

Kinetics and thermochemistry of $[2\pi + 2\sigma + 2\sigma]$ -cycloaddition of quadricyclane to tetracyanoethylene

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Abstract

© 2016, Pleiades Publishing, Ltd. Kinetic data for the unusual $[2\pi + 2\sigma + 2\sigma]$ -cycloaddition of quadricyclane to tetracyanoethylene in toluene have been obtained for the first time. The same reaction in 1,4-dioxane appears to be the most exothermic among known cycloaddition reactions. The entropy of activation and reaction volume differ only slightly from the corresponding parameters of conventional Diels–Alder reactions.

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