

Combined Experimental and Theoretical Study on the Kynurenine

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Kynurenine (KN) (Figure 1) and its derivatives act an important biological rule as UV-filters in the human lens. They absorb UV light in 300-400 nm wavelength region and protect the eye tissues from the harmful sun irradiation. This behaviour is due to the fast deactivation of the excited state; in fact, these molecules exhibit short fluorescence lifetimes and small fluorescence quantum yields. The nature of the deactivation processes is actually unknown.

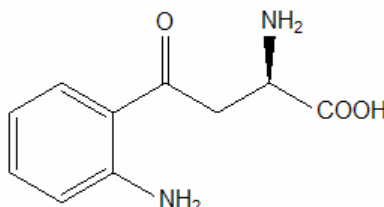


Figure 1: Structural formula of kynurenine.

The main aim of the present work is to study the energy gap between ground state and the first two singlet excited states, electronic spectra and to investigate solvent effects, both from an experimental and theoretical point of view.