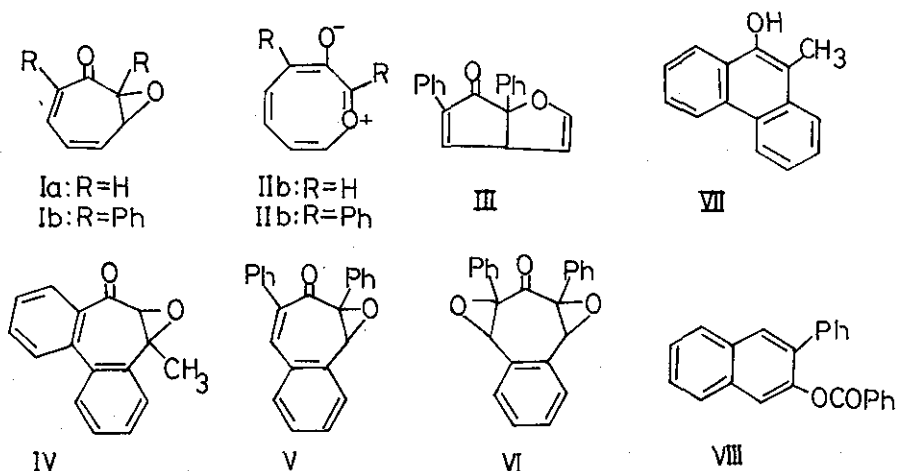


## SYNTHESIS AND REACTION OF BENZO- AND DIBENZO-TROPONE OXIDES

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The analogy of the isomerization of cyclopentadienone-2,3-oxide to pyrylium oxide prompted us to test whether or not tropone-2,3-oxide ( I ) isomerizes to oxoniacyclooctatetraenium oxide ( II ), a new  $\pi$  electron system. Tezuka et al.<sup>1)</sup> have suggested the presence of such ion as IIb as an intermediate of thermal isomerization of Ib to III.

In order to obtain further information on this kind of the new  $\pi$  electron system, benzo- and dibenzo-tropone oxides ( IV, V and VI ) were synthesized and their thermal or photochemical reactivities were examined in this study. Dibenzotropone oxide ( IV ) afforded VII in quantitative yield when heated at 220°C. Oxide ( V ) gave VIII in 10% yield by vapour phase pyrolysis at 450°C. No products due to the opening of the oxide C-C bond were detected in these cases. These tests imply that the opening of the oxide C-O bond favours over that of the oxide C-C bond in the tropone oxides IV and V.



Ref.

1) T. Tezuka, T. Abe, R. Miyamoto, F. Nagasaki, T. Mukai, M. Shinba, Abstract of paper, 28th IUPAC Congress, Tokyo, Session IV. (1977)