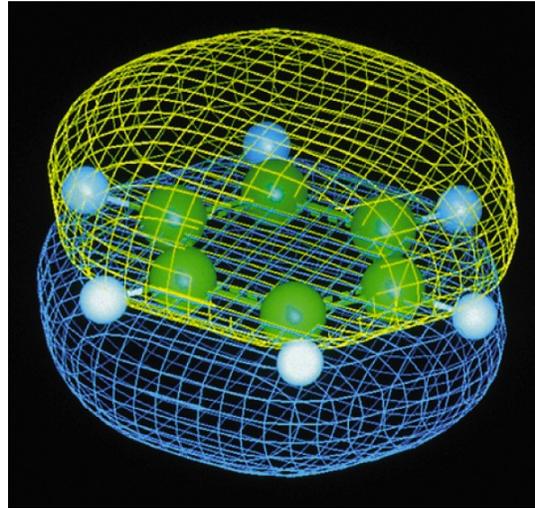




Química II

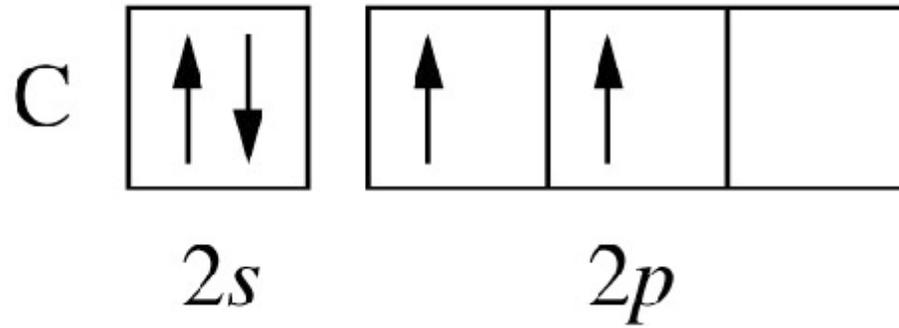


Hibridación del Carbono

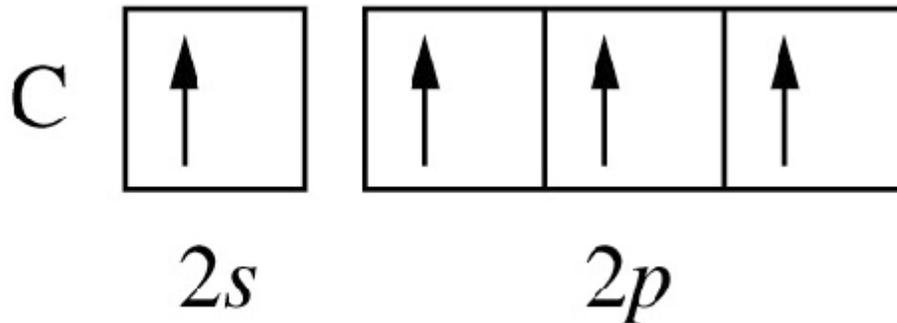
Curso 2006-2007

Hibridación de Orbitales Atómicos

