

Example of work

Comparison of Boiling Point (BP) Between Two Substances

O₂ vs. CO

Substance A: Bond Polarity (Figure)	Substance B: Bond Polarity (Figure)
<p>$\begin{array}{c} \text{O} - \text{O} \\ 3.5 \quad 3.5 \end{array}$</p> <p>$\Delta EN = 3.5 - 3.5 = 0.0$</p> <p>Bond Polarity: <u>non-polar</u> (did show symbol for Polar)</p> <p>Molecular Polarity (Figure: Locate δ^- / δ^+ area)</p> <p>$\overset{\times\times}{\underset{\times\times}{\text{O}}} = \overset{\times\times}{\underset{\times\times}{\text{O}}}$</p> <p>#/type of bond polarity: <u>1 non-polar</u> Geometry (symmetry): <u>Linear (sym)</u> Polar Bonds cancel out (Y/N): <u>N/A</u> Molecular Polarity: <u>non-polar</u></p> <p>Type of IMF: <u>LDF</u> IMF Compare (H/L): <u>Lower/Less</u> #vapor Particle in gas phase (H/L): <u>More</u> P_{vap} (H/L): <u>Higher</u> BP (H/L): <u>Lower</u></p>	<p>$\begin{array}{c} \text{C} - \text{O} \\ 2.5 \quad 3.5 \end{array}$</p> <p>$\Delta EN = 3.5 - 2.5 = 1.0$</p> <p>Bond Polarity: <u>polar</u> (did show symbol for Polar)</p> <p>Molecular Polarity (Figure: Locate δ^- / δ^+ area)</p> <p>$\overset{\times\times}{\underset{\times\times}{\text{C}}} \equiv \overset{\times\times}{\underset{\times\times}{\text{O}}}$</p> <p>#/type of bond polarity: <u>1 polar</u> Geometry (symmetry): <u>Linear (sym)</u> Polar Bonds cancel out (Y/N): <u>No</u> Molecular Polarity: <u>polar</u></p> <p>Type of IMF: <u>Dipole-Dipole (D-D)</u> IMF Compare (H/L): <u>Higher/Greater</u> #vapor Particle in gas phase (H/L): <u>Less</u> P_{vap} (H/L): <u>Lower</u> BP (H/L): <u>Higher</u></p>
Substance A: Bond Polarity (Figure)	Substance B: Bond Polarity (Figure)
<p>$\Delta EN = \underline{\quad} - \underline{\quad} = \underline{\quad}$</p> <p>Bond Polarity: <u> </u> (did show symbol for Polar)</p> <p>Molecular Polarity (Figure: Locate δ^- / δ^+ area)</p> <p>#/type of bond polarity: <u> </u> Geometry (symmetry): <u> </u> Polar Bonds cancel out (Y/N): <u> </u> Molecular Polarity: <u> </u></p> <p>Type of IMF: <u> </u> IMF Compare (H/L): <u> </u> #vapor Particle in gas phase (H/L): <u> </u> P_{vap} (H/L): <u> </u> BP (H/L): <u> </u></p>	<p>$\Delta EN = \underline{\quad} - \underline{\quad} = \underline{\quad}$</p> <p>Bond Polarity: <u> </u> (did show symbol for Polar)</p> <p>Molecular Polarity (Figure: Locate δ^- / δ^+ area)</p> <p>#/type of bond polarity: <u> </u> Geometry (symmetry): <u> </u> Polar Bonds cancel out (Y/N): <u> </u> Molecular Polarity: <u> </u></p> <p>Type of IMF: <u> </u> IMF Compare (H/L): <u> </u> #vapor Particle in gas phase (H/L): <u> </u> P_{vap} (H/L): <u> </u> BP (H/L): <u> </u></p>