

Quiz 9.3 – Molecular Orbital Theory: Polyatomic Molecules

Name: _____

Resonance in 1,3,5 hexatriene

○ Show the Hückel theory determinant for 1,3,5 hexatriene. You may either show the matrix populated with α and β terms, or the simplified matrix with only 1s and 0s

○ Solve for the energy levels (You may use WolframAlpha or similar software to either find the determinant or diagonalize the matrix) and draw the energy level diagram

○ Give the total bonding energy of the π system, as well as the resonance stabilization energy

Your World

By Georgia Douglas Johnson

Your world is as big as you make it.
I know, for I used to abide
In the narrowest nest in a corner,
My wings pressing close to my side.

But I sighted the distant horizon
Where the skyline encircled the sea
And I throbbed with a burning desire
To travel this immensity.

I battered the cordons around me
And cradled my wings on the breeze,
Then soared to the uttermost reaches
With rapture, with power, with ease!