) the cis is not formedHalogenation of alkenes intermediatebromonium ion ONSUMMARY OF ALKENE REACTION SPECIFICALLY FOR YOUFOR ONLY$13. 90/PAGEOrder Now