

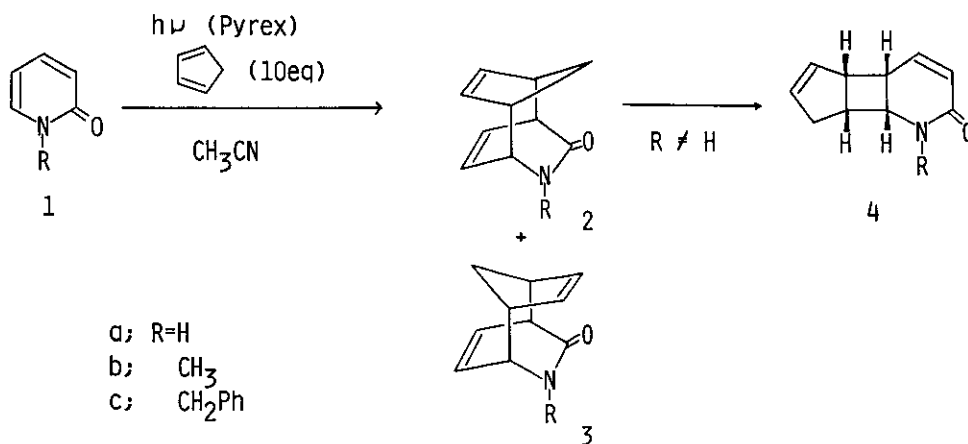
PHOTOCHEMISTRY OF 2-PYRIDONES.
PHOTOADDITION WITH CONJUGATED DIENES

Yuichi Kanaoka, Yoshiya Ikeda and Eisuke Sato

Faculty of Pharmaceutical Sciences, Hokkaido University,
Sapporo 060 Japan

As part of systematic photochemical research on conjugated nitrogen-carbonyl systems, which stemmed from our studies on photochemistry of amides and imides*, we explored photoaddition reactions of 2-pyridones with conjugated dienes.

Irradiation of 2-pyridones in the presence of excess conjugated dienes gave several types of cycloaddition products. In the case of conjugated cyclo-dienes (cyclopentadiene and 1,3-cyclohexadiene), reaction products were [4 + 4]-adducts such as 2 and 3. Compounds 2b and 2c were not stable and underwent rearrangement at room temperature to give [2 + 2]-adducts 4b,c.



Reference

* Y. Kanaoka, *Accounts Chem. Res.*, 1978, 11, 407.