

Abstract Submitted
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Critical adsorption and colloidal interaction in multi-component liquids¹ SHARMINE ALAM, ASHIS MUKHOPADHYAY, Wayne State University — We studied critical adsorption on colloidal nanoparticles in binary liquid mixture of 2,6 lutidine + water by using fluorescence correlation spectroscopy (FCS). Our results indicated that the adsorbed film thickness is of the order of correlation length associated with concentration fluctuations. The excess adsorption per unit area increases following a power law in reduced temperature with an exponent of -1, which is the mean-field value for the bulk susceptibility exponent. The measurements at higher particle volume fractions, where phenomena such as the particle-particle interaction, self-assembly, ternary phase separation become important will be presented.

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