

The alkylation of cyclopentadienyl-carbonyl-triphenylphosphine-(4-,3-, and 2-methylphenyl)acetylirons.

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Streszczenie

Three cyclopentadienyl-carbonyl-triphenylphosphine-(methylphenyl)acetylirons (4-, 3-, and 2-methylphenylacetylirons) have been synthesized. The complexes were deprotonated in the acyl ligand with n-butyl lithium and the anions formed were alkylated with methyl iodide, benzyl bromide or benzyloxymethyl chloride. The products were obtained as mixtures of R(Fe)S(C2)/S(Fe)R(C2) (A, major) and R(Fe)R(C2)/SFeSC2 (B, minor) products. (2-Methylphenyl)acetyliron showed highest stereoselectivity in the alkylation reaction. The results were interpreted in terms of stereoelectronic control of deprotonation. The results of alkylation of all three complexes when LDA was used as the base were different. In case of (4- and 3-methylphenyl)acetylirons products B dominated over A. A cyclic transition state during deprotonation was assumed to rationalize the results. X-ray structures of (3- and 2-methylphenyl)acetylirons were determined.

Słowa kluczowe

(methylphenyl)acetylironssynthesis and stereoselective, alkylationcrystal structure, LITHIUM DIISOPROPYLAMIDE, ASYMMETRIC-SYNTHESIS, COMPLEX REACTIVITY, IRON, THF, LDA

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