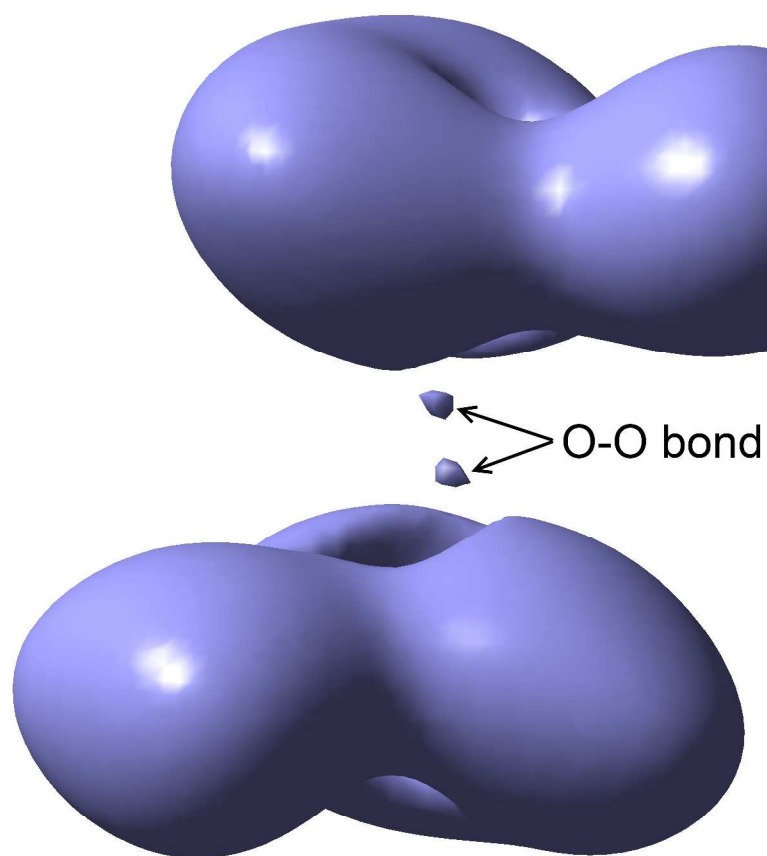


# Supporting Information for “Two-Center Two-Electron Covalent Bonds with Deficient Bonding Densities”

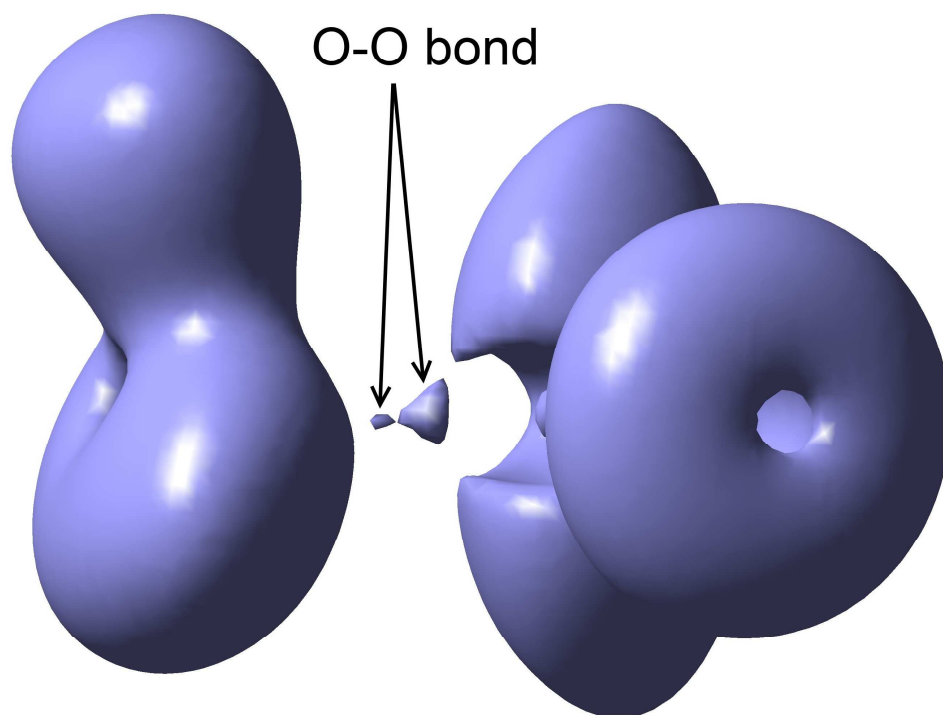
*Yang Yang*

Department of Chemistry, Case Western Reserve University, Cleveland, Ohio 44106

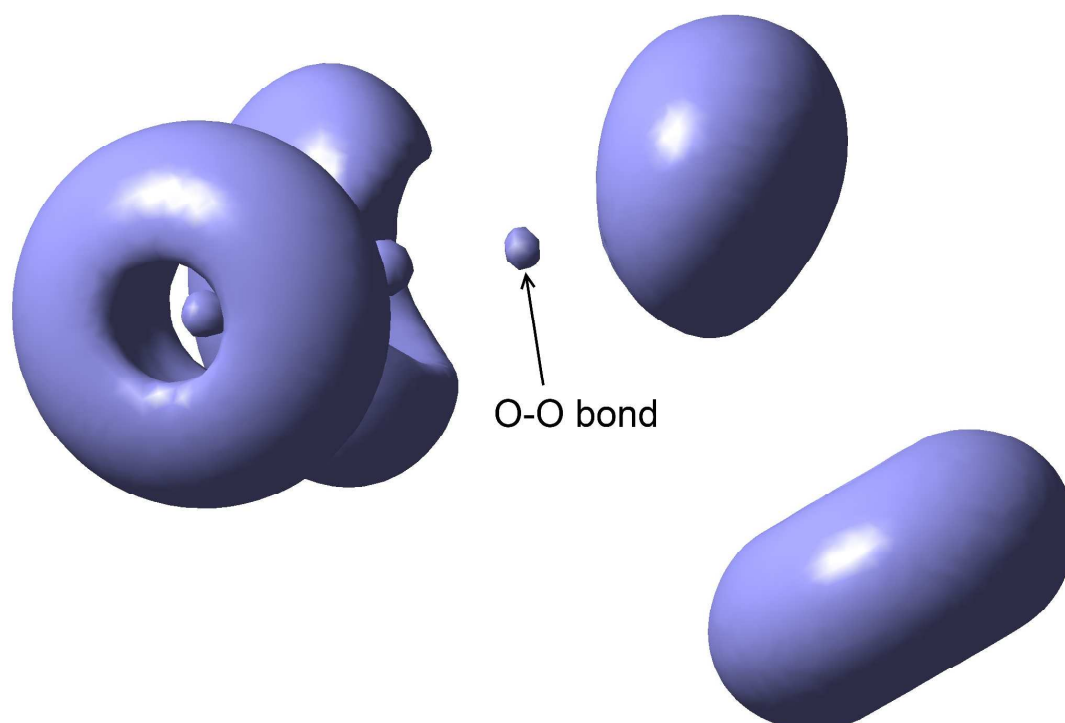
[xy130@case.edu](mailto:xy130@case.edu)



**Figure S1.** The O-O ELF localization domains in  $\text{H}_2\text{O}_2$  ( $f = 0.710$ ).



**Figure S2.** The O-O ELF localization domains in HFO<sub>2</sub> ( $f = 0.738$ ).



**Figure S3.** The O-O ELF localization domain in  $\text{F}_2\text{O}_2$  ( $f = 0.790$ ).