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## Synthesis of a Thirty Member Macrocyclic for Use in Host-Guest Chemistry

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Poster Presentation P29

## SYNTHESIS OF A THIRTY MEMBER MACROCYCLE FOR USE IN HOST-GUEST CHEMISTRY

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Polyamine and mixed polyamine/polyamide macrocycles have been widely used as hosts for anion recognition. Although numerous cyclic and polycyclic hosts for halides, sulfates, phosphates, and carboxylates have been described, few macrocycles large enough for polyoxometalate binding are readily available. A polyoxometalate is large polyatomic anion composed of early transition metal atoms, oxygen atoms, and sometimes heteroatoms. In this work, a thirty-membered macrocycle that contains amine groups (Figure 1) is being prepared as a host for polyoxometalate guests. The two part synthetic strategy being employed makes use of high dilution techniques and was first reported by Korendovych et. al for a related macrocycle. Under neutral conditions, the amine groups of the macrocycle may be able to interact with the polyoxometalate through ion-dipole forces and/or hydrogen bonds. Under acidic conditions, the amine groups would be protonated, and the resulting ammonium groups may interact with the polyoxometalate through ion-ion forces and/or hydrogen bonds.

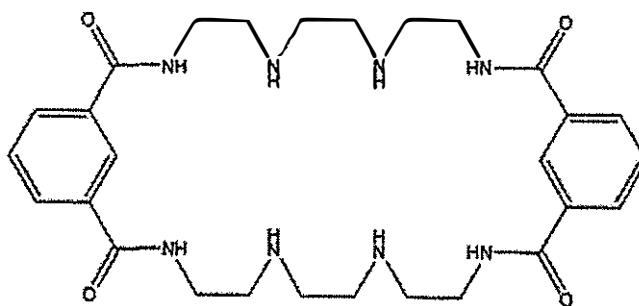


Figure 1