

m28.p09

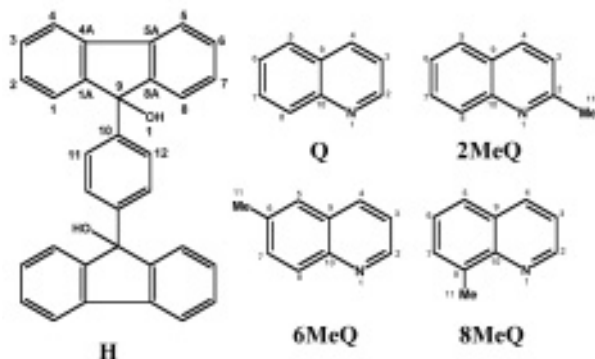
Inclusion Properties of Quinolines by A Diol Host Compound

Hong Su, Luigi R. Nassimbeni

Chemistry Department, University of Cape town, Rondebosch 7701, South Africa

Keywords: inclusion, single crystal structure, selectivity

1,4-bis(9-hydroxyfluoren-9-yl)benzene (**H**) is a versatile host compound which conforms to Edwin Weber's host design specifications in that the molecule is rigid and bulky and contains hydroxyl moieties, which are good hydrogen-bond donors. In literature, this compound has been employed for the separation of the isomers of lutidine^[1] and for the guest exchange between acetone and DMSO^[2]. The guest selectivity between aniline and benzylamine by this host has been studied and was found changed dramatically by controlling PH^[3]. In this study we investigate the inclusion properties of the host compound towards quinoline(**Q**), 2-methylquinoline (**2MeQ**), 6-methylquinoline (**6MeQ**) and 8-methylquinoline (**8MeQ**) (see Scheme). All the guests formed inclusion compounds with the same host:guest ratio. Single x-ray crystal structures of the inclusion compounds have been elucidated and are all stabilised by (host)O-H...N(guest) hydrogen bonds. Thermal stabilities were studied by Thermogravimetry (TG). Competition experiments were carried out to study the guest selectivity.



[1] M. R. Caira, L. R. Nassimbeni, D. Vujovic and E. Weber. Struct. Chem. Vol. 10, p205, 1999.

[2] M. R. Caira, L. R. Nassimbeni, D. Vujovic and E. Weber. J. Chem. Soc., Perkin Trans. 2, p86, 2001.

[3] S. A. Bourne, K. C. Corin, L. R. Nassimbeni and E. Weber. CrystEngChem, Vol. 6, p54, 2004.

m28.p10

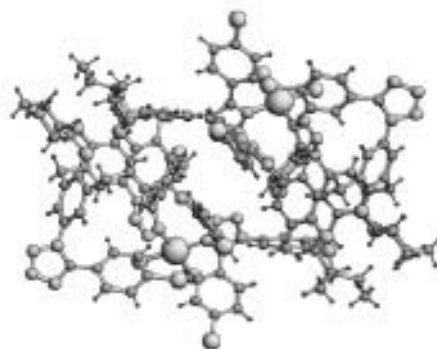
Self assembly of palladium complexes of azacalix[4]arenes

Kinga Suwinska^a, Oksana Danylyuk^a, Vyacheslav Boyko^b, Roman Rodik^b, Vitaly Kalchenko^b

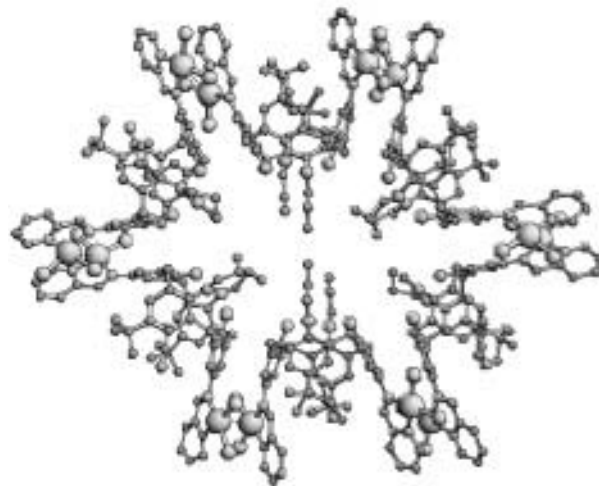
^aInstitute of Physical Chemistry, Polish Academy of Sciences, 01-224, Kasprzaka, 44, Warsaw, Poland ^bInstitute of Organic Chemistry, National Academy of Sciences of Ukraine, Murmanska 5, 02660, Kyiv-94, Ukraine. e-mail: kinga@ichf.edu.pl

Keywords: calixarenes, self assembly, supramolecular chemistry

Calixarenes are potential ligands for the development of chiral metalcomplex catalysis. An attempt to synthesize and characterize azacalix[4]arenes and their palladium complexes was performed. Self assembly of host molecules was observed due to palladium complexation. In this paper two crystal structures of Pd complexes are presented. In one case a dimer is formed and in the second case a hexamer is observed. Additionally, complexation of guest molecules in the calixarene cavities occurs.



dimer



hexamer