

Fig. S1. Complete FTIR spectra of the synthetic samples used in this work.

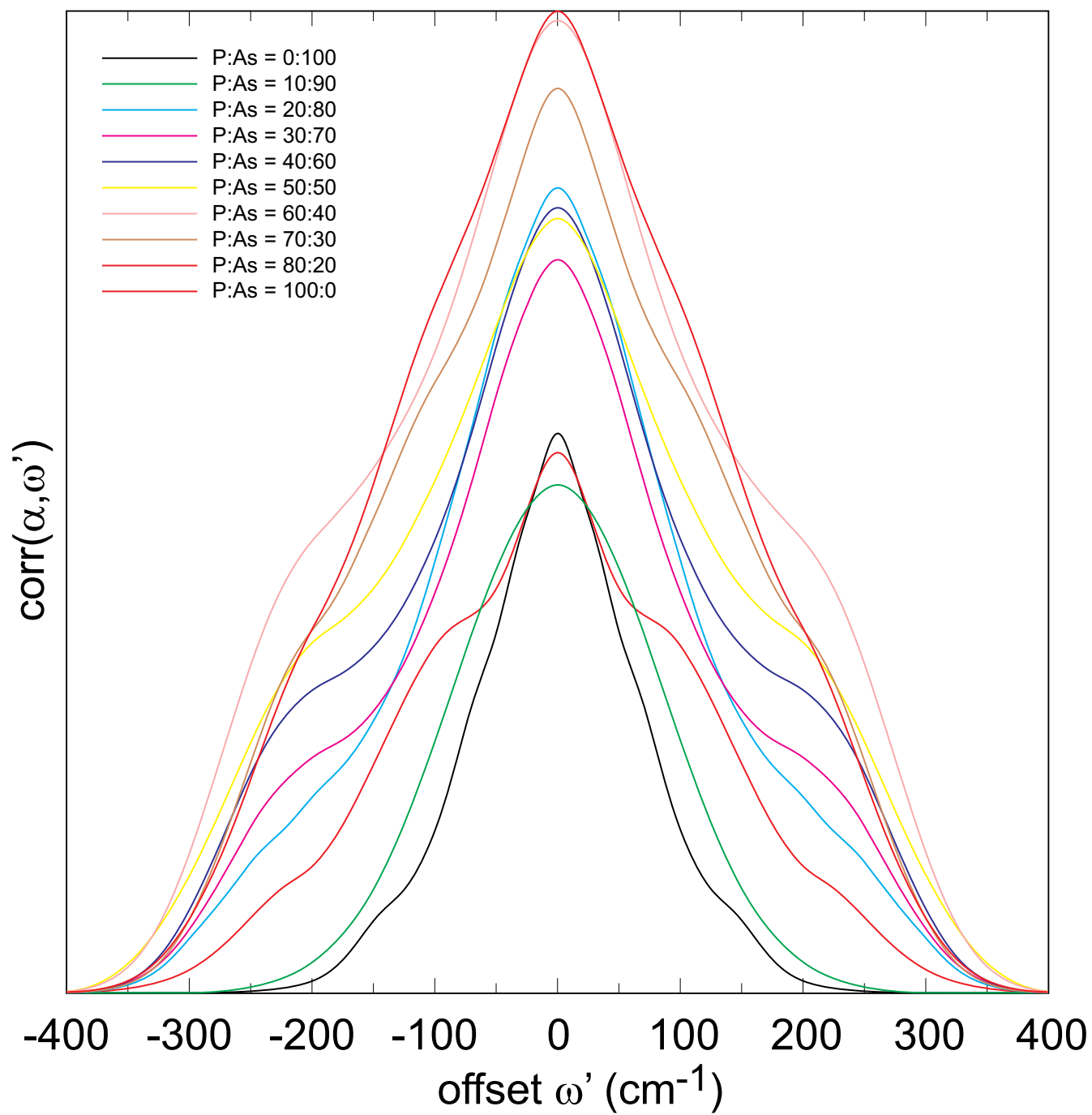


Fig. S2. Autocorrelation functions for all spectra acquired and processed in this work.

