

W0012

Are We Compatible For Each Other...What If Hydrogen Bonds Could Talk? N. Schultheiss, C.B. Aakeröy, J. Desper, Kansas State Univ., Manhattan, KS 66506 USA.

"In this project the validity of the hypothesis, "the best hydrogen bond donor interacting to form a hydrogen bond with the best hydrogen bond acceptor, while the second best donor goes for the second best acceptor and so on"¹ is examined. Consequently, we present the synthesis and characterization of four new asymmetric pyridyl pyrimidine (py-pym) ligands (supramolecular reagents) containing three electronically different donor/acceptor sites. These compounds were prepared in good yields through the palladium catalyzed Suzuki cross-coupling reaction of pyridyl boronic acids and chlorinated amino-pyrimidines. To test the limits and limitations of a hierarchical approach to supramolecular synthesis we have allowed a variety of organic species e.g. carboxylic acids, oximes and amides to react with the new py-pym ligands resulting in a number of new molecular co-crystals."

¹ Etter, M. C. *Acc. Chem. Res.* **1990**, 23, 120.