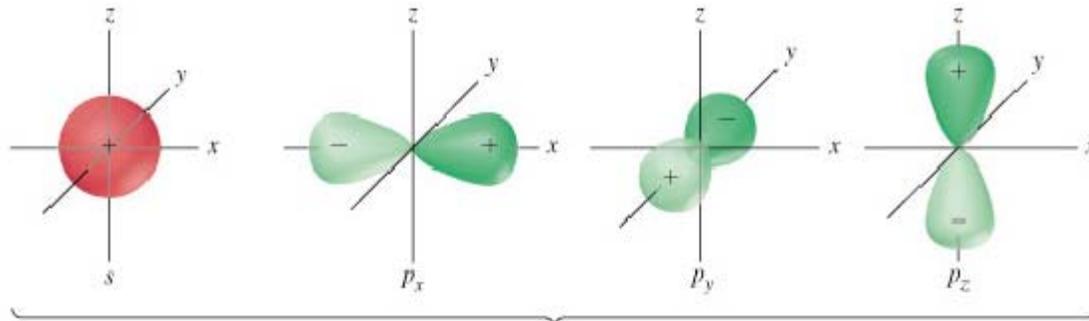
Estado Fundamental



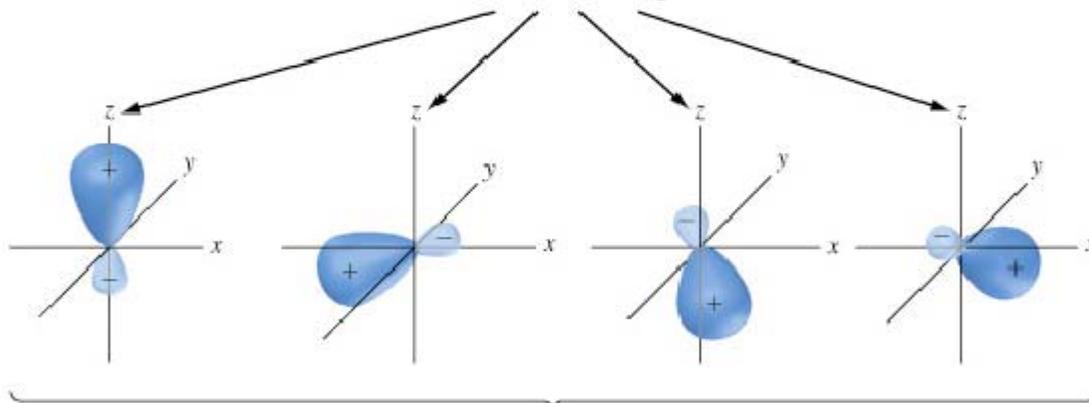
Estado excitado



Hibridación sp^3



Combinan para generar
cuatro orbitales sp^3



