PECULARITIES OF ISOTROPIC RAYLEIGH LIGHT SCATTERING IN AQUEOUS SOLUTIONS OF CARBOXYLIC ACIDS

S. A. OSMANOV, *Samarkand State University, 703004 Samarkand, Univ. Blvd, 15, Uzbekistan (email: barry@uni.uzsci.net).*

The pattern of isotropic light scattering in aqueous solutions of carboxylic acids is analogous to the one observed for some water-alcohol solutions [1]. Further, if in acetic acid + water solutions, two maxima were observed at small concentration of the acid (0.0-0.15 mole fr.) [2], for propionic and butyric acids at 293 K only one scattering maximum is observed at 0,02 and 0,05 mole fractions of the acid, respectively. In both cases, these maxima decrease in intensity with the increase in temperature. These results were explained by the presence of structural fluctuations due to the formation of hydrate clatrates in solution.

1. M.Ph.Vuks. Light scattering in gases, liquids and solutions. L.: LSU, 1977.
2. B.S.Osmanov, F.H.Tukhvatullin, A.Jumabaev, U.N.Tashkenbaev. Abstracts of 55-th Ohio State University Intern. Symposium on Molecular Spectroscopy. 2000, P.112. TB08.