

Poster Presentation

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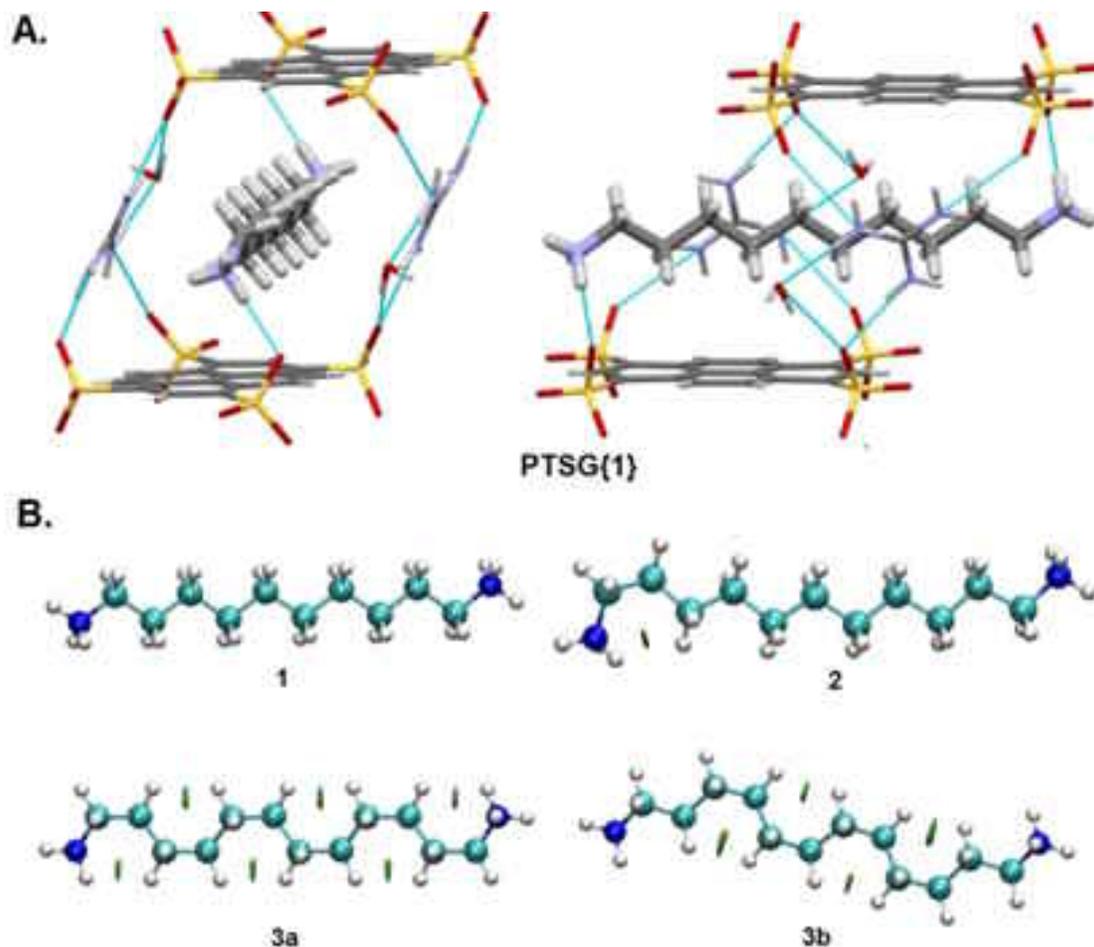
Putting variable-sized alkanes into fixed-size hydrogen-bonded molecular flasks

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Confined alkanes within molecular capsules are an intriguing research area which were studied until now only by spectroscopic techniques, but never by single-crystal X-ray techniques [1-2]. We report here an extremely simple molecular flask made up by hydrogen-bonded tectons, which is used as a container for diammonium alkane chains of variable sizes. It was obtained in aqueous solution as well as in the crystalline state by mixing commercially available components: 1,3,5,8-pyrenetetrasulfonate (PTS), guanidinium (G) and 1, ω -diammonium-alkanes (Figure A). 1,10-diammoniumdecane **1** fits perfectly inside the capsule, while the 1,11-diammonium-undecane **2** and 1,12-diammonium-dodecane **3** chains are progressively compressed. Furthermore, it was observed that the compressed conformers may be stabilized by short dihydrogen contacts (Figure B).

[1] Rebek, J. *Acc. Chem. Res.* 2009, 42, 1660-1668., [2] Ajami, D.; Rebek, J. *Acc. Chem. Res.* 2013, 46, 990-999.



Keywords: molecular flask, hydrogen bonding, alkane springs