

Molecular brownian motors or stochastic transport in ratchet-potential, forming structural features oxyhydrated clusters

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Abstract

Understanding of the formation of the structuring element oxihydrate heavy metals in non-equilibrium conditions allows us to hope for a sorbents based on oxyhydrate with specified sorption characteristics. Study of nonlinear properties of gel oxyhydrate systems found the following features: dilatant oscillating, oscillating (pulsation) electrical conductivity, electric current spontaneous self-organization on the background of the gel polarization phenomena stained gel systems, vibrational, optical and sorption properties and much more.

In our data the behavior of charged fragments around some center. According to our previous papers, the part oxyhydrated fragments have the property itself centers around a gel clusters having a specific electric moment. This raises the important question of the interaction of colloidal clusters in the dispersion medium. Suppose that in a certain spatial region oxyhydrate clusters do not interact with the gel microheterogeneous environment, as large macromolecular education hardly move in volume. Diffusion of them very delayed, the centers of mass are inactive. In the limited space of the same area of the colloidal clusters intensively interact with the environment and with each other. This interaction occurs through conformational motion gel cluster-cluster formations or close to processes (polymerization-peptization), due to the dynamic phenomena "collapse" or "break" DES macromolecules with emission in the dispersion medium-flowing nanoclusters and the creation of quasi-stable intermediate DES different capacity. These processes can be called dissociative-disproportionate effects.