

演題: Sugar Containing Metal Complexes: Recent Results in Synthesis and Application 講師: Dr. Michael Gottschaldt Friedrich-Schiller-University Jena 日時: 2009年7月9日(木)16:00 ~ 17:30 場所: 工学部材料・化学棟大会議室(MC526) 共催: 高分子学会北海道支部講演会・第 23 回生物機能高分子専攻セミ ナー

要旨:

Carbohydrates are of primary importance as energy sources. Due to the properties inherent to this class of molecules they are of increasing interest for the preparation of bioactive materials and better targeted drugs. One approach is to functionalize complexes of active metal ions in their periphery with sugar moieties in order to increase solubility, biocompatibility, bioactivity, selectivity in biological systems and to achieve new properties.^[1] For these reasons new synthesis pathways towards sugar substituted ligands have to be developed. The shape of the ligand strongly depends on the nature of the complexed metal ion and the desired biological/medicinal application.

An overview of recent development in synthesis, characterization and elucidation of properties for potential application of the metal complexes will be given. Depending on the shape of the synthesized sugar containing ligand different metal ions have been coordinated, such as Ag(I), Re(I), ^{99m}Tc(I), Pt(II), Pd(II), Ru(II), Ga(III), ⁶⁸Ga(III), In(III) or Ir(III). Determined by the active metal core the complexes where tested for their ability to act as antimicrobial or anticancer agents, as candidates for radio imaging or cell staining probes as well as photodynamic agents.

[1] M. Gottschaldt, U. S. Schubert, Chem. Eur. J. 2009, 15, 1548-1557.

連絡先:工学研究科生物機能高分子専攻 覚知 豊次(内線:6602)