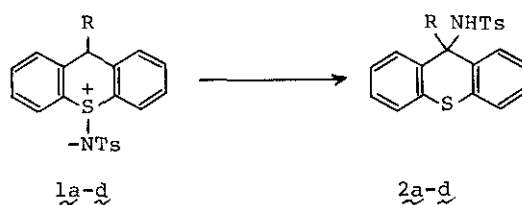


SYNTHESIS, STEREOCHEMISTRY, AND REARRANGEMENT OF 9-ALKYL- AND
9-PHENYL-THIOXANTHENE *N-p*-TOLUENESULFONYLSULFILIMINES

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cis- and *trans*-9-Methyl (1a), *cis*- and *trans*-9-ethyl- (1b), *trans*-9-isopropyl- (1c), and *cis*- and *trans*-9-phenyl-thioxanthene *N-p*-toluenesulfonylsulfilimines (1d) were prepared by two methods; (A) tosylation of 10-aminothioxanthenium mesitylenesulfonates which were obtained by the reaction of the corresponding thioxanthenes with *O*-mesitylenesulfonylhydroxylamine, and (B) reaction of the thioxanthenes with chloramine-T. The stereochemistry of the sulfilimines 1a-d was ascertained by an examination of the NMR spectra of 1a-d and by the thermal equilibration of 1a-d. Upon treatment with base in benzene, 1a-d rearranged to the corresponding 9-substituted 9-(*N-p*-toluenesulfonamido)thioxanthenes (2a-d). The rates of the rearrangement of 1a-d decreased in the order *trans*-1a, 1d > *trans*-1b > *cis*-1d > *cis*-1a > *cis*-1b > *trans*-1c.



a, R=Me; b, R=Et; c, R=i-Pr; d, R=Ph