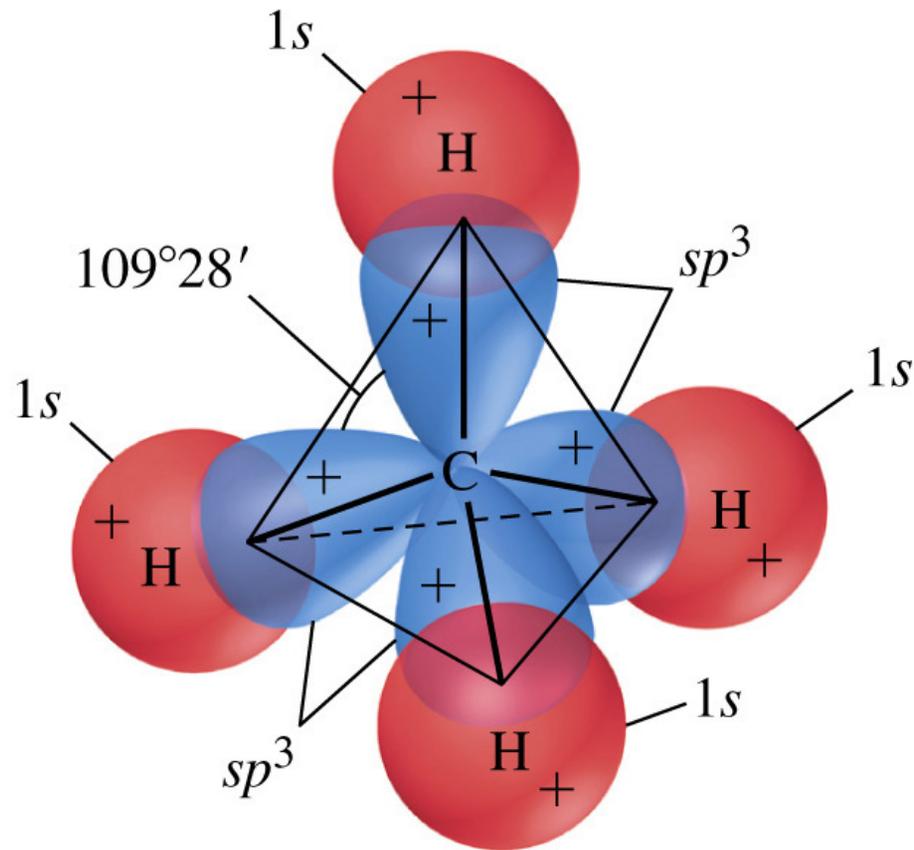
Que se representa como
el conjunto



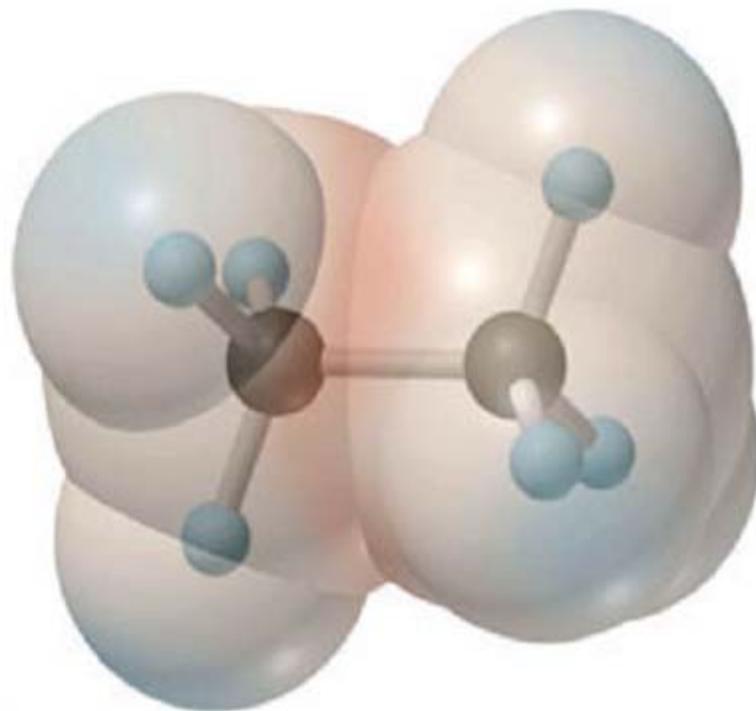
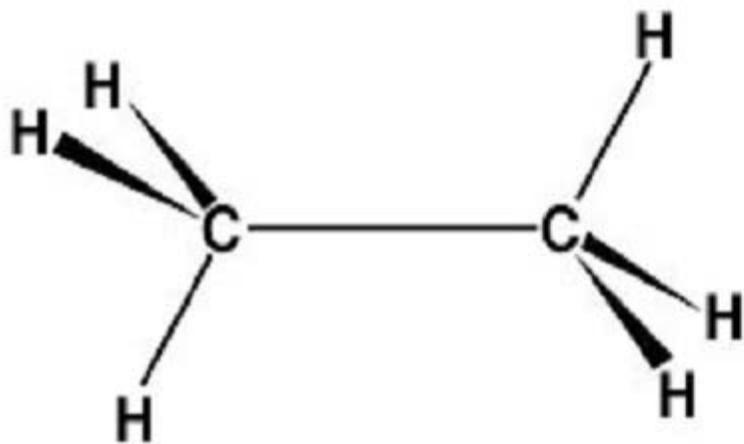
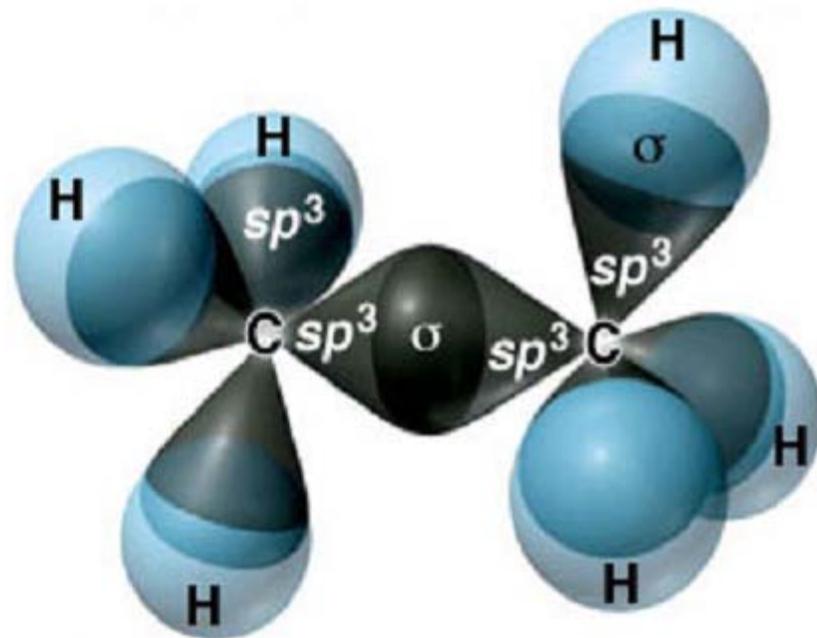
Hibridación sp^3



