

**Dynamics of an excited acid in 1-propanol-water mixtures.** Than Htun, M.; Suwaiyan, A.; Klein, Uwe K. A. Chemistry Department and Laser Research Laboratory, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia.

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### **Abstract**

The excited state proton transfer reaction of 4-hydroxy-1-naphthalenesulfonate in 1-propanol-water mixts. has been studied at six different temps. ranging from 5 to 60 C. Because of the hydrophobic interaction in these mixts., the dissocn. of the probe cannot be explained by a simple water dimer model which we found to be applicable to methanol-water and ethanol-water mixts. In 1-propanol-water mixts. the proton acceptor concn., however, shows a linear dependence on the water concn. above a certain crit. concn. of water. This behavior is explained by a new model assuming a water dimer within a water cluster to be the effective proton acceptor.