

INFLUENCE  
OF THE CHARGE AND CONCENTRATION  
OF DISSOLVED IONS ON THE SELF-DIFFUSION  
OF WATER IN AQUEOUS SOLUTIONS  
OF ELECTROLYTES. NEUTRON STUDIES

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S u m m a r y

The researches of water self-diffusion in 1—1 and 1—2 electrolyte solutions of various concentrations have been carried out making use of quasielastic scattering of slow neutrons. It was of interest not only to determine the values of the water self-diffusion coefficients in solutions, but also to obtain an experimental confirmation of the modern theoretical ideas concerning the existence of individual and collective contributions to the self-diffusion coefficient of molecules. The proposed method allowed us not only to describe the scenario of the molecular motion in liquids qualitatively, but also to quantitatively evaluate the relations between the individual and collective modes.