

Seminar

Monday 11 July 2011

11.00 am - Room 531

Professor Anthony Hill

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The Odd Bit of Carbon

The field of bimetallic compounds in which the metals are spanned by a linear chain of carbon has grown enormously in recent years. However the vast majority of such compounds have two features in common: (i) The carbon chains are connected to the metals by single metal-carbon bonds; (ii) The chains involve an even number of carbon atoms. This may be traced to the synthetic methodologies which are generally derived from the mature field of organic alkyne, diyne and polyyne synthesis. Effectively, these strategies deliver carbon in 'packets of two'. Compounds with metals linked by an odd number of carbon atoms are rare because (i) they are synthetically more difficult to obtain and (ii) simple electron counting requires that at least one metal carbon linkage involves metal-carbon multiple bonding. This talk will present synthetic strategies for the synthesis of bimetallic complexes spanned by one or three carbon atoms and a comparison of their chemistries with those of even-carbon chains.