Optically Active Transition Metal Compounds, 136 [1]. An Octahedral Molybdenum Complex (P-P')$Mo(CO)_4$ with a Chiral Secondary Phosphorus Atom

Henri Brunner, Ilias Grau, and Manfred Zabel*

Institut für Anorganische Chemie, Universität Regensburg, D-93040 Regensburg, Germany

Reprint requests to Prof. Dr. H. Brunner. E-mail: henri.brunner@chemie.uni-regensburg.de

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Reaction of (η^6-$C_6H_5CH_3$)$Mo(CO)_3$ with the easily accessible chiral chelate ligand *P,P,P'*-tris-[(+)-9-phenyldeltacyclan-8-yl]-1,2-bis(phosphanyl)benzene P-P' afforded the octahedral molybdenum carbonyl derivate (P-P')$Mo(CO)_4$ **1** as a diastereomer mixture **1a** (74%) and **1b** (26%). Crystallization gave single crystals of (S_P)-(P-P')$Mo(CO)_4$ **1a**. The X-ray structure analysis of compound **1a** revealed the formation of an unusual triple-decker π-stack in the solid state.

Key words: Molybdenum, Chirality, Secondary Phosphorus, π-Stack, Triple-Decker