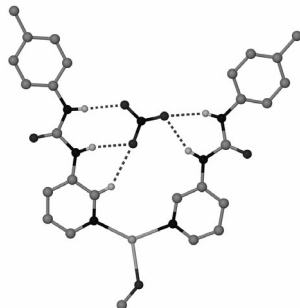


Structure Control by Hydrogen Bonding to Anions and Coordination to Cations

Jonathan W. Steed, David R. Turner, *Department of Chemistry, University of Durham, South Road, Durham DH1 3LE, UK.* E-mail: jon.steed@durham.ac.uk

A series of urea-containing pyridyl ligands have been prepared and used to bind ion pairs by hydrogen bonding to the anions and coordination to the cations. The new complexes are frequently coordination polymers or hydrogen bonded polymers, although discrete species that also persist in solution have also been observed (as in the figure). Common, reproducible and predictable hydrogen bonded motifs are observed across the series.



[1] Turner D. R., Spencer E. C., Howard J. A. K., Tocher D. A., Steed J. W., *Chem. Commun.*, 2004, 1352. [2] Turner D. R., Light M. E., Hursthouse M. B., Steed J. W., *Chem. Commun.*, 2004, 1354. [3] Turner D. R., Smith B., Goeta A. E., Evans I. R., Tocher D. A., Howard J. A. K., Steed J. W., *Cryst. Eng. Comm.*, 2004, **6**, 633. [4] Turner D. R., Smith B., Spencer E. C., Goeta A. E., Evans I. R., Tocher D. A., Howard J. A. K., Steed J. W., *New J. Chem.*, 2005, **29**, 90.

Keywords: anion, hydrogen bond, motif