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Heterometallic Metal-Organic Frameworks: Metalloligands vs. Organic Ligands. Seth M. Cohen, Sara R. Halper, Drew L. Murphy, Dept. of Chemistry and Biochemistry, Univ. of California, San Diego, La Jolla, CA 92093.

Inspired by the extensive work into metal-organic frameworks (MOF) based on simple organic ligands as 'linkers' and metal ions or metal ion clusters as 'nodes', we have investigated approaches to enhance these architectures by the incorporation of highly chromophoric metal centers. By designing 'metalloligand' precursors we have attempted to reproduce known MOF structures that possess augmented spectroscopic features based on the introduction of the second metal center. Several findings along this line of investigation will be discussed, which include a wide variety of new MOF structures (see figure), pronounced anion templating effects on structure, as well as the ability of these MOFs to readily undergo anion exchange.

