Universität Leipzig
Fakultät für Chemie und Mineralogie
Institut für Anorganische Chemie

E i n l a d u n g zum Kolloquium

Am Mittwoch, den 22. Oktober 2014, 17:00 Uhr, spricht

Herr Dr. Lee J. Higham

School of Chemistry, Newcastle University, UK

zum Thema:

Surprises in Primary Phosphine Chemistry and Their Applications in Catalysis and Disease Imaging

Primary phosphines are widely believed to be spontaneously flammable and toxic, despite their excellent potential as routes to very potent chiral ligands such as the DuPhos family of phosphines. We were able to demonstrate that the binaphthyl backbone of MOP-type monodentate ligands possess sufficient π-conjugation to render the normally oxygen sensitive phosphino group stable to air. In 2011 we published a DFT model on why this electronic stabilization effect may occur. Intriguingly, despite their inertness to air-oxidation, these phosphines retain the ability to be highly functionalized. Thus we have prepared chiral phosphiranes and phosphonites and studied their efficacy in asymmetric catalysis. Finally, the predictive powers of the DFT model allowed us to synthesise the first air-stable, fluorescent primary phosphines, based on the BODIPY backbone, the derivatives of which have potential as metal-based disease imaging agents.

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

Alle Interessenten sind zu diesem Vortrag herzlich eingeladen.

Prof. Dr. B. Kersting
GDCh-Ortsverband

Prof. Dr. D. Belder
Dekan

Die Professoren des Institutes
für Anorganische Chemie

Nähere Informationen bei Frau Professor Dr. Dr. h.c. E. Hey-Hawkins, Tel.: 36151