Self assembly of 2 × 2 grid complexes from bis(1,2,3-triazol-4-yl)pyridazines and Cu(I)

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A versatile platform for bis-bidentate ligands capable of forming Cu(I)-based 2 × 2 grids by self-assembly were created utilizing click chemistry. Examples such as grids, helicates, and cages demonstrate the versatility of such supramolecular approaches to build up structures more easily than covalent synthesis. In this study, the 3,6-diethynylpyridizazine building block was combined with four simple azides to prepare four bis-bidentate ligands that serve as the base for the preparation of four supramolecular grid complexes. The ease of synthesis of triazoles and the robustness of the grid complex allows for a wide variety of interesting supramolecular complexes to be quickly prepared.