

Molecular / covalent compounds

Share e^- 's

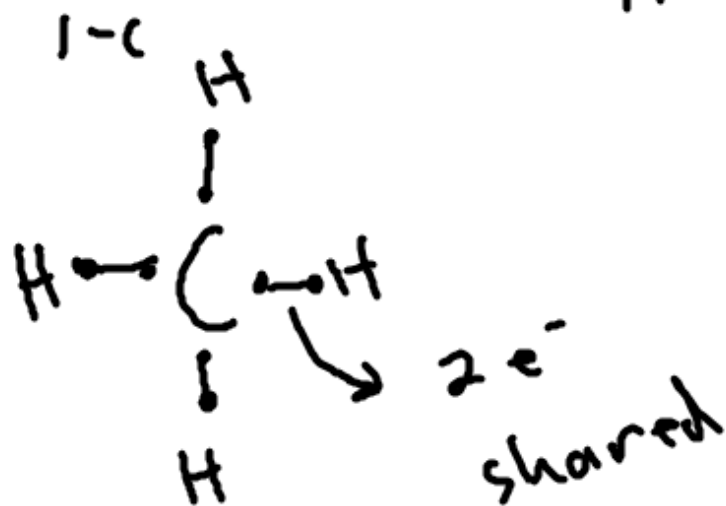
nonmetal - nonmetal

want 8 val e^- (H = only 2)

Lewis Structures (shapes)

methane

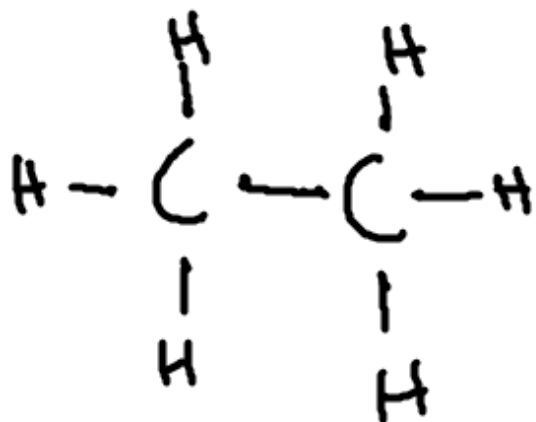
H.



val e⁻'s

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---------------------|-----|------|-----|-----|-----|-----|-----|------|
| val e ⁻ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Grp | 1 | 2 | 13 | 14 | 15 | 16 | 17 | 18 |
| | Li· | ·Be· | ·B· | ·C· | ·N· | ·O· | ·F· | ·Ne· |
| Free e ⁻ | 1 | 2 | 3 | 4 | 3 | 2 | 1 | 0 |
| # of bonds | 1 | 2 | 3 | 4 | 3 | 2 | 1 | 0 |

