

## Heats of Solvation of Fluorinated Alcohols in ILs

Ines Vaz<sup>C, S</sup>, Ana Lobo Ferreira and Luís Santos

*Department of Chemistry and Biochemistry, University of Porto, Porto, Portugal*  
*inescvaz@gmail.com*

Ionic Liquids also have unusual properties derived from its particular structure/nanostructuration and polar and non-polar interactions domains. The electrostatic interactions existing between the cation and the anion have been considered the dominant ones. However, the weak interactions as hydrogen bonds,  $\pi$ - $\pi$  staking and other non-covalent interaction could be relevant and rule the differentiation between the properties of different families. In this work the heats of solvation of alcohols with different degrees of fluorination in Ionic Liquids by Isothermal Titration Calorimetry is presented. The level of fluorination in tert-butanols: tert-butanol, trifluoro-tert-butanol, hexafluoro-tert-butanol and nonafluoro-tert-butanol was used to give insights into the effect of the increase of alcohol acidity in the -OH to IL interaction. The differentiation of the heats of solvation with the level of fluorination of tert-butanol in different Ionic Liquids will be used for the qualitative and quantitative evaluation of the H-bond interactions between alcohols and ionic liquids.

### Acknowledgements

Inês C. M. Vaz acknowledged the financial support from Fundação para a Ciência e Tecnologia (FCT) for the Research Grant associated with the project PTDC/AAC-AMB/121161/2010.