



GESELLSCHAFT DEUTSCHER CHEMIKER

*Ortsverband Osnabrück*

## **“Effect of Crowding Environment on Protein Conformation and Dynamics”**

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Protein folding, the issue of protein stability and dynamic perturbations, is one of the fundamental importance in the living cell and the biological activities. While the polypeptide chain folds with the help of chaperone in the ribosome, the cytoplasmic component (which includes both micro-and macromolecules) influences the protein folding pathway and their dynamics. To understand their effect on the folding and dynamics, it is very much essential to monitor the effect of each component on the protein local as well as global structure and conformation. Taking a note from the cytoplasmic constituents, we have started observing the effects exerted by the macromolecules, such as carbohydrates (i.e., glucose, sucrose, fructose or the synthetic ones like Dextran, Ficoll and Cyclodextrin), which has an approximate concentration of  $\approx 300$  to  $400$  mg/ml in the cytosol of *Escherichia coli* and constitutes 20 to 40 % of the total volume, on the nature of the folding intermediates. Starting with our objective, we are trying to see how the shape and size of macromolecule bring changes in the conformation and dynamics during the protein unfolding and refolding processes using optical spectroscopy methods.

Der Vortrag findet am **Di, 24.10.2023, 17:00 Uhr s.t.** im CellNanOs statt:  
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Besucher sind herzlich willkommen!

**Der Ortsverbandsvorsitzende:**

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