SFB 608

Einladung zum Kolloquium

Ort: Universität zu Köln
II. Physikalisches Institut
Seminarraum 201

Zeit: 04. November 2009, 14:30 Uhr s.t.

Sprecher: **Prof. Dr. Gerd Meyer**
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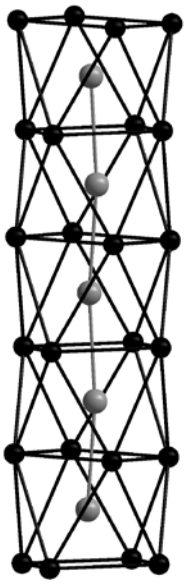
Thema: Cluster Complexes as anti-Werner Complexes



Abstract. The nomenclature which *Alfred Werner* introduced in coordination (complex) chemistry is imposed on cluster compounds, especially on those which contain endohedral atoms to enhance the electron count for intra-cluster bonding. Formulae are written in a way that, beginning with the central atom, the sequence of coordination spheres is illustrated. For example, the iodide so far mostly written as , a formula which tells nothing about the structure, is then rewritten as follows, {()}. would be [{}]. Whenever feasible other nomenclatures are included, for example *Niggli*'s way to hint at connections as in $\{()_{/2}\}_2\{_{/2}\}$, or the *Schäfer–Schnering* nomenclature for ligand functionalities as in $\{\}_{/}^{-a}$. This way of considering cluster complexes as *anti-Werner* complexes is especially useful when coordination numbers and polyhedra of endohedral atoms are considered in a systematic way. A variety of rare-earth cluster complexes is discussed with special emphasis on the relationships between crystal and electronic structures and physical properties.

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