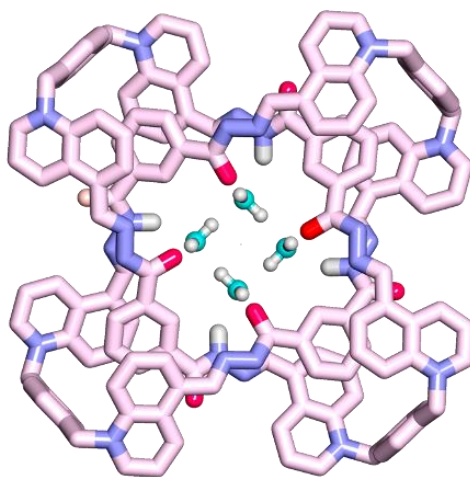


FoldaKnots

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Synthesising fully organic, multiply entangled macromolecules without resorting to metal templation represents a formidable challenge. [1] In this presentation, I will discuss the efforts of our group to develop reliable metal-free methodologies to access multiply entangled macromolecules. We have notably demonstrated that the hydrophobic effect could be rationally exploited to direct the folding of exceptionally compact entangled macromolecules. [2] This methodology is easy to implement, generally high yielding and allows for the synthesis of macromolecules with different topologies. Importantly, the presence of tight entanglements reduces the conformational freedom of these macromolecules, thereby affecting their chirality [3] and their ability to bind small molecules [4] and anions. [5]



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