

Brownian motion as a model of evolution of nonequilibrium system

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According to the principles of thermodynamics, any system being in contact with the thermal bath passes in the equilibrium state for the relaxation time. The paper presents a model of Brownian motion of the system which allows one to determine its stationary states far from the equilibrium. The stationary distribution function of a nonequilibrium state can be represented by none of the known equilibrium distributions. It is shown at which conditions the equilibrium states are realized, and new stationary states of nonequilibrium systems are predicted.

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