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Mixed Substituted Ferrocenylenebisphosphanes

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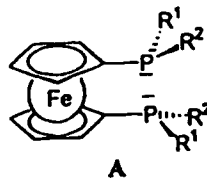
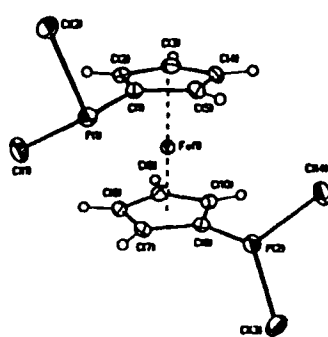
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Mixed Substituted Ferrocenylenebisphosphanes

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In our contribution we explored the design of a new type of ferrocenylenebisphosphane ligands with asymmetrically substituted phosphorus atoms (A), which may be interesting regarding stereo control in catalytic enantioselective reactions. Starting from 1,1'-bis-dichlorophospanoferrocene of which the so far unknown crystal structure could be determined (see below) a variety of ligands with asymmetrical substitution pattern can be synthesized [1]. While in the case of achiral substituents two diastereomers are obtained, in the case of one chiral substituent three diastereomers are observed. As previously reported [2] the diastereomers can be interconverted thermally by inversion of the phosphano groups at elevated temperature without solvent (>200° C).



R¹, R²:
Cl, Cp*, CHTms₂,
Bu, (-)Menthyl

References

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- [2] G.E. Herberich, S. Moss, *Chem. Ber.*, **1995**, 128, 689.