
The generalized Fokker-Planck equation for $\rho = \rho(x, t)$ reads

$$\partial_t \rho = \frac{1}{\gamma} \frac{\partial}{\partial x} [V'(x) \rho] + \frac{2k_b T}{\gamma} \left(\sum_{n=0}^{\infty} \beta_n \frac{\partial^{2n+2}}{\partial x^{2n+2}} \rho \right), \quad (1)$$

where k_b , T , γ are the Boltzmann constant, temperature, and friction constant respectively. Besides,

$$\beta_n \equiv \frac{\zeta^{2n}}{2^{n+1} (n+1)!}, \quad (2)$$

with ζ being a constant parameter.