Enlaces en el Metano



Los enlaces σ en C_2H_6

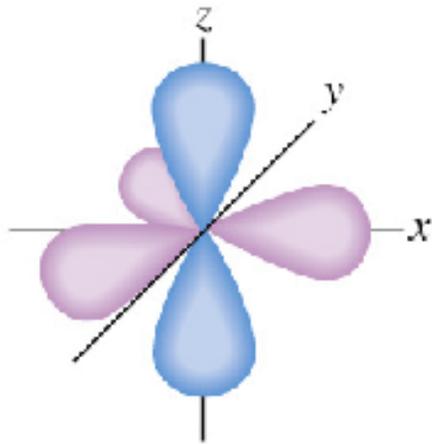


Enlaces covalentes múltiples

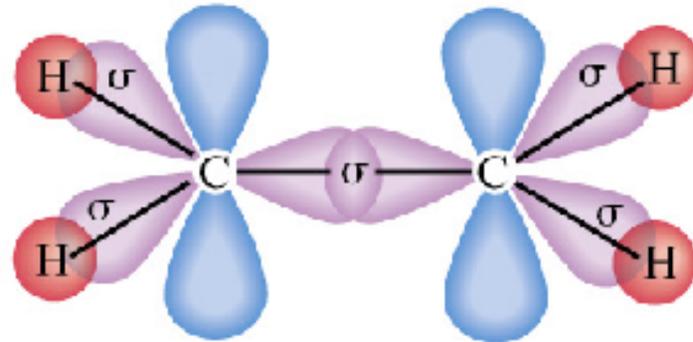
- El Etileno tiene un *doble* enlace en su estructura de Lewis.
- RPECV dice que el carbono tiene una estructura trigonal plana.



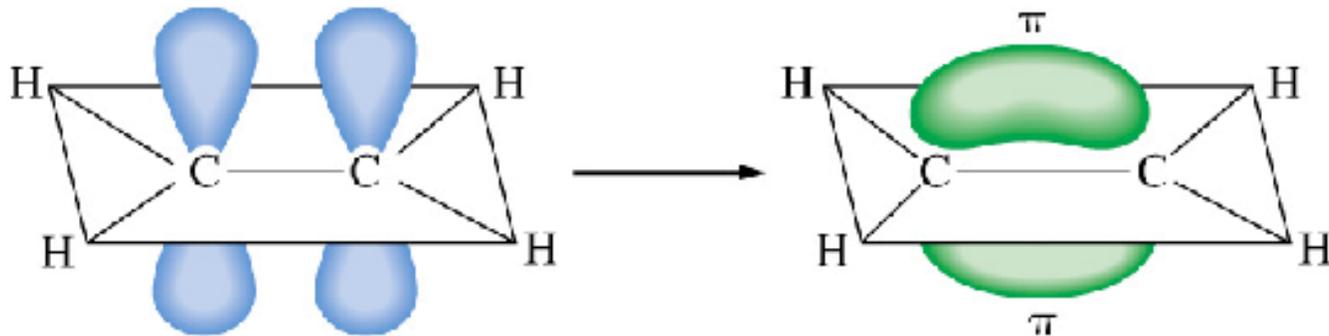
Etileno



Conjunto de orbitales $sp^2 + p$

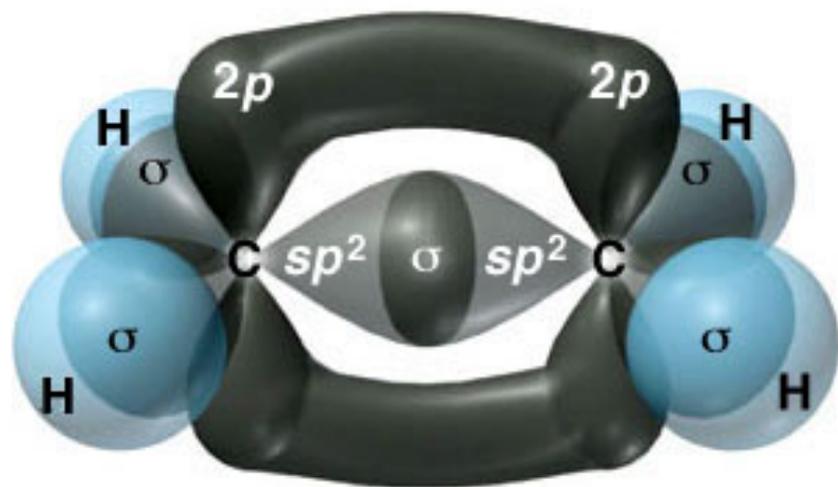


Enlaces Sigma (σ)

