



## Supratik Sen Mojumdar

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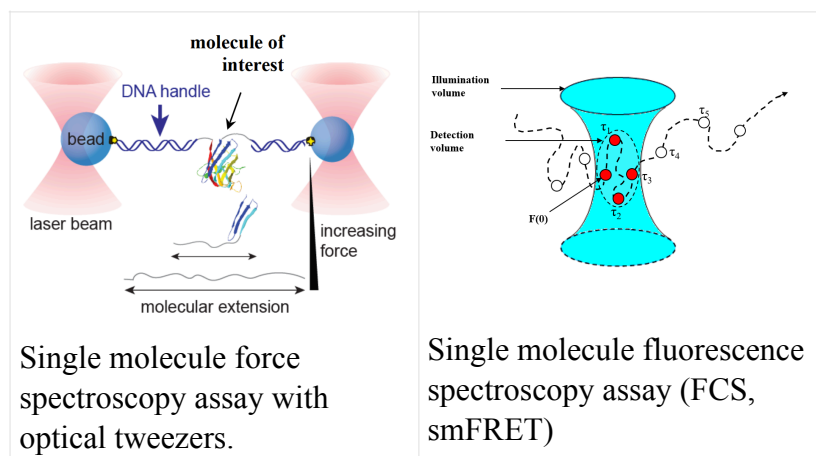


### Research Interests

- Protein folding/misfolding and aggregation mechanism.
- Protein chaperone/small molecule interaction.
- Protein conformational dynamics.
- Role of post translational modification on protein folding.

### Brief Summary of Research

The misfolding and aggregation of specific proteins is linked to a wide range of diseases such as Alzheimer's (A $\beta$  peptide), Parkinson's (alpha-synuclein), ALS (Superoxide dismutase 1) and many more. Dr. Sen Mojumdar's primary research focus is to better understand the cause of the protein misfolding diseases by looking at the folding/misfolding and aggregation mechanisms at the microscopic level by measuring the folding trajectories of individual protein molecules at high spatial and temporal resolution. For this he is taking an interdisciplinary approach combining both single molecule fluorescence and force spectroscopy (with optical tweezers) along with other biochemical, biophysical and computational tools. Deciphering the microscopic mechanisms should identify critical steps to be targeted for therapeutic intervention, e.g. through antibody therapies or chemical chaperones.



### Recent Publications

- **S. Sen Mojumdar**, Z. N. Scholl, D. R. Dee, L. Rouleau, U. Anand, C. Garen and M. T. Woodside, "Partially native intermediates mediate misfolding of SOD1 in single molecule folding trajectories." *Nature Communications* **8**, 1881 (2017).
- **S. Sen Mojumdar**, R. Chowdhury, S. Chatteraj and K. Bhattacharyya, "Role of ionic liquid on the conformational dynamics in the native, molten globule and unfolded states of cytochrome c: a fluorescence correlation spectroscopy study." *J. Phys. Chem. B* **116**, 12189-12198 (2012).