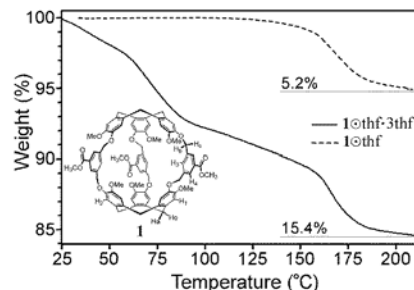


W0195

Crystal Engineering of Microcavity-Within-Micropore Materials. K.T. Holman, S.T. Mough, K.M. Zumberge, Onome-Ugono, S.D. Drake, Dept. of Chemistry, Georgetown Univ., Washington, DC 20057 USA.

Molecular encapsulation phenomena have received a great deal of attention in recent years related to the unique properties and behaviors that arise in systems of intimately associated “molecules within molecules.” Though the solution-phase binding properties of so-called container molecules have received much attention, little is known about the corresponding properties of materials derived from these remarkable molecules. A crystal engineering strategy toward functional microcavity-within-micropore materials will be outlined. Materials derived from molecular containers are expected to display recognition and storage properties commensurate with the molecular recognition properties of their building blocks. The remarkable thermal properties of inclusion compounds constructed from these sorts of molecules will be discussed.



The authors gratefully acknowledge support from the National Science Foundation (DMR-0349316).