

Abstract Submitted  
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**Theory of polyzwitterionic solutions** RAJEEV KUMAR, GLENN FREDRICKSON, Materials Research Lab, UCSB — Conformations of polyzwitterionic molecules in aqueous solutions are investigated using the variational method. We have carried out self-consistent calculations for the degree of counterion adsorption on the zwitterionic sites and the size of a single polyzwitterionic chain. These calculations are used to analyze the solubility of these molecules in water. Results for the effect of an asymmetric counterion adsorption, electrostatic interaction strength, salt concentration, solvent quality, specificity of the zwitterionic monomeric units and the added salt on the conformations of the polyzwitterionic chain will be presented.

Rajeev Kumar  
Materials Research Lab, UCSB

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