# Excited state intramolecular proton transfer in salicylidine -3,4,7-methyl amine: spectroscopic and theoretical investigations.

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Streszczenie

A new orll/O-hydroxy SchilT base. sa licylidinc-3.4.7-methy lamine (SMA) has bccn synthcsized. Investigation has hccn donc o n the cxcited state intramolecular proton transfcr (ESIPT) proccss. cmploying absorplion. emission and nanosecond spectroscopy in some non-polar and wcakly polar solvcnlS at room tcmpcrature and al 77K. The ESIPT is cvidcnccd by a large Stokcs shiftcd emission (-10.700 cm-I) both at room tempcraLUre and at 77K. The keto tauLolller is round Lo be Lhe prcdominanL spccics in the exciLed slate aL 77K. From nanosccond mcasuremcnts and qual1lum yields or Iluoresccnce. we have es timatcd the dccay ratcs of proLon transrer rcacLion. Theorctically dCLcrmincd energetics or the ground and excilcd statc proLon Lransrcr in SMA al AM I level or approximation. predicL thaL Lhc ground singlct proton Lransfcr path would have considcrable barricr. while the barrier hcighL should bc much lowcr bOLh on thc corrcsponding exciLed singlcl and triplcL surraccs.

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