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An Octahedral Molybdenum Complex (P-P’)Mo(CO)₄
with a Chiral Secondary Phosphorus Atom

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Reaction of (η⁶-C₆H₅CH₃)Mo(CO)₃ with the easily accessible chiral chelate ligand P,P,P’-tris-[(+)-9-phenyldecatacyclan-8-yl]-1,2-bis(phosphanyl)benzene P-P’ afforded the octahedral molybdenum carbonyl derivate (P-P’)Mo(CO)₄ as a diastereomer mixture 1a (74%) and 1b (26%). Crystalization gave single crystals of (Sₚ)-(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