

n,π^* triplet excited state of the β -oxoamide (1). Production of the pyrrolidinone (3) via δ -hydrogen abstraction may be considered to proceed from the charge-transfer state of the β -oxoamide (1).⁴ However, it is quite improbable that the rate of bimolecular quenching with penta-1,3-diene greatly surpasses the rate of intramolecular charge-transfer quenching.

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References

- 1 P. J. Wagner, *Acc. Chem. Res.*, 1971, **4**, 168.
 - 2 N. J. Turro and D. S. Weiss, *J. Am. Chem. Soc.*, 1968, **90**, 2185.
 - 3 P. J. Wagner, P. A. Kelso, A. E. Kemppainen, and R. G. Zepp, *J. Am. Chem. Soc.*, 1972, **94**, 7500; P. J. Wagner and R. G. Zepp, *ibid.*, 1971, **93**, 4958.
 - 4 T. Hasegawa, H. Aoyama, and Y. Omote, *J. Chem. Soc. Perkin Trans. 1*, 1976, 2054; 1979, 963.
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