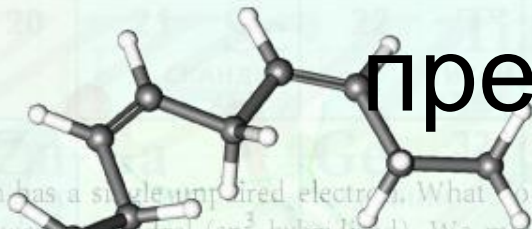
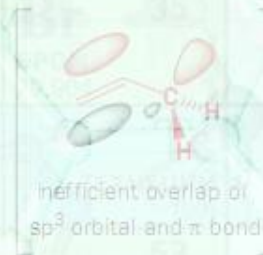


# Шаблон для презентации



Now the end carbon has a single unpaired electron. What do we do with it? Before the bond broke, the end carbon was tetrahedral ( $sp^3$  hybridized). We might think that the single electron would still be in an  $sp^3$  orbital. However, since an  $sp^3$  orbital cannot overlap efficiently with a  $\pi$  bond, the single electron would then have to be localized on the end carbon atom. If the end carbon atom becomes trigonal ( $sp^2$  hybridized), the single electron could be in a  $p$  orbital and this could overlap and combine with the  $\pi$  bond. This would mean that the radical could be spread over the molecule in the same orbital that contained the cation.



So once again we have two orbitals to share three electrons. In fact, the molecular orbital energy level diagram for this compound is *almost the same* as the one for the allyl cation: the only difference is the number of electrons in the  $\pi$  system. Whereas in the allyl cation  $\pi$  system we only had two electrons, here we have three (two from the  $\pi$  bond plus the single one). Where does this extra electron go? Answer: in the next lowest molecular orbital—the nonbonding molecular orbital.



Вы можете использовать данное оформление для создания своих презентаций.

Финк Вероника Георгиевна,  
Костанайская область

this MO now has one electron in it. It is known as the Singly Occupied Molecular Orbital (SOMO) of the molecule.

