

## DYNAMICS OF TRANSIENT PROCESSES IN IRREVERSIBLE KINETIC MODELS

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### S u m m a r y

A microscopic model of an open system interacting with an external medium and exhibiting quasiclassical fluctuations of its energy has been developed. The model is used to describe the irreversible process of binding between ligand and receptor molecules in a solution. Analytical expressions for the probabilities of transitions between non-stationary states of the system averaged over both equilibrium vibrations in the medium and stationary states in the system were derived. The explicit dependences of the transition rate constants on the ligand concentration, solution viscosity, and temperature were found for the irreversible model with three kinetic stages.