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Supramolecular Reagents for One-pot Assembly of Quaternary Molecular Architectures. Debra J. Salmon, Christer Aakeröy, John Desper, Dept. of Chemistry, Kansas State Univ., Manhattan, KS, 66506.

The supramolecular ligands, lending themselves to the possibility of creating quaternary systems, were prepared utilizing traditional Suzuki coupling methods. The cross-coupling is accomplished by creating a new C-C bond between 3-carboxyphenylboronic acid and an asymmetric 2-aminopyrimidine moiety (Figure 1). The ligands have three self-complementary hydrogen-bonding sites; due to the different functionality of the sites, different cocrystallizing agents can be introduced, leading to quaternary assembly. This work illustrates how a modular supramolecular approach based upon a hierarchy of intermolecular interactions can allow for the construction of relatively complex molecular assemblies.

Figure 1. General Reaction Scheme