

The theory of ratchet-potential of the oxyhydrate systems

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Abstract

The structures formed by the gel particles have been considered. The gel particles formed separate long molecules folding in micellar composition. Due to the peculiarities of the structure of the oxyhydrate gels there is a large number of charged cluster particles. These particles interact with graphite electrodes. While there are currents of free charges, the fluctuations of which are found experimentally. The calculated values of the expected nano-currents give quite good agreement with experiment.

This process of the fluctuated splash motion of particles is determined by a stochastic ratchet-potential, the nature of education which is considered in the work.