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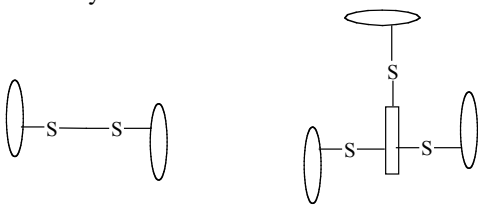
Assembly directed by Novel Functional Ligands with Transition Metals. Shaohua Gou, Haibin Zhu, and Huaze Dong, State Key Laboratory of Coordination Chemistry, Nanjing Univ., Nanjing, 210093, P. R. China.

A variety of well-defined supramolecular arrays and coordination polymers with diverse structural motifs have been realized by using a number of sulfur-containing organic ligands as building blocks. These functional ligands are composed of 4-(2', 3' or 4')-pyridine-2-mercaptopyrimidine, which have also been connected via the sulfur atom with alkyl chains or aromatic chains as shown below.



Different transition metals with square, tetrahedral and octahedral coordination geometries have been applied to construct new architecture through coordination bonding. Crystal structures of a number of compounds have been determined by single crystal X-ray diffraction, in which non-covalent interactions such as coordination bonds, hydrogen bonding, and aromatic π-π stacking are studied.

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