

(PL-8)

**Reactivity of Rhodium Cp* Complexes Containing
Labile Ligands: [Cp*Rh(H₂O)₃](OTf)₃, [Cp*Rh(NO₃)(OTf)],
and [Cp*Rh(η^6 -C₆H₃NH₂-2,6-*i*Pr₂)](OTf)₂
(Cp* = C₅Me₅, OTf = CF₃SO₃)**

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We prepared a couple of RhCp* complexes, [Cp*Rh(η^2 -NO₃)(OTf)] and [Cp*Rh(η^6 -C₆H₃NH₂-2,6-*i*Pr₂)](OTf)₂, which possess labile ligands. We examined the reactivity of those complexes as well as [Cp*Rh(H₂O)₃](OTf)₃ and structurally characterized most of products. In this presentation, we will discuss the following subjects:

- (1) N-O bond cleavage and various bonding modes of the nitrato ligand
- (2) Reactivity of [Cp*Rh(η^2 -NO₃)(OTf)] toward organic thiolates and cyanates
- (3) Various forms of linear dipyridyls in discrete rectangles, dinuclear rods, and one dimensional networks containing Cp*Rh(III)
- (4) Azido or hydroxyl capped half cubanes containing Cp*Rh fragments:
[Cp*Rh(μ_3 -X)](μ_3 -X)]²⁺ (X = OH or N₃)
- (5) Rhodium(III) mediated cycloaddition of alkynes
- (6) [Cp*Rh(η^6 -C₆H₃NH₂-2,6-*i*Pr₂)](OTf)₂: reactivity toward phosphines and alkynes

