Contribution ID: **270** Type: **Poster**

【726】Single Molecule Force Spectroscopy of Disulfide Bonds

Tuesday 31 August 2021 19:08 (1 minute)

Disulfide bonds play an important role in biology, as they can influence the conformation of proteins through the covalent connection of adjacent strands. Reversible cleavage of the bond occurs both through physiological agents and forces. It is therefore interesting to study the effects of forces on the disulfide bond in the single molecule. For this purpose, we used an atomic force microscope (AFM) to investigate specifically designed molecules, which contain safety lines with two different lengths bridging the disulfide bond. Thus, rupture of the disulfide bond can be confirmed and the necessary force measured directly at the single molecule level.

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Session Classification: Poster Session

Track Classification: Biophysics, Medical Physics and Soft Matter