

## Self aggregates of hydrophobically modified poly (amino acid) in aqueous solution and their packing parameter measurement

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Dodecyl chain grafted poly (2-hydroxyethyl aspartamide) (PHEA) was successfully synthesized and their self aggregates behavior in aqueous solution was characterized using DLS, TEM and LB technique. From the TEM images, we can find that the morphologies of aggregates in the aqueous solution were dramatically changed from spherical micelle to wormlike micelle, tubule networks and vesicle structure depending on the degree of substitution and polymer concentration. The  $\pi$ -A isotherm experiment was performed using Langmuir-Blodgett technique, and we can determine the two-dimensional limiting area of hydrophilic backbone per alkyl chain at air-water interface. With this results, we can estimate the packing properties of hydrophobic alkyl chain according to DS, and finally predict the morphology of self-aggregates in aqueous solution.