molecules

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Article

Supplementary material

Enhancing double-beam laser tweezers Raman Spectroscopy (LTRS) for the photochemical study of individual airborne microdroplets

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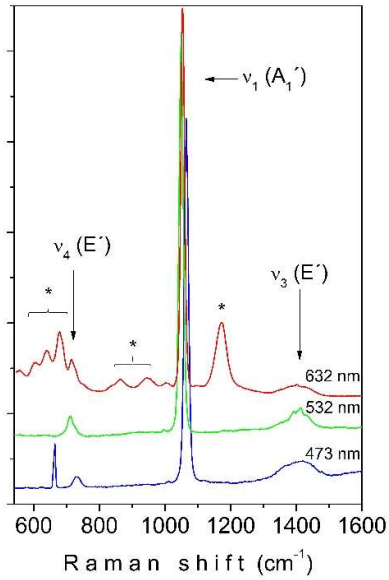

Figure S1. Raman spectra of a micro-droplet of aqueous $NaNO_3$ levitated optically in air using different excitation wavelengths. Additional signals (see asterisks) were observed around 600 cm^{-1} in the spectra obtained using the excitation wavelengths of 632 and 473 nm, and around 900 and 1150 cm^{-1} in the spectrum obtained using the excitation laser of 632 nm. These were determined as artefacts from the levitation 975 nm trap laser. These interferences can be limited by placing a laser clean-up filter to purify the 975 nm laser line.

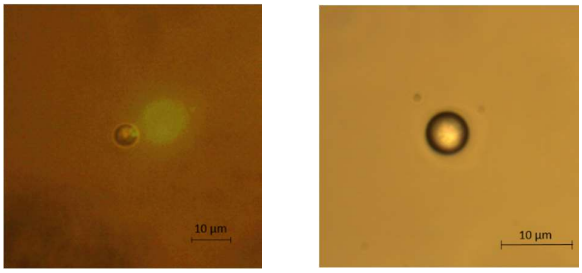

Figure S2. Visualization of an aqueous micro-droplet of $NaNO_3$ optically levitated through the 50X Nikon objective of the confocal Raman microscope (left) and the 100X Nikon inverted immersion objective of the optical tweezer (right).