

Answer on Question #43219 - Chemistry - Inorganic Chemistry

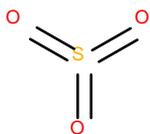
Question:

Enthalpy of bond S-O is stronger in SO₃ or SO₃²⁻?

Answer:

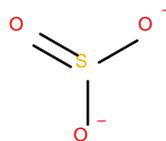
Draw the structure of particles to determine the bond order.

SO₃:



Bond order = $6/3 = 2$

SO₃²⁻:



Bond order = $4/3 = 1.333$

The higher bond order in the same particles results in the higher bond energy. Therefore, the SO₃ molecule has the larger bond strength.