

Aggregation processes of nanoparticles under formation and operation of nanostructured organosilicate coatings

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Keywords: aggregation, sedimentation, diffusion of particles, diffusion fluxes, surface energy, mixing energy, kinetics of interphase interactions.

Abstract

The main features of nanoparticles aggregation in organosilicate coatings in systems polyorganosiloxane – layered hydrosilicates – pigments are considered. In the article association and aggregation processes criteria are introduced for the systems of the same or related quality composition based on their physical and chemical properties. The association and aggregation processes characteristics are defined by the type and composition of nanoparticles and organosilicon polymers and may vary in a rather wide range, almost directly related to the quantitative ratios in the formulation of compositions. Actually, for this reason this information may be useful in the development of composite materials and coatings.