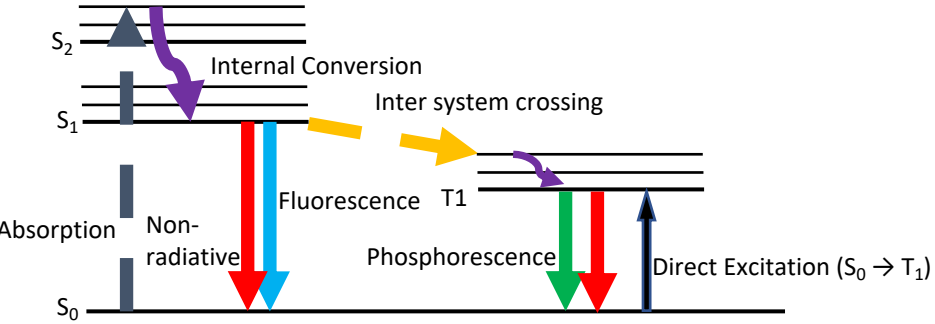


Phosphorescence – Potential Biological Applications of Direct Excitation to the Triplet State

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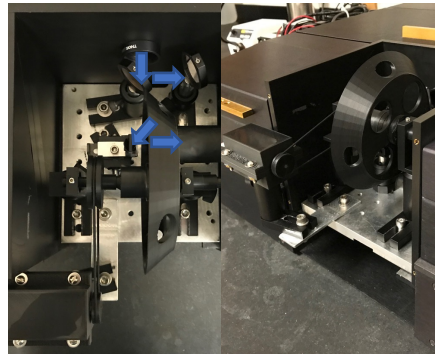
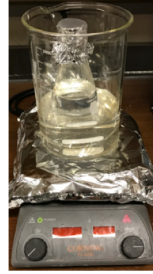
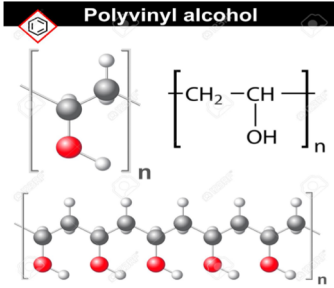
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Background



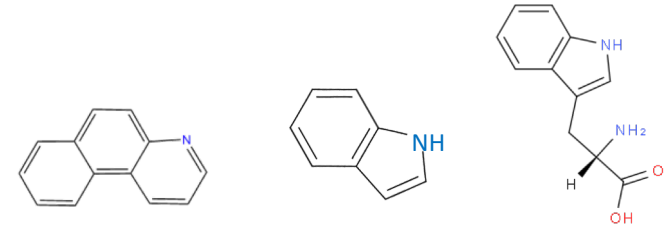
Luminescence is the emission of light by a substance. What we study is called photoluminescence which is the absorption of light by a molecule after a finite time. This process can be split into two, fluorescence (short lived) and phosphorescence (long lived). When the molecule absorbs a photon and gets excited it travels to the singlet state where it fluoresces. It has a small chance where it can go to the triplet state and then phosphoresce. Today this project will focus on increasing/populating phosphorescence which circumvents the fluorescence and how it can be used to study large molecular complexes.

Results



Conclusions

If this is done possible to directly excite then this could be used to study other model systems like indole and tryptophan. With tryptophan this is a intrinsic (natural) probe located on proteins. Using its phosphorescence (long lifetime) will be used to study its molecular dynamics.

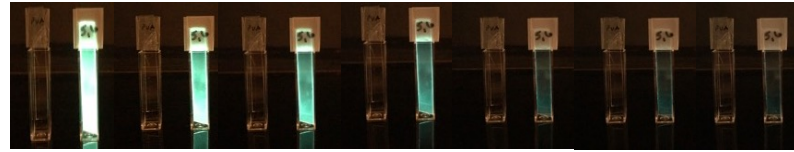


Benzoquinoline Indole Tryptophan



References

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Delay Time (seconds)

