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Pyridyl-Functionalized Cavitanths and Capsules. S.D. Drake, K.T. Holman, Georgetown Univ., Washington, DC 20057 USA.

Molecular cavitanths and capsules will exhibit recognition and self-assembly properties that are influenced by their specific endo- and/or exo-functionalization. In this context, the structures of synthesized pyridyl-substituted cryptophane capsules (1) and [1.1.1]-orthocyclophane cavitanths (2) will be presented. Capsule molecules that are endo-*N*-functionalized are being explored for their behavior toward anion binding (when protonated), cation binding, and as organocatalysts, whereas the pyridyl-substituted [1.1.1]-orthocyclophanes are being explored as ligands for coordination driven self-assembly of both discrete and infinite structures. Progress on these fronts will be presented.

