DIPARTIMENTO DI CHIMICA

SAPIENZA
UNIVERSITÀ DI ROMA

Seminario di Dipartimento
26/11/2013 aula Parravano ore 16:00

Bile Salts Future Perspectives

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Bile salts are important biomolecules that participate in several biochemical processes such as vitamins and fat emulsification, enzyme activation and some hormonal processes. Bile salts are ubiquitous in nature and constitute a good base for the synthesis of new materials. Currently synthetic derivatives from bile salts are used in diverse fields. In Supramolecular Chemistry the salts are used to form non-covalent aggregates e.g. vesicles, molecular tubes or gels[1-4]. Medical applications include anticancer and antimicrobial drugs. Also they are used as slow release agents and surfactants that enhance solar cell performance in the electronic field. We began synthesizing bile salts with hydrophobic expansion several years ago. Currently we are preparing derivatives that show good antibacterial and anticancer activity and we have found that the new derivatives have improved the performance of Gratzel cells.

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[2] Galantini, L.; Leggio, C.; Jover, A.; Meijide, F.; Pavel, N. V.; Soto Tellini, V. H.; Tato, J. V.; Di Leonardo, R.; Ruocco, G. *Soft Matter* **2009**, *5*, 3018.
[3] Manghisi, N.; Leggio, C.; Jover, A.; Meijide, F.; Pavel, N. V.; Soto Tellini, V. H.; Vázquez Tato, J.; Agostino, R. G.; Galantini, L. *Angew. Chem. Int. Ed*. **2010**, *49*, 6604.
[4] Travaglini, L.; D'Annibale, A. ; Schillen, K. ; Olsson, U. ; Sennato, S. ; Pavel, N. V.; Galantini, L. *Chem. Comm.* **2012**, *48*, 12011.

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