



Einladung zum Kolloquium

Am Mittwoch, den 27. Mai 2009, 17:00 Uhr, spricht

Herr Professor Dr. Phil Andrews

School of Chemistry, Monash University, Australien

zum Thema:

Exploring the Structural Diversity and Biological Activity of Metal-Organic Bismuth Compounds

Bismuth compounds have been used as antimicrobial and chemotherapeutic agents for over 200 years. Today the most common use is of bismuth *subsalicylate* (BSS), *subcitrate* (BSC) and *ranitidine subcitrate* (RBC) in triple and quadruple therapies for the treatment and eradication of *Helicobacter Pylori*, and in the treatment of travelers diarrhea. Bismuth is also considered to be a heavy metal of low toxicity and can be tolerated by the body in levels that its near neighbours in the periodic table (Sn, Cd, Hg, Sb, Pb) cannot. As such it is often touted as a 'green' metal for use in catalysis, synthesis and in new materials.

However, the organometallic and metal-organic chemistry of bismuth has been plagued by many physical and chemical difficulties, mostly stemming from high levels of insolubility and a tendency for facile hydrolysis and/or reactions with available solvent. These factors can result in polymer or oxo-cluster formation, ligand lability and thermodynamic instability. End products are often difficult to comprehensively characterise and, hence, the common 'sub' epithet.

This talk will describe our recent efforts in developing and contrasting various synthetic procedures for the clean, high yielding and reproducible synthesis of homo and heteroleptic bismuth compounds, their solubility and stability towards aqueous environments, their varied structural chemistry, and decomposition pathways to large high nuclearity oxo-clusters. The formation and biological activity of bismuth NSAID complexes and the activity of various bismuth complexes against the *Leishmania* parasite will also be presented.

Ort: Fakultät für Chemie und Mineralogie, Johannisallee 29, kl. HS 015,
04103 Leipzig

Alle Interessenten sind zu diesem Vortrag herzlich eingeladen.

Prof. Dr. E. Hey-Hawkins
Sprecherin der
Graduiertenschule BuildMoNa

Prof. Dr. H. Krautscheid
Dekan

Die Professoren des Institutes
für Anorganische Chemie