

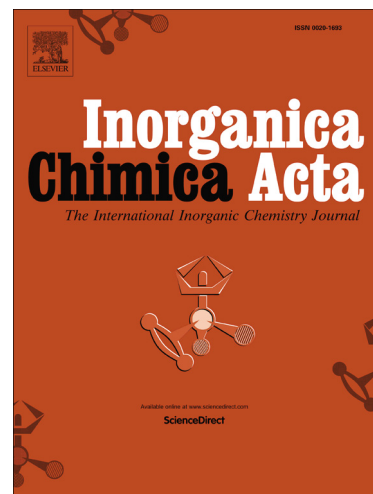
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Catalytic activity of a large Rhodium metallaborane towards the [2+2+2] cycloaddition of alkynes

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Abstract

Rhodadecaborane [6-(η^5 -C₅Me₅)-*nido*-6-RhB₉H₁₃] (**1**) was found to catalyze the [2+2+2] cycloaddition of a series of terminal and internal alkynes to yield mixtures of 1,2,4- and 1,3,5-substituted benzene. The reactivity of **1** with alkynes demonstrates that decaborane based metallaborane can be used as the catalyst for [2+2+2] cycloaddition of alkynes. All compounds are characterized by NMR spectroscopy and MS spectrometry methods.

Keywords:

metallaborane, catalyst, cyclootrimerization, cycloaddition, Rhodium

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