

## Bridge effect in charge transfer absorption bands. para-substituted benzylideneacetones

Morales, Raúl G.E.

Vargas, Victor

Hernández, Carlos

The electronic absorption charge transfer bands in a series of para-substituted benzalketones are analyzed in order to establish the role of the electron-donor substituent as well as the electronic properties of the molecular structure of the  $\pi$ -conduction channel. Absorption bands assignment of the  $\pi$ - $\pi^*$  electronic transitions in the near ultraviolet spectral region is carried out from an experimental and theoretical point of view. The photo-induced charge transfer spectral bands in these aromatic compounds follow the same spectral pattern than the para-substituted benzaldehydes and acetophenones and the electronic transition takes place in the  $\pi, \pi^*(1La)$  excited state. However, our semiempirical M.O calculations show that this charge transfer process involves the electron-acceptor carbonyl group and the olefinic bond bridge as a second electron-acceptor group.