



第177回触媒化学研究センター談話会

演 題 : Polyoxoanions: Nanomolecular Structures
with Multiple Functions

講演者 : Prof. *Ulrich Kortz*
International University Bremen, Germany

日 時 : 2004年11月26日(金)
14:00 - 15:30

会 場 : 北海道大学創成科学研究棟
4階 セミナー室 215号室

要 旨 : Polyoxoanions are discrete molecular assemblies with dimensions in the nanoscale domain. These metal-oxygen clusters exhibit a unique structural variety associated with a multitude of functions. Therefore these fascinating compounds are of interest in many different fields including catalysis, medicine and materials science.

In the first part of the talk some transition metal substituted polyoxotungstates with novel geometries of the addenda matrix and/or of the incorporated metal ions will be presented. The spins of the incorporated paramagnetic ions are usually exchange-coupled which can lead to large spin ground states. The tungsten-oxo framework acts as a diamagnetic ligand, encapsulating and thereby isolating the magnetic transition metal clusters from each other.

The second part of the talk is focused on our approaches towards the design of very large polyoxotungstates. Some titanium-substituted species will be presented as well as some hybrid organic-inorganic polyoxoanions based on diorgano-tin linking groups. Especially the latter class of compounds has resulted in some species with fundamentally novel and unexpected architectures.

《連絡先》 北大触媒化学研究センター 機能材料設計分野

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