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STUDY OF GRAPHENE DISPERSIONS IN SODIUM DODECYLSULFATE BY STEADY-STATE FLUORESCENCE OF PYRENE.

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ABSTRACT

Hypothesis

Aqueous solutions of ionic surfactants allow the exfoliation of graphene, that can be explained considering the adsorption model of ionic surfactants to hydrophobic surfaces. For many years, pyrene has been used as a fluorescent probe because its sensitivity to the micro-environment. The study of pyrene fluorescence in the presence of different graphene dispersions in an ionic surfactant, would improve the knowledge of the graphene-surfactant interactions.

Experiments

Different dispersions of graphene in sodium dodecylsulfate were prepared at different weight ratios 0.5, 1 and 2%. The dispersions have been studied by Raman spectroscopy, scanning electron microscopy and transmission electron microscopy. The influence of the dispersions on the pyrene fluorescence has been investigated.

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