



第275回触媒化学研究センター談話会

演題：“Macrocyclic and Supramolecular Chemistry with Poly-NHC Ligands”

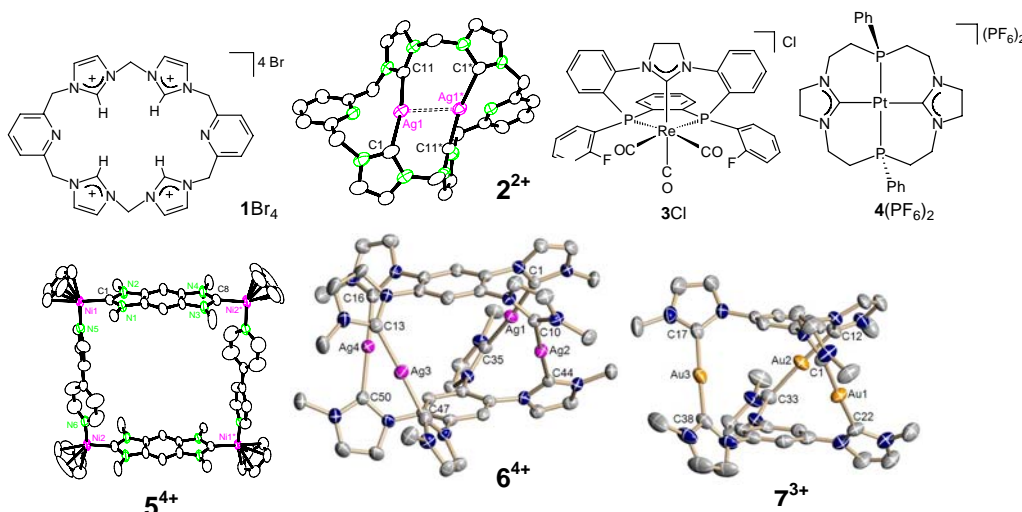
講演者：Prof. F. Ekkehardt Hahn

(Institut für Anorganische und Analytische Chemie, Universität Münster)

日時：2010年6月11日(金) 16:00–17:00

会場：工学研究院 材料化学棟大講義室 (MC030)

Cyclic ligands with carbene donor functions are accessible from cyclic tetraimidazolium salts like 1Br_4 , which after C2 deprotonation react with metal ions to give, for example, the dinuclear disilver complex 2^{2+} . We have extended this chemistry to complexes with cyclic ligands exhibiting a PPC donor set like [11]ane- $\text{P}_2\text{C}^{\text{NHC}}$ in 3Cl or a PPCC donor set like [16]ane- $\text{P}_2\text{C}^{\text{NHC}_2}$ in $4(\text{PF}_6)_2$. Bidentate biscarbene ligands can be used for the generation of supramolecular structures like the molecular square $5(\text{BF}_4)_2$ containing two biscarbene and two 4,4'-bipyridine building blocks. Three-dimensional supramolecular assemblies $6(\text{PF}_6)_4$ have been obtained from 1,2,4,5-tetra(imidazolium) substituted benzene and silver oxide. The silver atoms in 6^{4+} can be exchanged for gold atoms without destruction of the supramolecular assembly. The same reactivity has been observed with a tricarbene ligand which forms the trisilver complex and reacts with $[\text{AuCl}(\text{SMe}_2)]$ to give the trigold species 7^{3+} . The inclusion of small substrates into the metallocupramolecular carbene complexes has been studied.



《連絡先》 北大触媒化学研究センター 分子触媒化学研究部門

高橋 保 (TEL: 011-706-9149)



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