INCORPORATION OF A ROVIBRATIONAL ANALYSIS OF OC-H_2O INTO 6-D MORPHED POTENTIALS OF THE COMPLEX

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Rovibrational transitions associated with tunneling states in the water bending vibration in OC-H_2O and other available spectroscopic data are included in generation of 6-D morphed potentials of the complex. Six-dimension *ab initio* interaction potentials are initially calculated for the complex to provided the initial functions for the potential morphing. The available spectroscopic data is then used to fit and generate 6-D morphed potentials. Previous prediction of the D_0 of the complex will be incorporated in the analysis. Finally, intermolecular frequencies of the complex will be predicted using the 6-D morphed potentials involving the CO stretching and the H_2O bending vibrations.