

# Ultrafast x-ray probing of UV excited molecular dynamics in thiouracil

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Nucleobases are strong absorbers in the ultraviolet (UV) domain and show ultrafast processes after photoexcitation, finally leading to the electronic ground state. Sulfur-substituted nucleobases (thionucleobases) instead show a long-lasting and efficient triplet population. We will present ultrafast x-ray probe studies on thiouracil performed at the sulphur L-edges. We will show, how the initial relaxation from the optically excited state to lower states within the first picoseconds modulates the x-ray induced observables.