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THE SOLVENT SENSITIVITY OF THE FLUORESCENCE OF AN AMINO ALKYL AROMATIC COMPOUND

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The fluorescence quantum yield of 9, 10 bis (n-butyl amino) Anthracene has been found to show a sharp dependence on the solvent whereas other parameters such as the position and the shape of the fluorescence band are virtually solvent invariant. The controlling property of the solvent appears to be its polarity as manifested through polarization-polarizability and hydrogen bond donor ability[1]. The fluorescence quantum yield shows a virtual step function when plotted against solvent polarity. A simple theory based on Photo indueed eleetron transfer[2] can account for all the results, which therefore might have a more general significance. The utility of this type of system as a solvent polarity probe will be examined.

References

1. Kamlet, M. J., Abboud, J. L. M. *and* Taft, R. W. (1977). *J. Amer. Chem. Soc.*, **99**, 6027 *and earlier papers*.
2. Weller, A. (1968), *Pure Appl. Chem.*, **16**, 115.