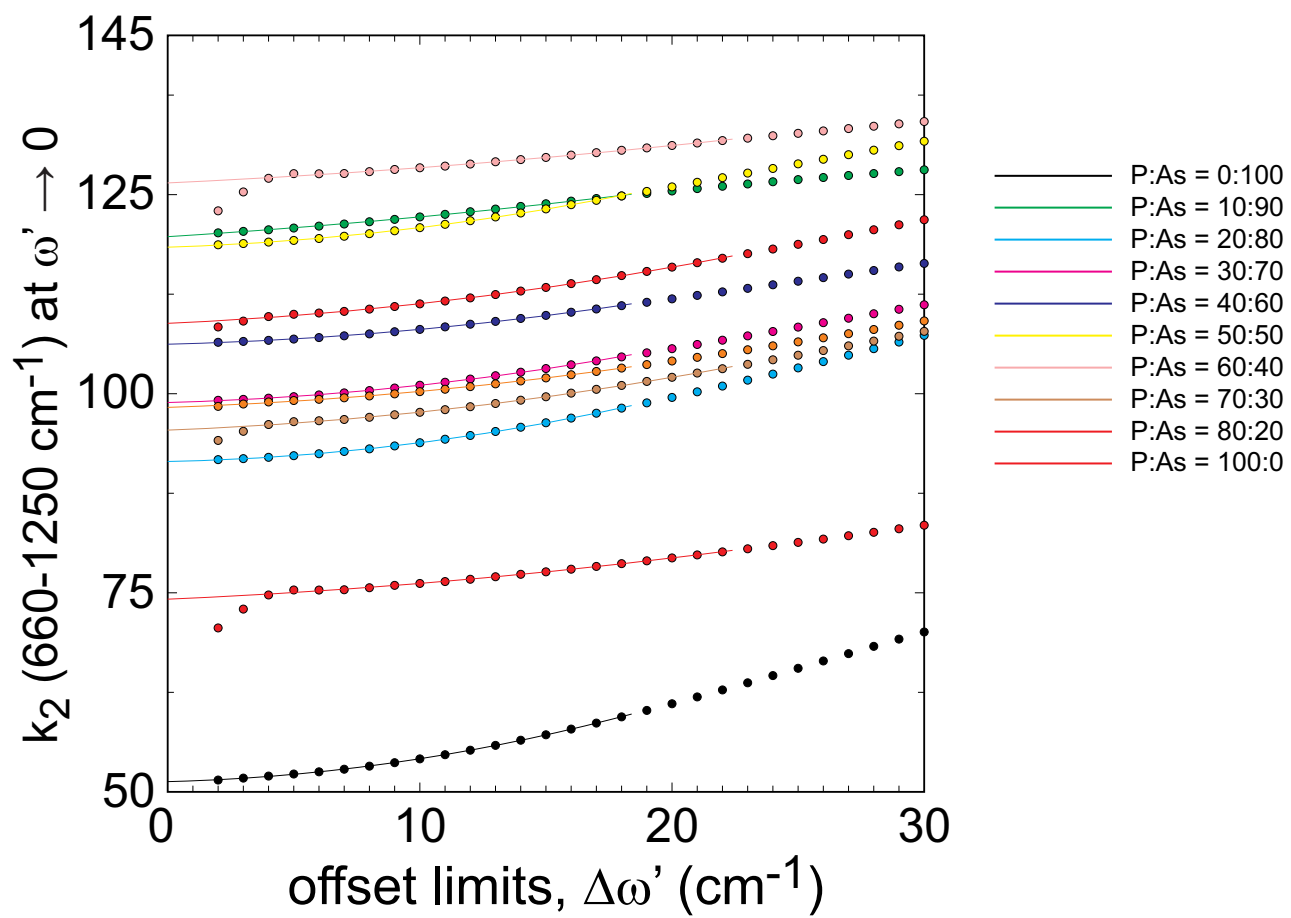


Fig. S3. Extrapolation of the  $k_2$  values (defined by the Gaussian function) to an offset limit of 0  $\text{cm}^{-1}$ .