

SUPPORTING INFORMATION

Figure 1 SI. Calculated spectra (black) of the different isomers *M* (a), *SC* (b), *Z2* (c) and *Z1* (d) of CIP Li⁺ complex, plotted as Lorentzian convolution (FWHM of 15 cm⁻¹) of theoretical IR stick spectra. The IRMPD experimental spectrum is overlaid in red.

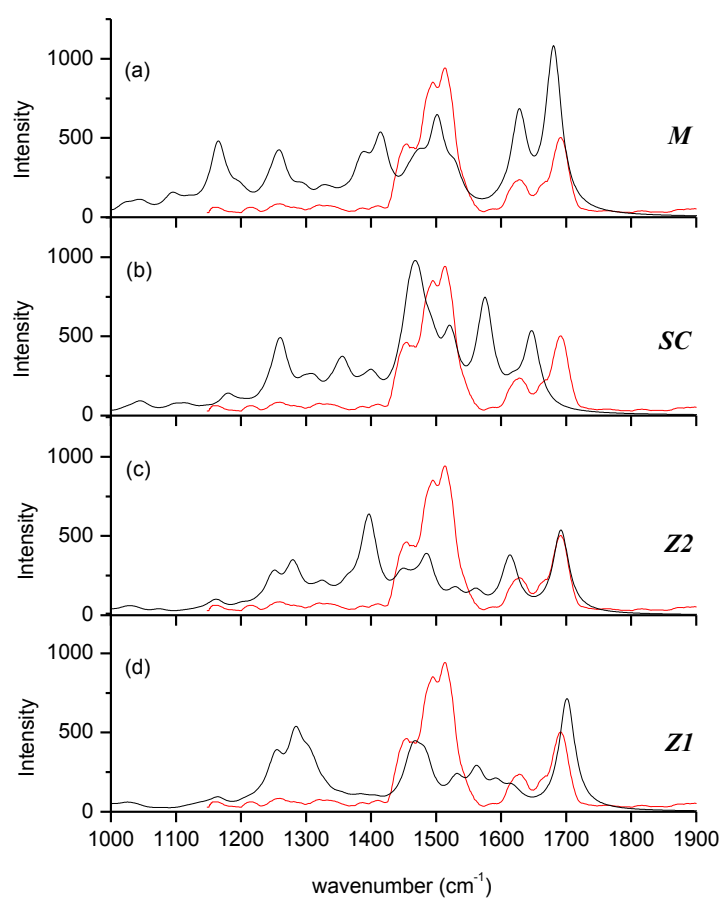


Figure 2 SI. Calculated spectra (black) of the different isomers *M* (a), *SC* (b), *Z2* (c) and *Z1* (d) of CIP $\text{Al}(\text{OH})_2^+$ complex, plotted as Lorentzian convolution (FWHM of 15 cm^{-1}) of theoretical IR stick spectra. The IRMPD experimental spectrum is overlaid in red.

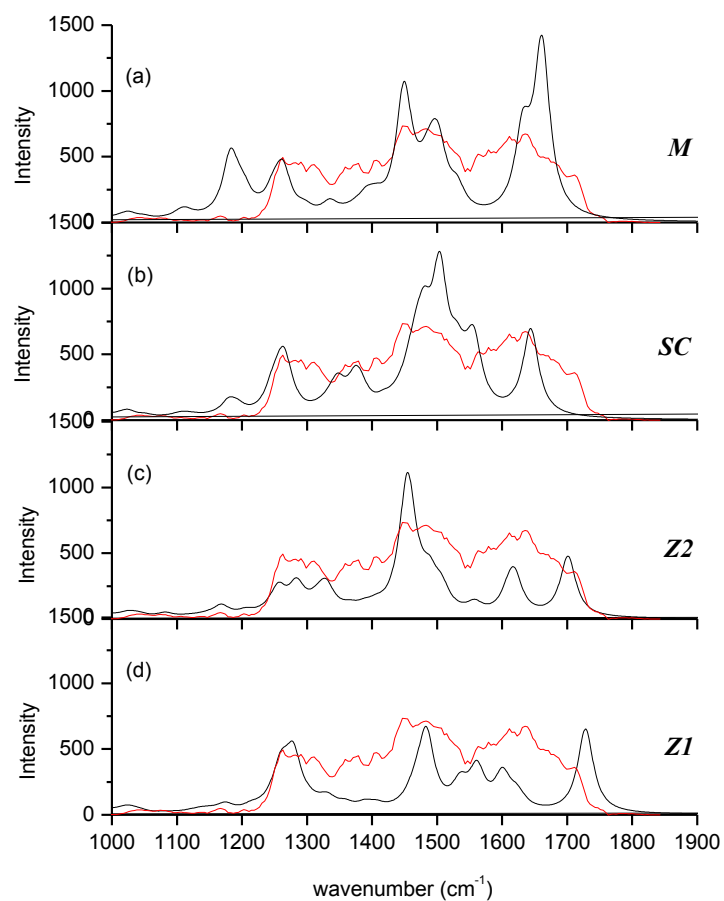


Figure 3 SI. Calculated spectra (black) of the different isomers *M* (a), *SC* (b), *Z2* (c) and *Z1* (d) of CIP Ag⁺ complex, plotted as Lorentzian convolution (FWHM of 15 cm⁻¹) of theoretical IR stick spectra. The IRMPD experimental spectrum is overlaid in red.