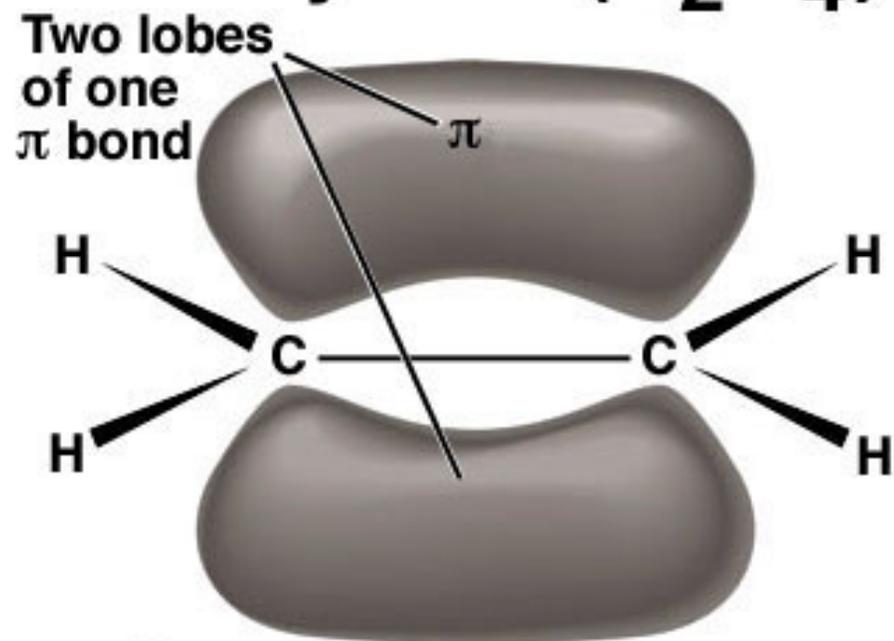


Solapamiento de orbitales p para dar enlaces pi (π)

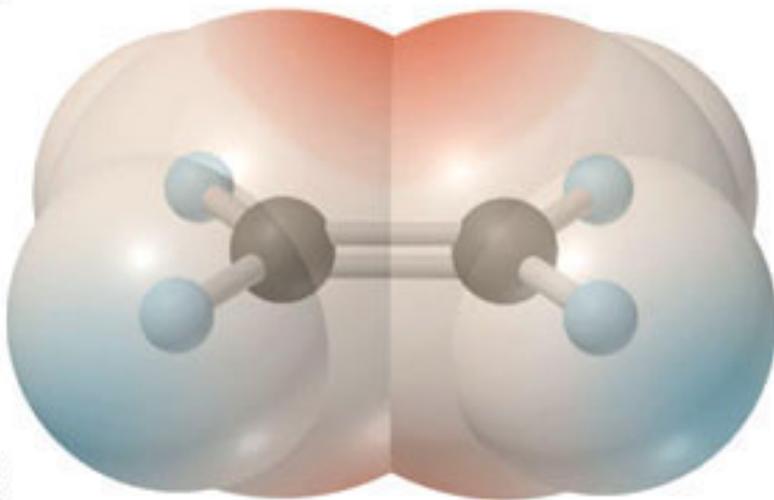
The σ and π Bonds of Ethylene (C_2H_4)



