

Practice – Lewis Structures

Model the following compounds with Lewis structures using the strategies and techniques discussed in class.

<p>1. N₂</p> <p style="text-align: right;">$N-5 \times 2 = 10$ $\frac{10 \text{ ve}^-}{}$</p> <p style="text-align: center;">$:\text{N} \equiv \text{N}:$</p>	<p>7. HI</p> <p style="text-align: right;">$H-1 \times 1 = 1$ $I-7 \times 1 = 7$ $\frac{8 \text{ ve}^-}{}$</p> <p style="text-align: center;">$\text{H}-\ddot{\text{I}}:$</p>
<p>2. H₂Se</p> <p style="text-align: right;">$H-1 \times 2 = 2$ $Se-6 \times 1 = 6$ $\frac{8 \text{ ve}^-}{}$</p> <p style="text-align: center;">$\text{H}-\ddot{\text{Se}}-\text{H}$</p>	<p>8. CH₃OH</p> <p style="text-align: right;">$C-4 \times 1 = 4$ $H-1 \times 4 = 4$ $O-6 \times 1 = 6$ $\frac{14 \text{ ve}^-}{}$</p> <p style="text-align: center;">$\begin{array}{c} \text{H} \\ \\ \text{H}-\text{C}-\ddot{\text{O}}-\text{H} \\ \\ \text{H} \end{array}$</p>
<p>3. SiO₂</p> <p style="text-align: right;">$Si-4 \times 1 = 4$ $O-6 \times 2 = 12$ $\frac{16 \text{ ve}^-}{}$</p> <p style="text-align: center;">$:\ddot{\text{O}}=\text{Si}=\ddot{\text{O}}:$</p>	<p>9. HSO₄⁻</p> <p style="text-align: right;">$H-1 \times 1 = 1$ $S-6 \times 1 = 6$ $O-6 \times 4 = 24$ $\frac{31+1}{32 \text{ ve}^-}$</p> <p style="text-align: center;">$\left[\begin{array}{c} :\ddot{\text{O}}: \\ \\ :\ddot{\text{O}}-\text{S}-\ddot{\text{O}}-\text{H} \\ \\ :\ddot{\text{O}}: \end{array} \right]^-$</p>
<p>4. NH₃</p> <p style="text-align: right;">$N-5 \times 1 = 5$ $H-1 \times 3 = 3$ $\frac{8 \text{ ve}^-}{}$</p> <p style="text-align: center;">$\begin{array}{c} \text{H} \\ \\ \text{H}-\ddot{\text{N}}-\text{H} \\ \\ \text{H} \end{array}$</p>	<p>10. I₂</p> <p style="text-align: right;">$I-7 \times 2 = 14 \text{ ve}^-$</p> <p style="text-align: center;">$:\ddot{\text{I}}-\ddot{\text{I}}:$</p>
<p>5. C₂H₆</p> <p style="text-align: right;">$C-4 \times 2 = 8$ $H-1 \times 6 = 6$ $\frac{14 \text{ ve}^-}{}$</p> <p style="text-align: center;">$\begin{array}{c} \text{H} \quad \text{H} \quad \text{H} \\ \quad \quad \\ \text{H}-\text{C}-\text{C}-\text{C}-\text{H} \\ \quad \quad \\ \text{H} \quad \text{H} \quad \text{H} \end{array}$</p>	<p>11. CHCl₃</p> <p style="text-align: right;">$C-4 \times 1 = 4$ $H-1 \times 1 = 1$ $Cl-7 \times 3 = 21$ $\frac{26 \text{ ve}^-}{}$</p> <p style="text-align: center;">$\begin{array}{c} \text{H} \\ \\ :\ddot{\text{Cl}}-\text{C}-\ddot{\text{Cl}}: \\ \\ :\ddot{\text{Cl}}: \end{array}$</p>
<p>6. SO₃</p> <p style="text-align: right;">$S-6 \times 1 = 6$ $O-6 \times 3 = 18$ $\frac{24 \text{ ve}^-}{}$</p> <p style="text-align: center;">$:\ddot{\text{O}}: \quad :\ddot{\text{O}}: \quad :\ddot{\text{O}}:$ $:\ddot{\text{O}}-\text{S}=\ddot{\text{O}}: \quad \ddot{\text{O}}=\text{S}-\ddot{\text{O}}: \quad \ddot{\text{O}}-\text{S}=\ddot{\text{O}}:$</p>	<p>12. O₃</p> <p style="text-align: right;">$O-6 \times 3 = 18$ $\frac{18 \text{ ve}^-}{}$</p> <p style="text-align: center;">$:\ddot{\text{O}}-\ddot{\text{O}}=\ddot{\text{O}}:$ $:\ddot{\text{O}}=\ddot{\text{O}}-\ddot{\text{O}}:$</p>