



Organic Chemistry

Babolsar, Iran 13-15 October 2010

University of Mazandaran

44641 \_ دانشگاه ماز ند J.L دانشکده ش



## Synthesis of some novel tetraimidazolium salts derived from diphenyland Dimethylglycolurils

Mohammad Rahimizadeh,<sup>a\*</sup> Esmaeel Rezaei Seresht,<sup>b</sup> Neda Golari,<sup>a</sup> Mehdi Bakavoli<sup>a</sup> <sup>a</sup>Department of Chemistry, School of Sciences, Ferdowsi University of Mashhad, 91775-1436 Mashhad, Iran.

<sup>b</sup>Department of Chemistry, Faculty of Sciences, Sabzevar Tarbiat Moallem University, Sabzevar, Iran.

Corresponding Author E-mail: rahimizh@yahoo.com

The design and synthesis of host molecules for the binding of neutral guest molecules continues to be an area of interest in supramolecular chemistry.[1] These "u-shaped" clips bind dihydroxy benzenes by means of hydrogen bonding between the hydroxyl groups of the guest and the urea carbonyl groups of the host and by  $\pi$ - $\pi$  stacking interactions between the guest and the host side walls.[2,3] Also Molecular clips with a large variety of side walls have been synthesized, and the supramolecular chemistry of these clips has been extensively studied.[4]

In this study, several new tetra-imidazolium salts have been synthesized based on diphenylglycoluril and dimethylglycoluril moieties. These salts were readily obtained from the reaction of the corresponding tetrabromo derivatives with imidazole and subsequently methylated by methyliodide and exchanged the iodide anion by sodium tetrafluoroborate to give the tetraimidazolium salts. The results showed some of these salts have low melting points and consequently potential abilities to use as ionic liquids.



## **References:**

- [1] Lehn, J. M. Comprehensive supramoleacular chemistry, Elsevier science Ltd, Oxford, 1996: Vol. 2.
- Sijbesma, R. P.; Nolte, R. J. M. Top. Curr. Chem. 1995, 179, 25. [2]
- Rowan, A. E.; Elemans, J. A. A. W.; Nolte, R. J. M. Acc. Chem. Res. 1999, 32, 995. [3]
- [4] Reek, J. N. H.; Priem, A. H.; Engelkamp, H.; Rowan, A. E.; Elemans, J. A. A. W., Nolte, R. J. M., J. Am. Chem. Soc. 1997, 119, 9956.