SYNTHESIS AND PHOTOCHEMISTRY OF CHIRAL LIQUID CRYSTALLINE NITRONES

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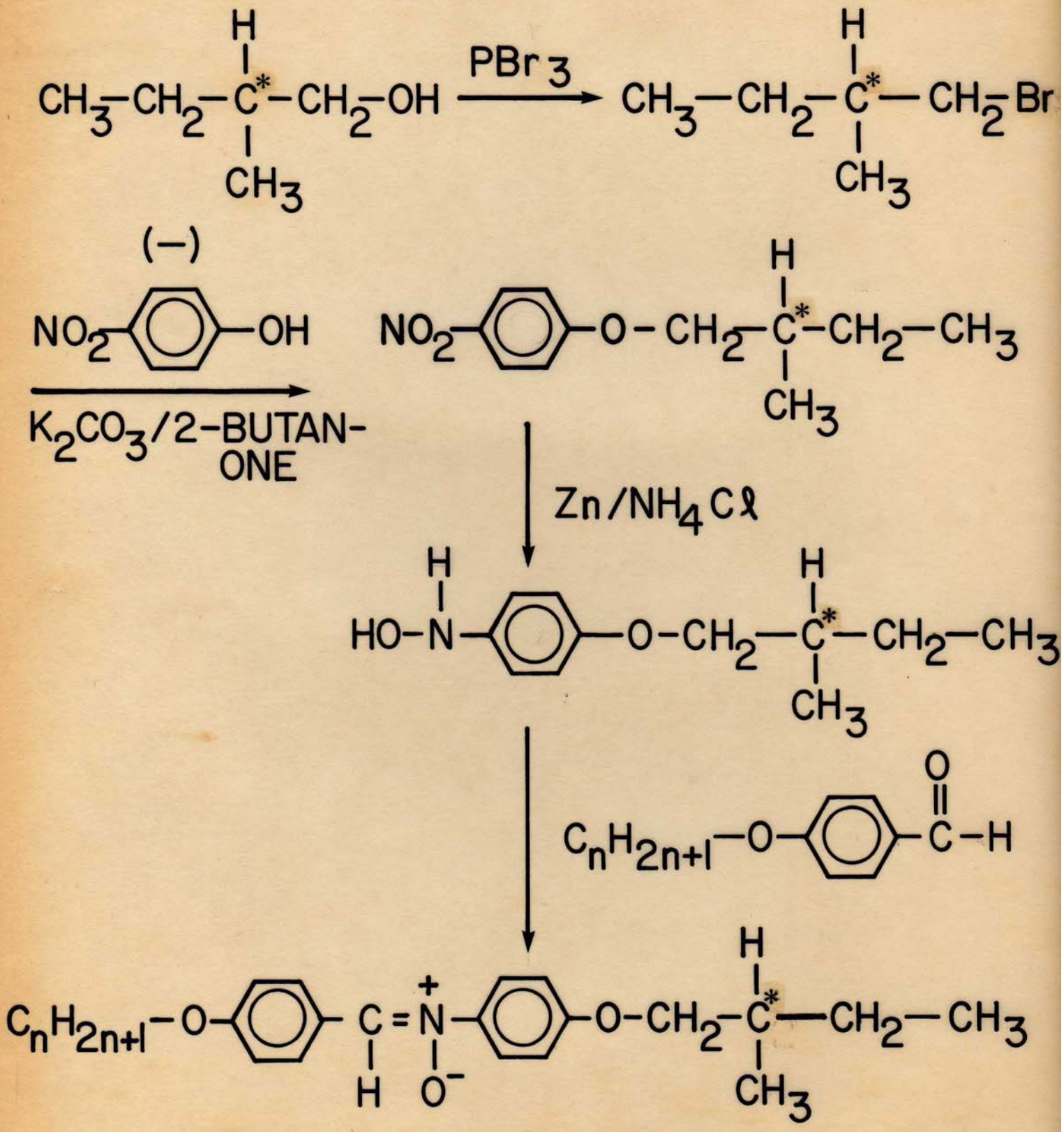
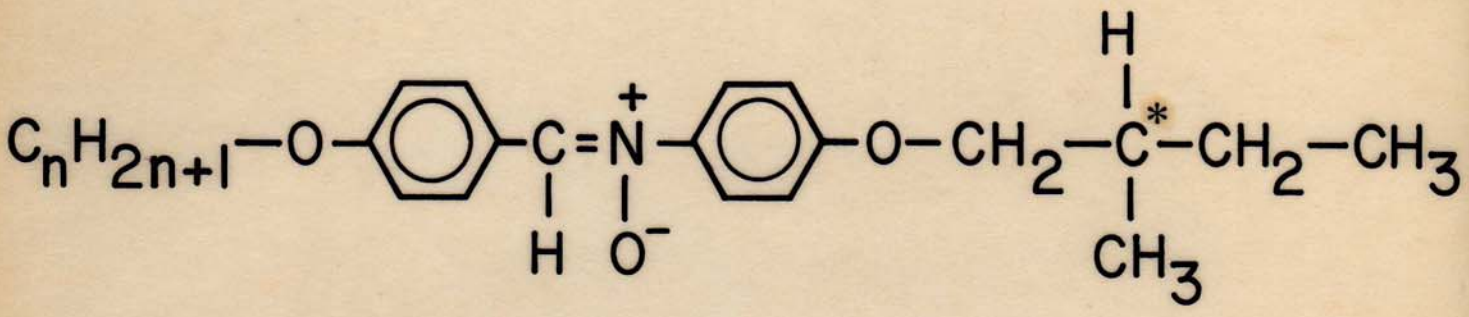
CHIRAL NITRONES
SYNTHESIS



