

## Physical Chemistry Chemical Physics

### Supporting Information

## Water interactions with condensed carboxylic acids: adsorption and desorption of water on valeric acid surfaces

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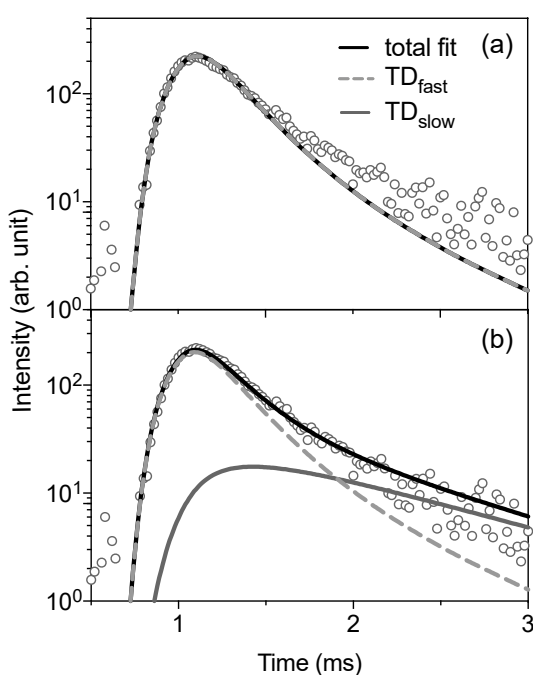


Fig. S1 ToF distributions of water intensities observed in the normal direction from a micrometer-thick valeric acid layer at  $T = 160$  K in log scale. The  $TD_{\text{fast}}$  and  $TD_{\text{slow}}$  components (grey solid and dashed lines respectively) and total fit (black line) are displayed together with the experimental data (circles). (a) and (b) show fitted fluxes with two and one TD component, respectively.

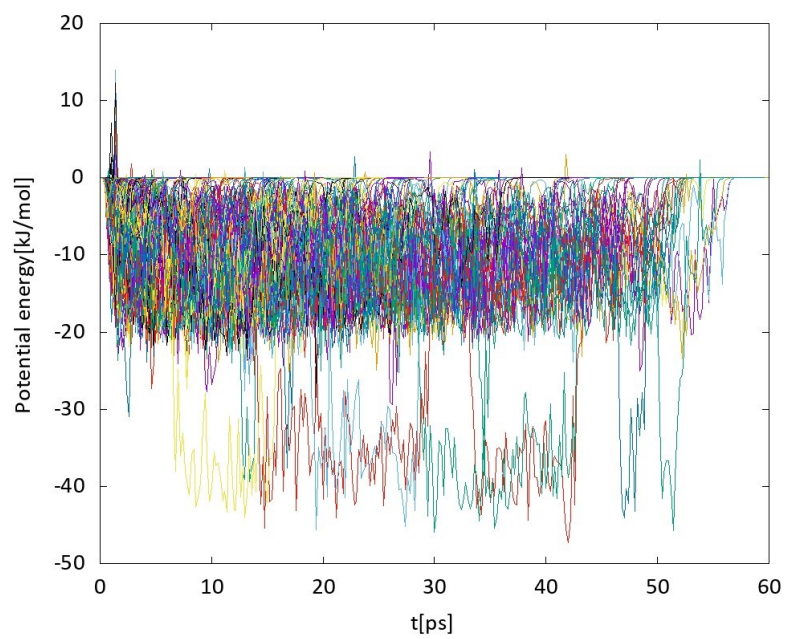


Fig. S2 Potential energy during 60 ps simulations of water molecules on solid valeric acid (200 K). Results for 90 individual trajectories are displayed.