

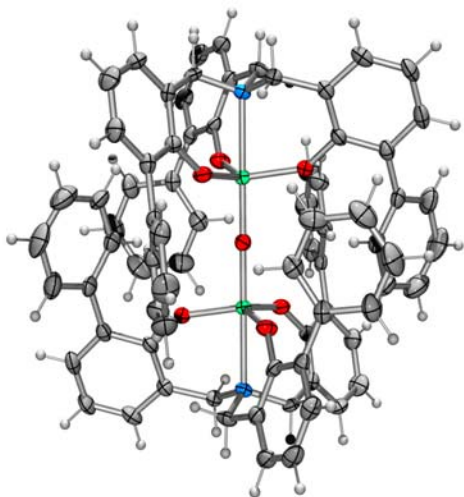
AVVISO DI SEMINARIO

Mercoledì 14 marzo 2007
ore **15.30** aula **A1** dell'edificio **C11**
via L. Giorgieri 1 Università di Trieste

**Multidentate ligands for a
selective and effective catalysis**

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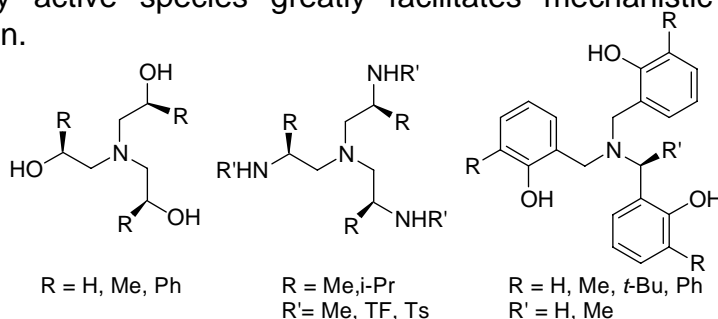


Il Direttore
Prof. Lucio Randaccio

Tutti gli interessati sono invitati a partecipare

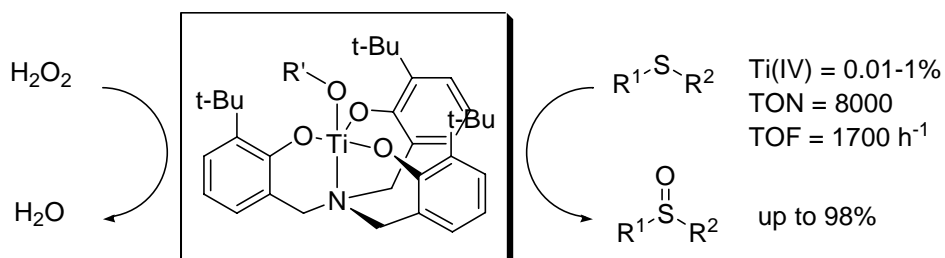
Multidentate ligands for a selective and effective catalysis

One of the current trends in catalyst design is the use of multidentate ligands for complexation of the metal.^[1] Advantages include the high stability of the metal complexes, which often allows low catalyst concentrations without loss of catalyst integrity. Secondly, a nearly complete occupation of all coordination sites of the metal by a single ligand reduces the chances of formation of multimetric and often undefined metal-species under catalytic conditions. The presence of only a single catalytically active species greatly facilitates mechanistic studies and catalyst optimization.



In particular our group has been studying the use of trialkanol, triamido and triphenolamino amino systems with metal ions like Ti(IV), Zr(IV), V(V) and Al(III), exploring in particular way their behaviour in the activation of peroxides for oxygen transfer reactions.

In this communication our most recent results obtained with Ti(IV) and V(V)-triphenoxy-amino complexes will be described. New synthetic protocols for the ligand synthesis will be reported^[2] together with studies on their coordination chemistry with metal ions and their effective use in oxidation with peroxides^[3] and as chiral solvating agents.



[1] *Comprehensive Asymmetric Catalysis*, E. N. Jacobsen, A. Pfaltz, H. Yamamoto, Eds.; Springer, Berlin, 1999; Vols. 1-3. *Lewis acids in Organic Synthesis*; Yamamoto, H., Ed.; Wiley, New York, 2000; Vols. 1 and 2.

[2] Prins L. J.; Mba, M.; Kolarović, A.; Licini, G. *Tetrahedron Lett.* **2006**, *47*, 2735.

[3] Mba, M.; Prins, L. J.; Licini, G. *Org. Lett.* **2007**, *9*, 21.