Alkylation of cyclopentadienyl rings in the reactions of nickelocene with organolithium compounds.

Autorzy

Stanisław Pasynkiewicz

Antoni Pietrzykowski

L. Bukowska

Lucjan B. Jerzykiewicz

Rok wydania

1999

Czasopismo

Journal of Organometallic Chemistry

Numer woluminu

585

Strony

308-314

DOI

10.1016/S0022-328X(99)00241-7

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

The reaction of nickelocene with *tert*-butyllithium has been studied. It was found that unstable species $\{CpNiC(CH_3)_3\}$, formed in this reaction, reacted further in two directions: β-H elimination and homolytic cleavage of Ni–C bond. Hydrogen elimination product formed trinickel cluster $(NiCp)_3CCH(CH_3)_2$ **1**, while *t*-butyl radical alkylated cyclopentadienyl rings to form several compounds. One of these compounds, $\{Ni[C_5H_4C(CH_3)_3]\}_2[C_5H_5C(CH_3)_3]$ **3**, has been isolated and fully characterised. The compound crystallizes from hexane in a triclinic crystal system and space group. Corresponding unit cell parameters were determined as a=7.520(2) Å; b=13.150(5) Å ; c=13.625(4) Å; α=113.77(3)°; β=97.42(3)°; γ=90.02(3)°; V=1220.7(7) Å^3; Z=2. It is the first example of alkylation of cyclopentadienyl rings bonded to nickel by organolithium compounds.

Słowa kluczowe

Nickel, Lithium, Cyclopentadienyl, Alkylation, Crystal structure

Adres publiczny

https://doi.org/10.1016/S0022-328X(99)00241-7

Strona internetowa wydawcy

http://www.elsevier.com