INFLUENCE OF HYDROPHOBIZATION OF PORE'S SURFACE ON ELECTRONIC SPECTRA OF DYE MOLECULES ADSORBED IN MICROPOROUS SILICATE GLASSES

V. N. BEGER, *Saint-Petersburg State Institute of Fine Mechanics and Optics, Saint-Petersburg, 197101, Russia*; G. V. LISICHKIN, A. YU. FADEEV, *Chemistry Department, Moscow State University, Moscow, 119899, Russia*.

Electronic spectra of absorption as well as of fluorescence for diverse dyes (in particular, oxazines and coumarines) adsorbed on preliminary hydrophobized pore's surface of microporous silicate glasses have been experimentally studied. Hydrophobization has been achieved by chemical substitution of OH-groups covering the surface of the pores for hydrophobic radicals of diverse length. Significant differences of electronic spectra for dyes molecules adsorbed on hydrophobized surface from the spectra of the same molecules adsorbed in the non-hyrophobized porous glasses have been revealed.

Discovered phenomena may be explained as a manifestation of off-beat solvatochromism and solvatofluorochromism of dyes molecules under strong heterogeneous conditions when the role of the most close environment of each dye molecule is played by the nearest atoms and molecules of the surface (not the molecules of the solvents as it usually takes place in solutions). Diverse factors of the influence of intermolecular interactions between adsorbed dye molecule and the surface on electronic spectra of dyes molecules under conditions of adsorption are examined.