

SPECTRAL AND BASIC PROPERTIES OF FLAVONES IN THE GROUND AND EXCITED STATES

Dependence between structures of R-oxyflavones and their spectral and basic properties has been investigated. It was found that pK_a of flavones, depending on positions of hydroxy and methoxy groups, increase by 6-8 orders of magnitude upon excitation and reaches 3.7-6.6 units. Due to high pK_a^ value carbonyl group can serve as a proton acceptor in the excited-state intramolecular proton transfer as well as in the formation of phototautomers of 7- and 4'-hydroxyflavones in protic solvents.*

Key words: flavones, electronic spectroscopy, acid-base properties, protolytic equilibria