

Abstract Submitted
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The inverse and direct Hofmeister series of Hen egg lysozyme at pH below isoelectric point (pI) as seen by SAXS PAWAN KOIRALA, JOSE L. BANUELOS, University of Texas at El Paso, Department of Physics, NANO MATERIALS, INTERFACES, AND CONFINEMENT FOR ENERGY AND ENVIRONMENT TEAM — Protein interaction and aggregation processes are important in understanding many physiological processes in living organisms. Diseases such as Alzheimer's, Kreutzfeld-Jakob and Parkinson's are associated with protein or peptide aggregation phenomena whereas the short-range order of crystalline proteins contributes to eye lens transparency benefitting our visual system. We are focused on determining the shape, size, and nature of interactions between the protein molecules (lysozyme) in solution at low and high salt concentration of various sodium salts at certain pH by using Small-angle X-ray scattering (SAXS). For example, data fits using an ellipsoidal form factor yield an average polar radius of 38.5 Å and equatorial radius 15.5 Å for 0.1M ionic strength solutions with 60mg/ml protein concentration.

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