



Supplementary Information. Fig. S1: Experimental IRMPD spectrum recorded for the nonactin- Na^+ complex compared to the IR spectra predicted for the 1C_2 (blue, solid line) and 2S_4 (red, dashed line) conformers, by computations with different density functionals (as indicated in each panel). The 6-311+G(d) basis set is employed in all cases. It can be noted that the B3LYP functional provides the best agreement with the shape of the IRMPD bands, in particular in the $950\text{--}1250\text{ cm}^{-1}$ range.