

Electronic Supplementary Material

Probing RbBr solvation in freestanding sub-2 nm water clusters

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Spectrum comparisons

Figure S1 displays photoelectron spectra recorded from Rb 3d region at concentration values of 0.5 mol/kg and 21 mol/kg. The monomer response has been indicated and labeled. The spectra have been normalized with respect to the monomer Rb 3d_{3/2} spin-orbit component. From Fig. S1, one can see that at the low concentration (red curve) the cluster response is characterized by peak maxima at ~115 eV and ~116.5 eV which roughly obey the statistical 3 : 2 area ratio expected for spin-orbit split 3d_{5/2} and 3d_{3/2} components. This has been labeled as M₁ in the main article. At higher concentration (black spectrum) the peak at 116.5 eV grows relative to peak at 115 eV. This is accompanied by intensity increase of the monomer Rb 3d_{5/2} peak relative to monomer Rb 3d_{3/2} peak. As the statistical ratio of the spin-orbit split components does not depend on the concentration, we reach a conclusion that an additional peak doublet, named M₂ in the main article, must be responsible of these changes in the spectrum.

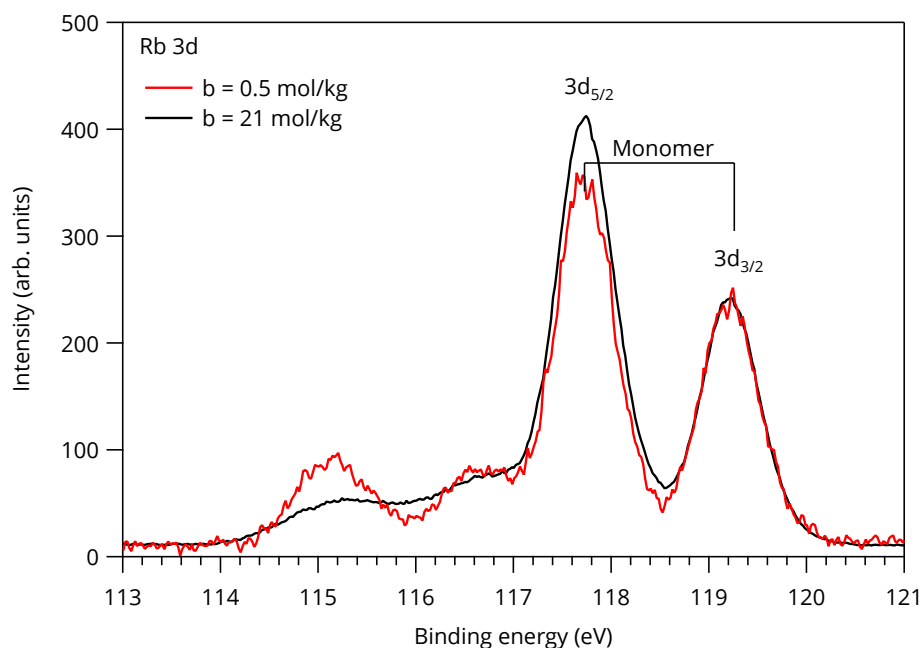


Fig. S1 Comparison of Rb 3d region photoelectron spectra for two concentration values. The spectra have been normalized with respect to the RbBr monomer Rb 3d_{3/2} component (labeled).

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Figure S2 shows a comparison of four Rb 3d region photoelectron spectra: Two recorded from anhydrous RbBr clusters and two from water containing clusters. The hydrated and anhydrous cluster spectra are also included in Figs. 2 and 4 of the main article, respectively. As the monomer to cluster intensity ratio changes between the spectra, approximate scaling was performed by using the peak at 115 eV for easier comparison of the cluster related spectral features between 114 eV and 117 eV.

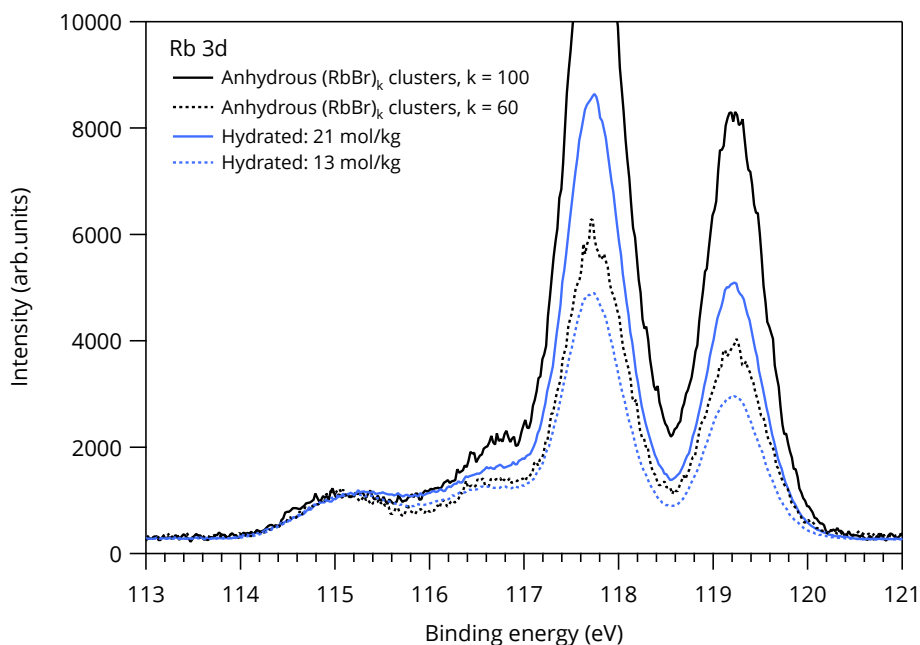


Fig. S2 Comparison of Rb 3d region photoelectron spectra recorded from anhydrous RbBr clusters and hydrated clusters. The spectra have been scaled so that the peak intensity at 115 eV is roughly comparable.