A



B

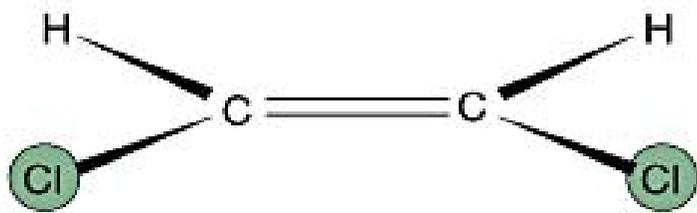
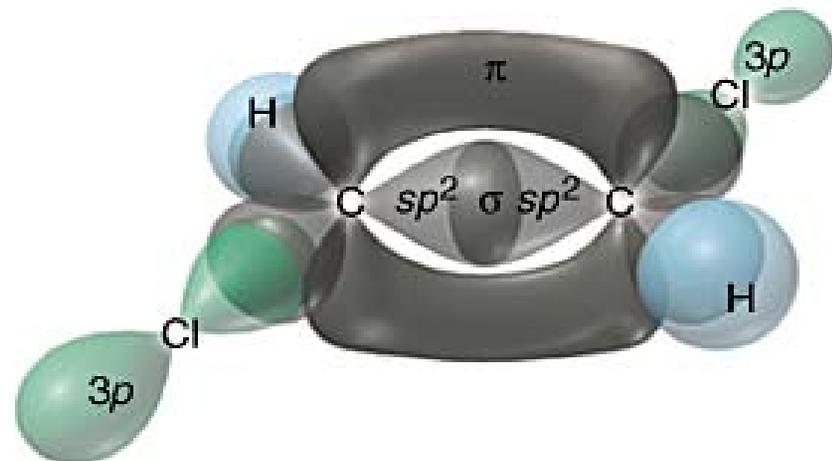
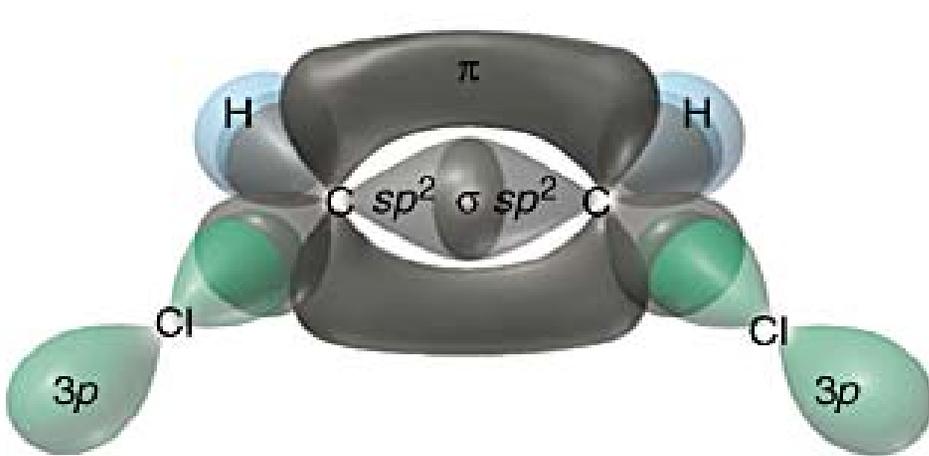


