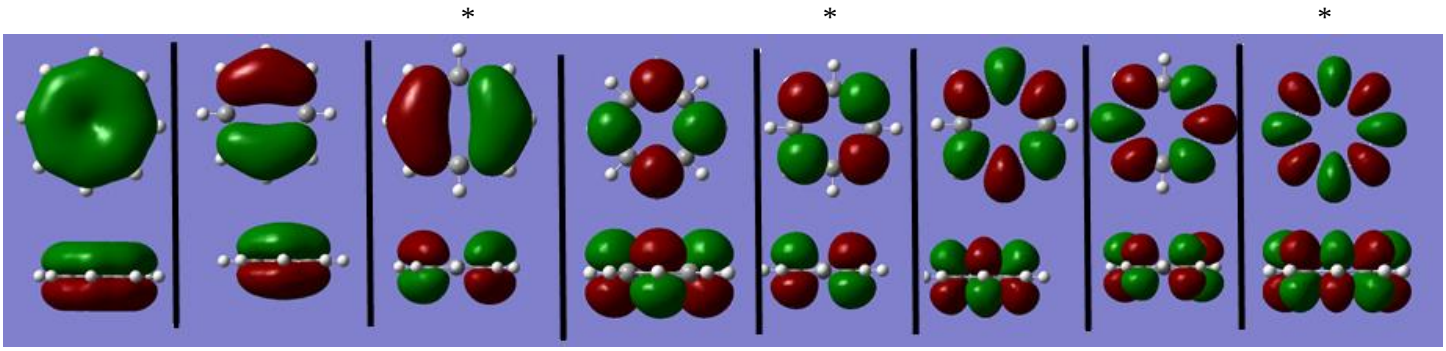
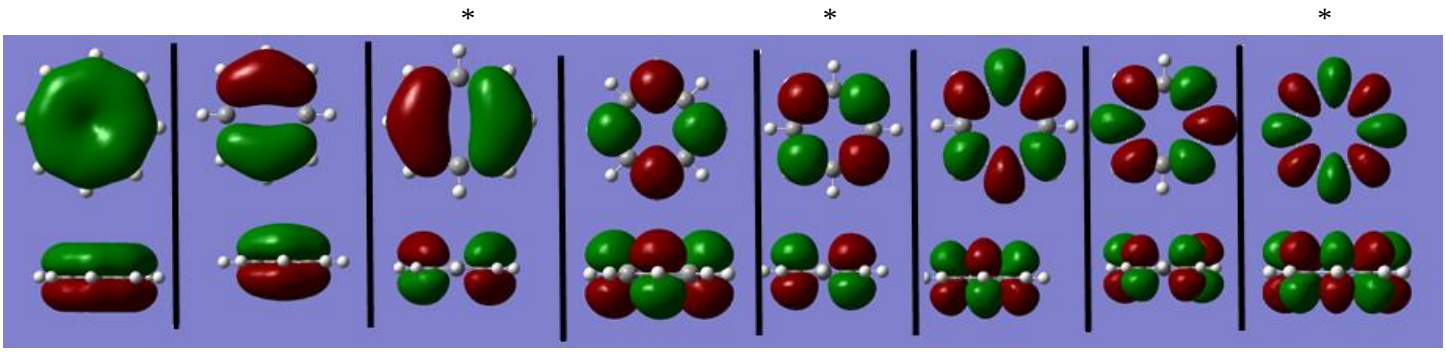
Ch112
In class exercise
Oct 3, 2017

The eight π-orbitals of cyclooctatetraene dianion ($C_8H_8^{2-}$), an aromatic compound, are shown below. For each of the starred molecular orbitals (MO's 3, 5, 8), find irreducible representations corresponding to C_{4v}, C_{2h}, D_{4d}, and D_{8h} point groups. Assume X and Y axes to be in the plane of the molecule, oriented vertically and horizontally, respectively.

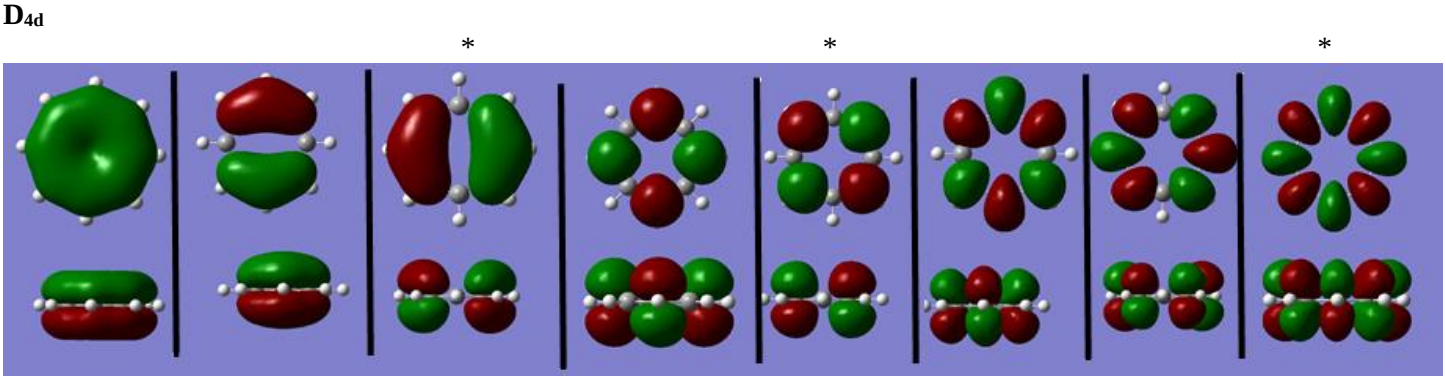
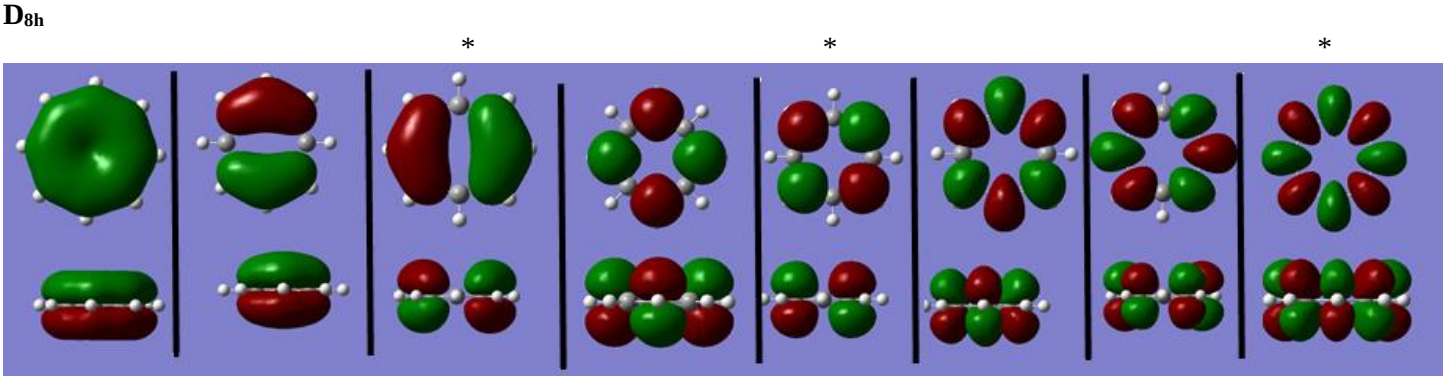
C_{4v}



C_{2h}



D_{4d}



D_{8h}