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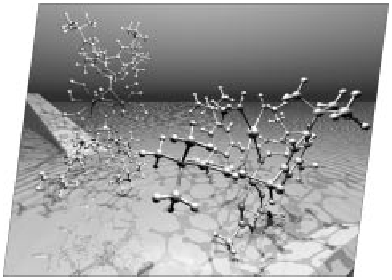
## COVER PICTURE

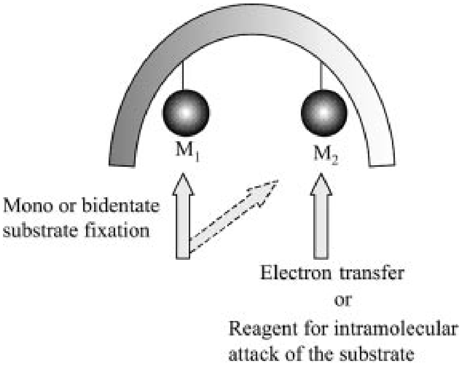
**The cover picture shows** the structures of two new types of calix[4]arene complexes obtained by deprotonating the calixarene with an alkaline earth metal, or potassium metal, followed by reaction with selected titanium(IV) compounds. The alkaline earth metals form dimeric alkaline earth-titanium(IV) complexes, containing at the core a rhombus of alternating alkaline earth metal and $\mu_3$-oxo centres. Each oxo centre of the rhombic core is the apical ligand of a square-pyramidal titanium(IV) centre, whose basal plane donors are the four phenolate oxygen atoms from a calix[4]arene arrayed in the symmetrical cone conformation. Terminal methanol ligands surround the alkaline earth centres, and simultaneously hydrogen-bond to the adjacent phenolate oxygen atoms. Potassium reacts with calix[4]arene and the titanium(IV) source to give a monomeric mixed potassium-titanium complex. The potassium cation binds within the π-basic calix[4]arene cavity, whilst the titanium centre is octahedrally complexed in the *exo* position by four phenolate and one acetylacetonate ligands. A solution pathway exists for the interconversion between the potassium-titanium calix[4]arene monomer and the alkaline earth-titanium dimers, where the product is dictated by the choice of solvent. Details are discussed in the article by R. N. Lamb et al. on p. 4153 ff.



## MICROREVIEW

**4137** **C. Belle,* J.-L. Pierre***

Asymmetry in Bridged Binuclear Metalloenzymes: Lessons for the Chemist



**Keywords:** Unsymmetrical binuclear metalloenzymes / Superoxide dismutase / Purple acid phosphatases / Catechol oxidases / Model complexes