

第6回錯体物性化学講演会

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磁性や磁気円二色性などの物性から、不斉反応や酸化反応の触媒能まで、金属錯体の研究を幅広く精力的に進めている Kil Sik Min 先生(慶北大学校)をお招きして、講演会を開催いたします。皆さまのご来聴をお待ち申し上げます。

日時：2012年12月21日(金) 16:00 ~ 18:00

場所：理学部2号館3階 化学第一講義室(2349室)

講演タイトル：

Functional Coordination Compounds based on Chiral Macrocyclic Complexes

Abstract: Chiral compounds have attracted much attention in chemistry, material science and the chemical industry because of their potential and/or practical applications for molecular recognition, catalysis, magnetism, and separation. Recently transition metal complexes with chiral ligands have been studied in asymmetric catalysis and self-assembly for luminescent materials. Many nickel(II)/copper(II) macrocyclic complexes have been exploited in self-assembly for the construction of coordination compounds. However, macrocyclic nickel(II)/copper(II) complexes bearing chiral pendant arms have not been reported, even though such complexes can be good candidates as chiral building blocks. As building blocks for chiral coordination compounds, novel nickel(II)/copper(II) hexaaza macrocyclic complexes, $[M(L^{R,R})](ClO_4)_2$ and $[M(L^{S,S})](ClO_4)_2$ ($M = Ni, Cu$), containing chiral pendant groups have been synthesized by an efficient one-pot template condensation and characterized ($L^{R,R/S,S} = 1,8$ -di((R/S)- α -methylbenzyl)-1,3,6,8,10,13-hexaazacyclotetradecane). From the self-assembly of the chiral macrocyclic complexes and some bridging ligands such as deprotonated 1,3,5-benzenetricarboxylic acid, oxalate ion, and chromate ion, we have obtained and characterized dinuclear complexes, cage compounds, 1-D coordination polymers, and 2-D networks. In this presentation, we will introduce the detailed preparation, structure, magnetism, circular dichroism, and chiral resolution, etc.

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