

Proton transfer reaction of 4 - hydroxy - 1 - naphthalenesulfonate in methanol-water and ethanol-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 rate of 4-hydroxy-1-naphthalenesulfonate has been studied in methanol-water and ethanol-water mixts. The lifetimes of the probe are measured at six different temps. between 5 and 60°C. The decay is single exponential in the long time regime and proton transfer rates have been found to increase with the square of the concn. of water in alc.-water mixts. The decay has been explained by a new model proposing a water dimer to be the effective proton acceptor in the proton transfer process.