Correction to "Molecular-Level Details about Liquid H₂O Interactions with CO and Sugar Alcohol Adsorbates on Pt(111) Calculated Using Density Functional Theory and Molecular Dynamics"

Cameron J. Bodenschatz, Sapna Sarupria, and Rachel B. Getman*

J. Phys. Chem. C 2015, 119 (24), 13642-13651. DOI: 10.1021/acs.jpcc.5b02333

We have become aware of errors in the reported numbers of water molecules hydrogen-bonded to the adsorbates tested, and we report corrected numbers here. The corrected values for CO are 1.3 \pm 0.5 hydrogen-bonded water molecules; i.e., 13 total hydrogen bonds were found in the 10 configurations considered, with an average $O_{\rm H_2O}-O_{\rm CO}$ distance of 2.93 \pm 0.09 Å and an average O–O–H angle of 17.4 \pm 4.5°. The corrected values for CH₂OH are 1.8 \pm 0.3 hydrogen-bonded water molecules, with an average O–O–H angle of 13.5 \pm 2.8°. The corrected values for C₃H₇O₃ are 4.0 \pm 0.7 hydrogen-bonded water molecules, with an average O–O–H angle of 13.5 \pm 2.8°. The corrected values for C₃H₇O₃ are 4.0 \pm 0.7 hydrogen-bonded water molecules, with an average O–O–H angle of 14.1 \pm 2.7°. Figure 2 has been updated to include these

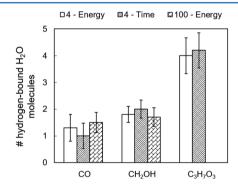


Figure 2. Number of H_2O molecules that hydrogen-bond to CO, CH_2OH , and $C_3H_7O_3$ adsorbates using the "energy" and "time" sampling methods. The numbers "4" and "100" indicate the number of "layers" of ice in the starting configurations. Error bars are 95% confidence intervals.

values, as shown below. Additionally, any conclusions made regarding the insufficiency of our model for $C_3H_7O_3$ are no longer valid, as our corrected values show that this method is sufficient for all three adsorbates tested.

801