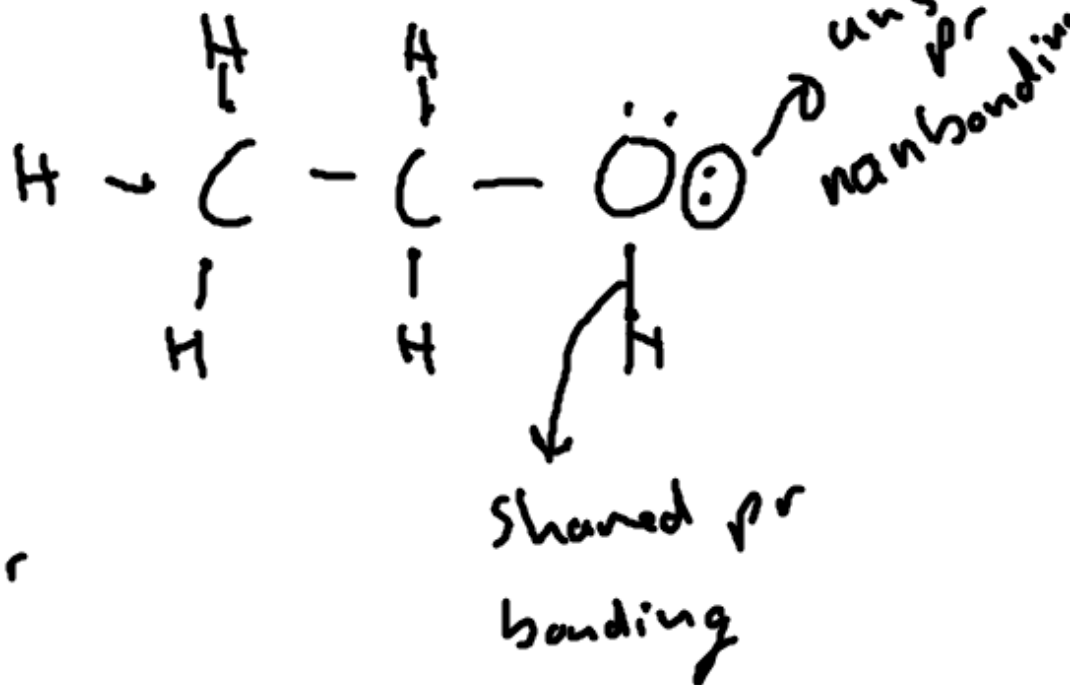
ethane



C_2H_6 - molecular

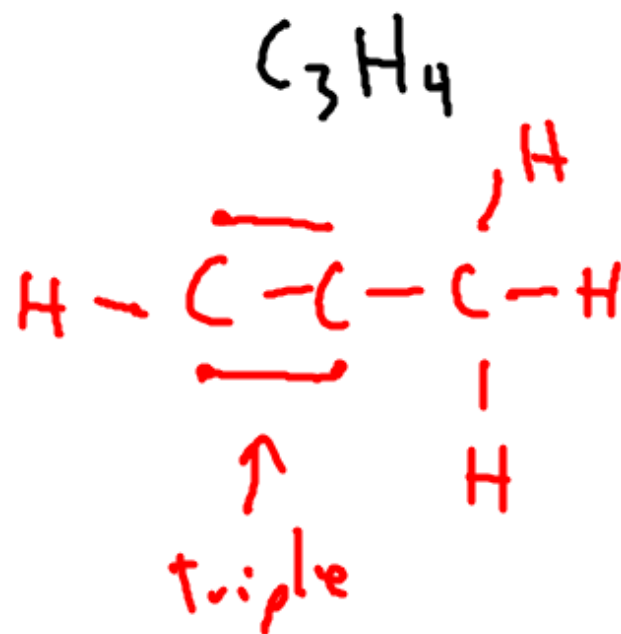
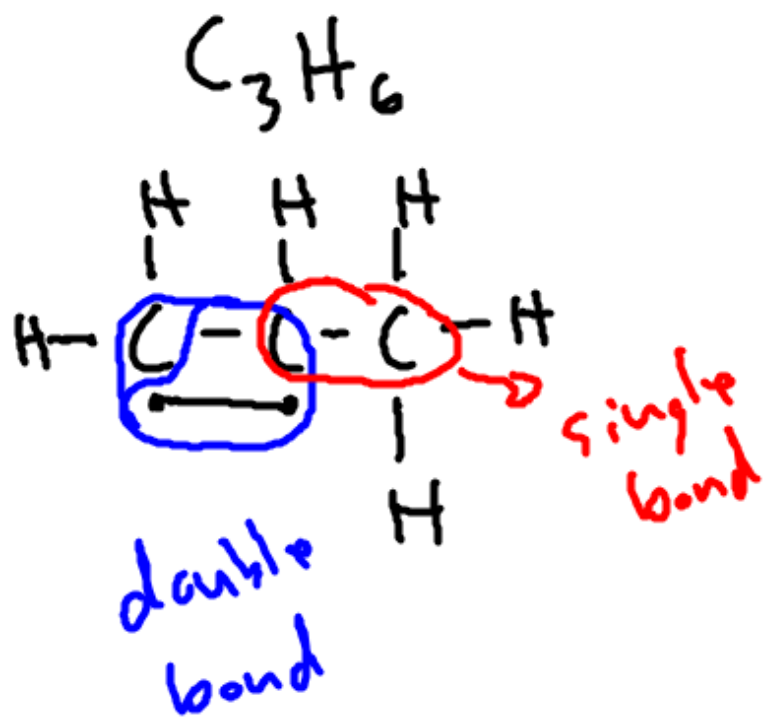
CH_3CH_3 - structural

(ethyl alcohol)
ethanol



C_2H_6O

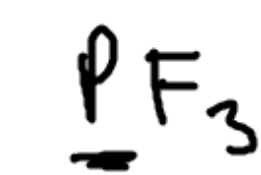
CH_3CH_2OH



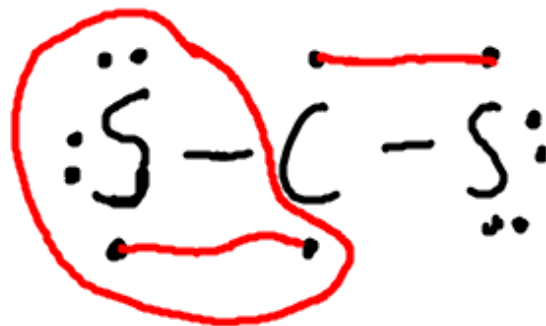
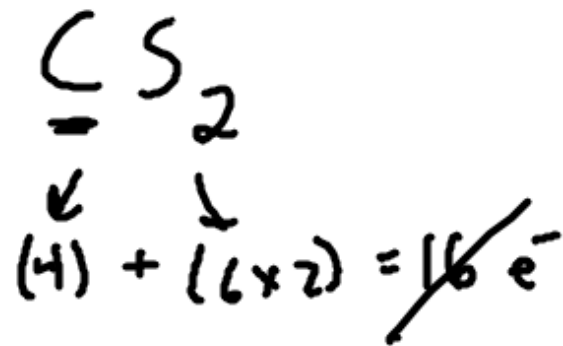
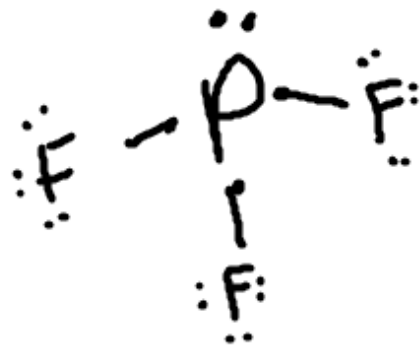
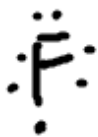
Bond length

triple < double < single

simple covalent



central



naming



phosphorus trifluoride



carbon disulfide



dinitrogen pentoxide

1-mono-

2-di

3-tri

4-tetra-

5-penta

6-hexa

7-hepta

8-octa

9-nona

10-deca