Supporting Information

Decoding disorder: unravelling entropy effects in deep eutectic systems with neutron spectroscopy

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Figure 1S – INS spectra, up to 4000 cm-1, of perdeuterated urea (urea-d4) compared with non-deuterated urea (urea-h4).

Figure S2 – INS spectra of urea, tetraethylammonium chloride ($[N_{2,2,2,2}]$ Cl), and their eutectic mixture after shock-freeze solidification.

Figure S3 – Optimized structures of urea-Cl clusters at the B3LYP-D2/6-312++G** level.

Figure S4 – Calculated INS spectra of the cluster structures of Fig 3S.

Figure 1S – INS spectra, up to 4000 cm-1, of perdeuterated urea (urea-d4, A) compared with non-deuterated urea (urea-h4, C)[TOSCA database], normalized to mass and beam intensity. The middle spectrum (B) presents a 10x magnification of spectrum A.









Figure S3 – Optimized structures of urea-Cl clusters at the B3LYP-D2/6-312++G** level, labelled according to the notation of P. Hunt et al.

Figure S4 – Calculated INS spectra of the cluster structures of Fig 3S (labelled according to the notation of P. Hunt et al.).

