

Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: This file contains Cartesian coordinates for all optimized geometries, including **4c**, **H₂**, **4c-HH**, **(R)-4a**, **4a-HH**, **4c'**, **4c'-H**, **4c''**, **4a'**, **4a'-H**, **4a''**, **TS-rs**, **(S)-4a**.