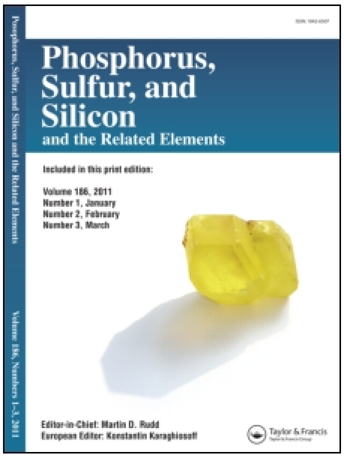

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Diastereoselective Coordination of Chiral Phosphine Substituted Thioamide Ligands

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Diastereoselective Coordination of Chiral Phosphine Substituted Thioamide Ligands

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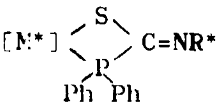
Homochiral thioamides are forming diastereomeric molybdenum and tungsten complexes in different ways (type 1-3) and different stereoselectivities (1 and 2: >99%de , 3:0%de). The dissolved complexes 1 epimerized slowly at room-temperature.



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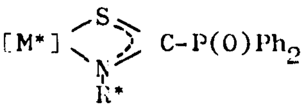

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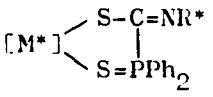

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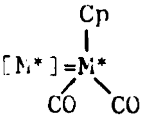
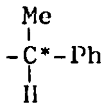


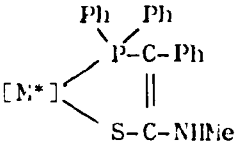
(M=Mo,W) , R* = (S),(R)



$-\overset{\displaystyle Me}{\underset{\displaystyle H}{C^*}}-Ph$

The complex 6 results from the coordination of the thioacetamide 4. Because this reaction is accompanied by tautomerisation of 4, the original carbon- chirality (C*) gets lost.

$$\underset{4}{Ph_2P\text{-}\overset{*}{C}HPh\text{-}C(S)\text{-}NHMe} \rightleftharpoons \underset{5}{Ph_2P\text{-}CPh{=}C(SH)\text{-}NHMe}$$



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