C

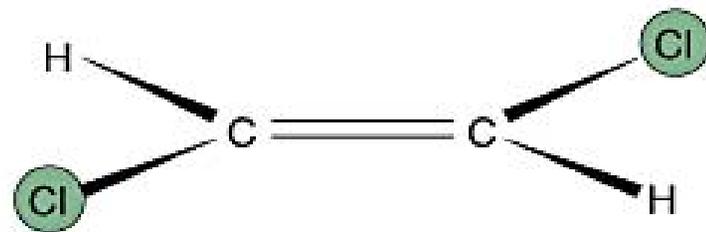


D

Rotación impedida de moléculas con enlaces π



A



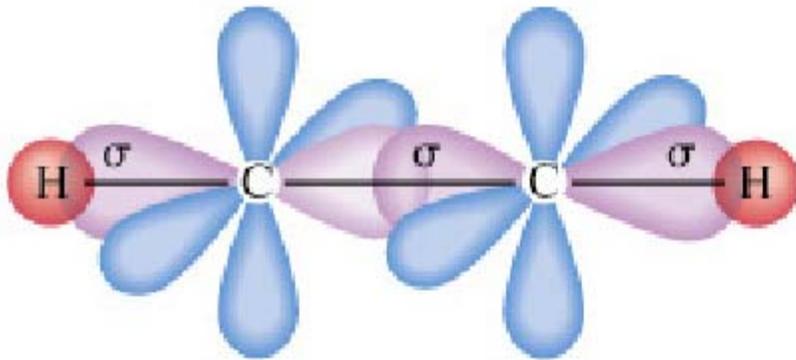
B

A) Cis - 1,2 dicloroetileno

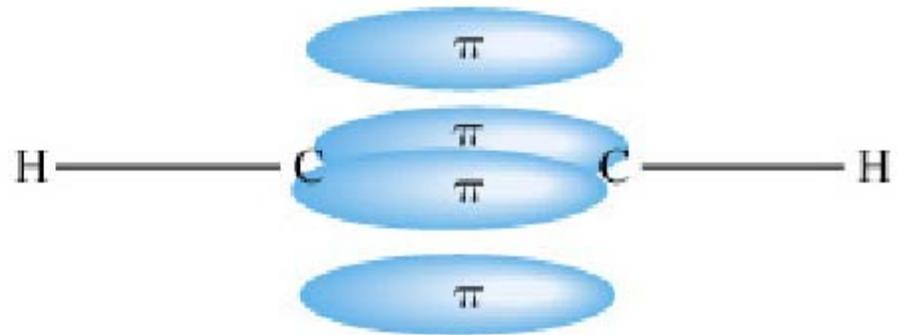
B) trans - 1,2 dicloroetileno

Acetileno

- El Acetileno, C_2H_2 , tiene un *triple* enlace.
- RPECV dice que el carbono es lineal.



Formación de enlaces σ

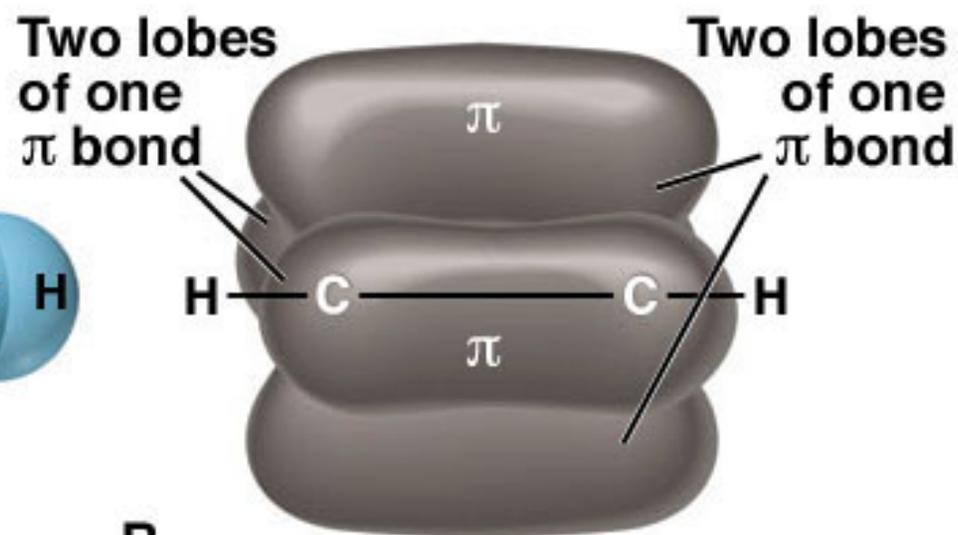


Formación de enlaces π

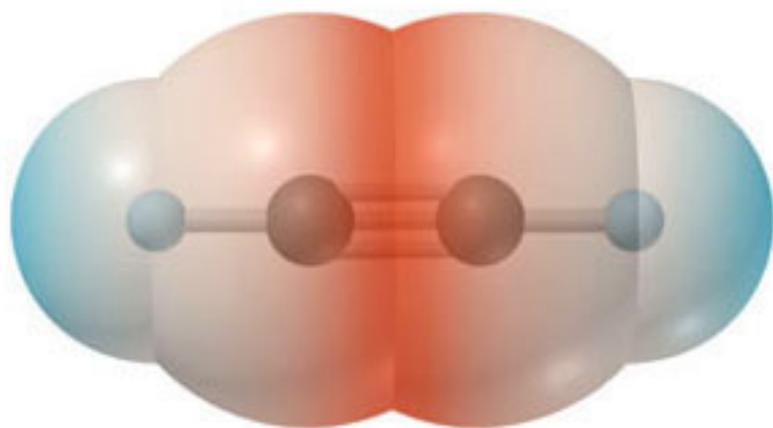
The σ and π Bonds of Acetylene (C_2H_2)



A



B



C



D