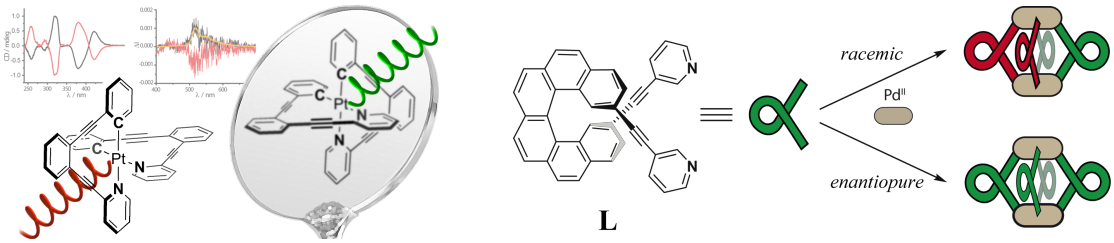
第704回　化学・物質工学セミナー開催のお知らせ

日時：平成31年1月18日（金）13:00～14:00
場所：サイエンステクノラボ　セミナー室 1
講演題目；Metal- and ligand-centered chirality in square-planar coordination compounds
講演者；Thorben R. Schulte 博士（ドルトムント工科大学・頭脳循環プログラム招聘研究者）

Square planar metal complexes can be chiral even if the ligand is not chiral itself. We present a new kind of *trans*-cyclometalated square-planar platinum(II) complexes. Neutral organometallic compounds carrying one or two of the *trans*-spanning *C^N*-donor ligands $\mathbf{L}^{CN}$ were prepared. Both the formed [Pt$\mathbf{L}^{CN}$Cl(SEt$_2$)] and [Pt$\mathbf{L}^{CN}_2$] complexes are chiral with the metal serving as the stereo center. The enantiomers of complex [Pt$\mathbf{L}^{CN}_2$] could be separated and their absolute configuration was determined. All compounds were fully characterized and the photophysical properties of [Pt$\mathbf{L}^{CN}_2$] have been investigated showing phosphorescence in solution and in the solid state with a moderate quantum yield.[1]



Supramolecular cages based on self-assembled coordination compounds play an important role in host-guest chemistry. Enantioselective recognition is an ubiquitous phenomenon in nature, so the formation of chiral hosts for the enantioselective binding of guest molecules is of special interest for the development of sensors and transporters. We present a new class of chiral and achiral cages based on a [6]helicene backbone.

[1] T. R. Schulte, J. J. Holstein, L. Krause, R. Michel, D. Stalke, E. Sakuda, K. Umakoshi, G. Longhi, S. Abbate, G. H. Clever, J. Am. Chem. Soc. **2017**, *139*, 6863.
[2] T. R. Schulte, J. J. Holstein, G. H. Clever, in submission

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