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## The Synthesis of Cage Shaped Molecule Using Polyoxometalates as a Template

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Poster Presentation P17

**THE SYNTHESIS OF CAGE SHAPED MOLECULE USING  
POLYOXOMETALATES AS A TEMPLATE**

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Polyoxometalates are large anionic clusters that form between oxygen and transition metal ions, especially the following d-zero species: V (V), Nb (V), Ta (V), Mo (VI), and W (VI). We propose to use a large, negatively charged, polyoxometalate as a temporary internal scaffold for preparation of a capsule shaped host molecule from two macrocyclic hemispheres. Because the target capsule molecule will have a cryptand-like shape with interstices between the macrocyclic straps, we anticipate that hydroxide ions should be able to penetrate the interior of the capsule promoting fragmentation of the polyoxometalate. The polyoxometalate will thus be a disintegrable scaffold. Most of our research to date has focused on multistep synthesis of the macrocyclic hemispheres from a cyclam precursor.