6.16: Examples of Lewis Structures

Here are a set of examples showing 3D twirlymol molecular models of from other sections in the text, along with Lewis structures of these molecules as well. It is useful to see what can be conveyed via 3D models, molecular geometry for instance, and what is conveyed by Lewis structure models, an example being the assignment of electrons around atoms and assignment of electrons for bonding. An important clarification, is that the twirlymols display *connections*, not bonds, so double and triple bonds do not show up. Double and triple bonds are shown in the Lewis structures. Molecules from a common page are grouped together, with a link back to the original page.

From Deciding on a Skeleton Structure

Hypochlorous Acid: $HOCl$

From Multiple Bonds

Formaldehyde: CH_2O

Carbon Monoxide: CO

Methanol: CH_3OH

Ethene: C_2H_4

Carbon Dioxide: CO_2

From An Excess of Bonds

Perchloric Acid: $HClO_4$

Nitrous Oxide: N_2O

From Resonance

Ozone: O_3

Carbonate Ion: CO_3^{2-}

From Polyatomic Ions

Sulfate Ion: $SO_4{}^{2-}$

Hydroxide Ion: OH^-

Hydronium Ion: H_3O^+

Ammonium Ion: $NH_4{}^+$

Sulfite Ion: $SO_3{}^{2-}$

Miscellaneous

Acetic Acid: CH_3COOH

Ammonia: NH_3

Contributors