

Solvent Effect on the Rate of Decomposition of Peroxy Compounds

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Abstract—Solvent effect on the rate of decomposition of peroxy compounds was described by multiparameter equations based on the linear Gibbs energy relationship. In the decomposition of dialkyl peroxides, the determining factors are the cohesion energy density of solvents and their ability to electrophilic solvation, which accelerate the process. In the case of hydroperoxides, the nonspecific solvation factor should additionally be taken into account.