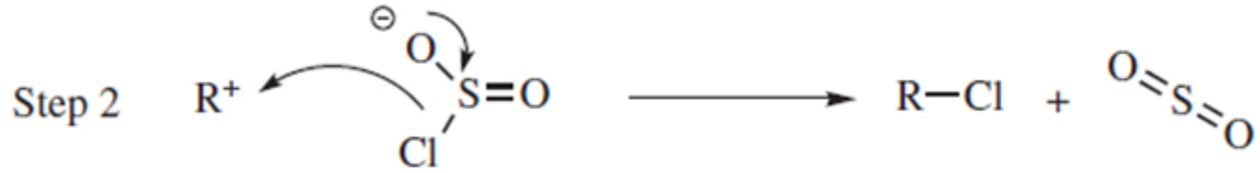
The SN^i Mechanism

unacademy

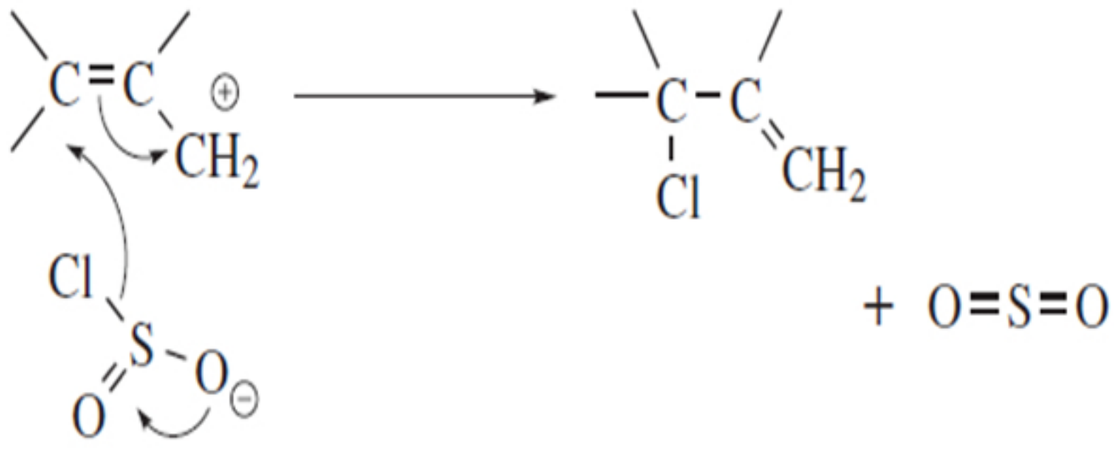
• Those nucleophilic substitution proceeds with retention of configuration, even where there is no possibility of a neighboring-group effect.

• The first step is the same as the very first step of the SN1 mechanism dissociation into an intimate ion pair. But in the second step part of the leaving group attacks, necessarily from the front since it is unable to get to the rear, which results in retention of configuration.



When a molecule has in an allylic position capable of giving the SN_i' reaction, it is possible for the nucleophile to attack at the g position instead of the a position. This is called the SNi0 mechanism and has been demonstrated on 2-buten-1-ol and 3-buten-2-ol, both of which gave 100% allylic rearrangement

Another example is the decomposition of ROCOCl (alkyl chloroformates) into RCl and CO_2



Elimination–Addition