Update 2

Patrick Regan

November 2, 2014

By M11, the following updates have occurred:

- Assigned electronegativity values to each atom in each molecule based off those listed in the periodic table
- Created citations where the data for the molecules was fond
- Created a crude approximation of dipole moment vectors using differences in electronegativities of each atom bonded together in a molecule, scaled the arrow so the molecule could be seen, and changed the opacity of the molecule so the arrow can be seen

Future plans include the following:

- I need to find a constant to put in front of the repulsion factor in the potential energy equation for the bond energy. When I looked it up online the constant in front was ambiguous and I was not able to find values for those constants.
- I also need to find a proper way to scale the dipole moment vector so that the ideal bond length is realistic with relation to the molecules I am dealing with. This model is only meant to give values of bond energies to show one is stronger than the other.
- Once those have been accomplished, I plan to learn how to make one molecule move using the arrow keys on the keyboard.
- Then, I want to implement the energy equation into VPython and use a graph to show the bond energy as one molecule moves closer to/further from the other.