

Mapping the Energetic Landscape for the PNA(P)/Pyridine Chemical Actinometer System: A Full Experimental and Theoretical Quantum Dynamics Investigation

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The chemical reaction between p-nitroanisole (PNA) and pyridine is one example of a chemical actinometer: a tool widely used by quantum and environmental chemists paramount to understanding photodegradation of micropollutants in aquatic ecosystems. An actinometer must have an accurately characterized quantum yield, a parameter that represents how much the system reacts per photon absorbed, obtained and verified through ϕ_{act} (ie)- ϕ_{act} through ϕ_{act} th.52

Fluorescence and phosphorescence spectroscopy were used to study photons emitted from excited singlet and triplet states, giving information about how the sensitizers behave upon absorbing light. Further analysis was conducted in which multiple PNA/pyridine samples were placed in a photoreactor, several containing specific quencher molecules that inhibit the stability of individual excited sta(t) 3 (0.24178.370 215.04m BT 5q)n5qcm BT 0.0081 Tc 5 0 0 5 0 0 Tm /TT2 1 Tf [(