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Effect of hydrostatic pressure, temperature, and solvent on the rate of the Diels–Alder reaction between 9,10-anthracenedimethanol and maleic anhydride

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Abstract

The rate of the reaction between 9,10-anthracenedimethanol and maleic anhydride in 1,4-dioxane, acetonitrile, trichloromethane, and toluene is studied at 25, 35, 45°C in the pressure range of 1–1772 bar. The rate constants, enthalpies, entropies and activation volumes are determined. It is shown that the rate of reaction with 9,10-anthracenedimethanol is approximately one order of magnitude higher than with 9-anthracenemethanol.

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Keywords

9,10-dimetahnol anthracene, Diels–Alder reaction, effect of pressure, effect of temperature, solvent effect

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