

# Study of all stages of the Diels-Alder reaction of cyclopentadiene with 2,3-dicyano-1,4-benzoquinone and monoadducts: Kinetics, thermochemistry, and high pressure effect

Kolesnikova A.O., Kornilov D.A., Gubaidullin A.T., Kiselev V.D.  
*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

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## Abstract

© 2020 Wiley Periodicals, Inc. The kinetic parameters and enthalpies of the Diels-Alder reactions between cyclopentadiene and 2,3-dicyano-1,4-benzoquinone leading to the formation of two different monoadducts and bisadduct were determined. The stability of adducts is compared. Monoadduct appears to be thermodynamically more stable than the bisadduct. Comparison with the other Diels-Alder reactions studied previously allows us to conclude that the heat effects upon formation of the considered Diels-Alder adducts are the lowest in comparison with all the studied dienophiles.

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## Keywords

2,3-dicyano-1,4-benzoquinone, cyclopentadiene, Diels-Alder reaction, high pressure effect, kinetics, thermochemistry

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