NEW

CHIRAL S_C

MESOPHASES

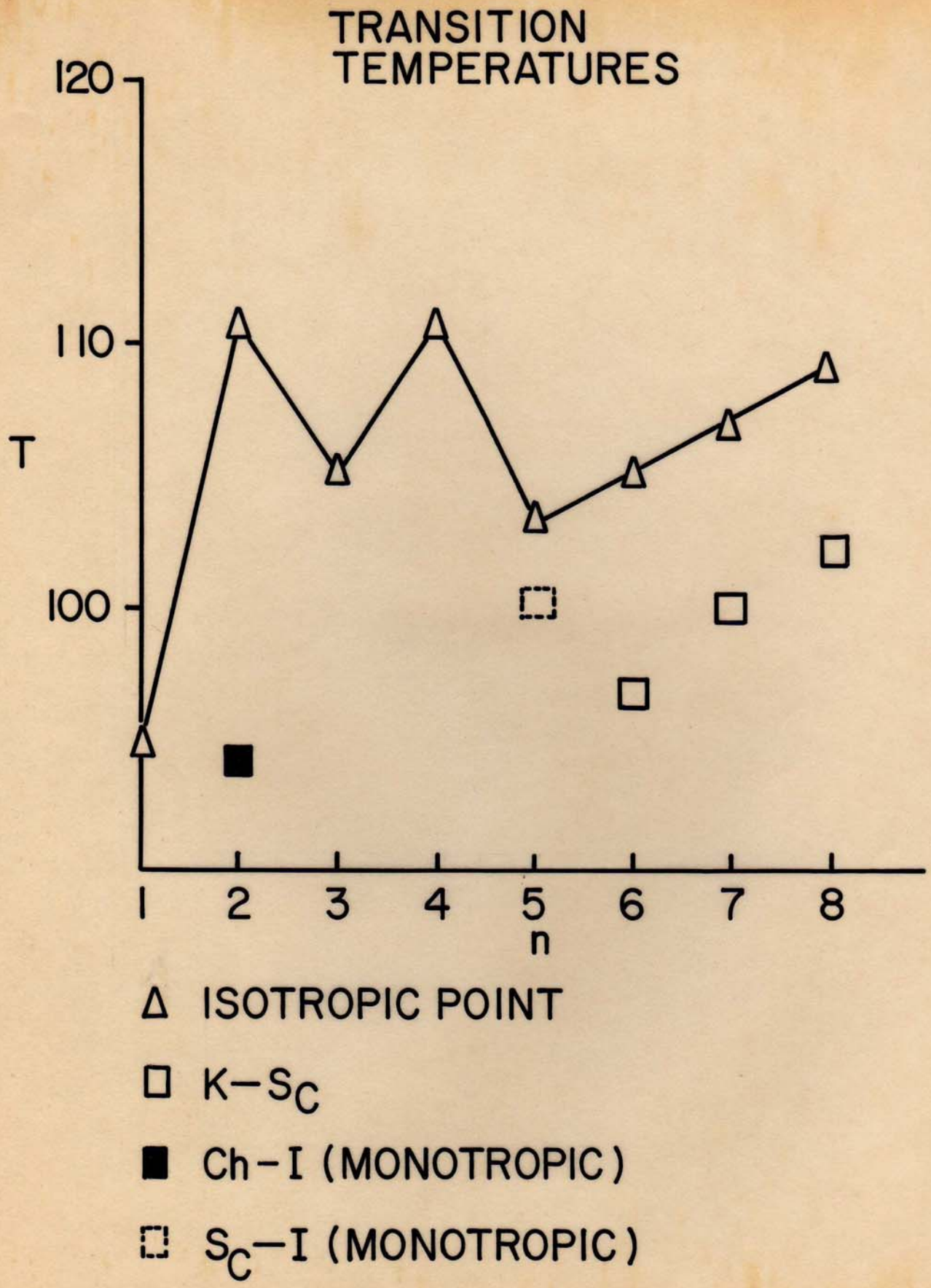


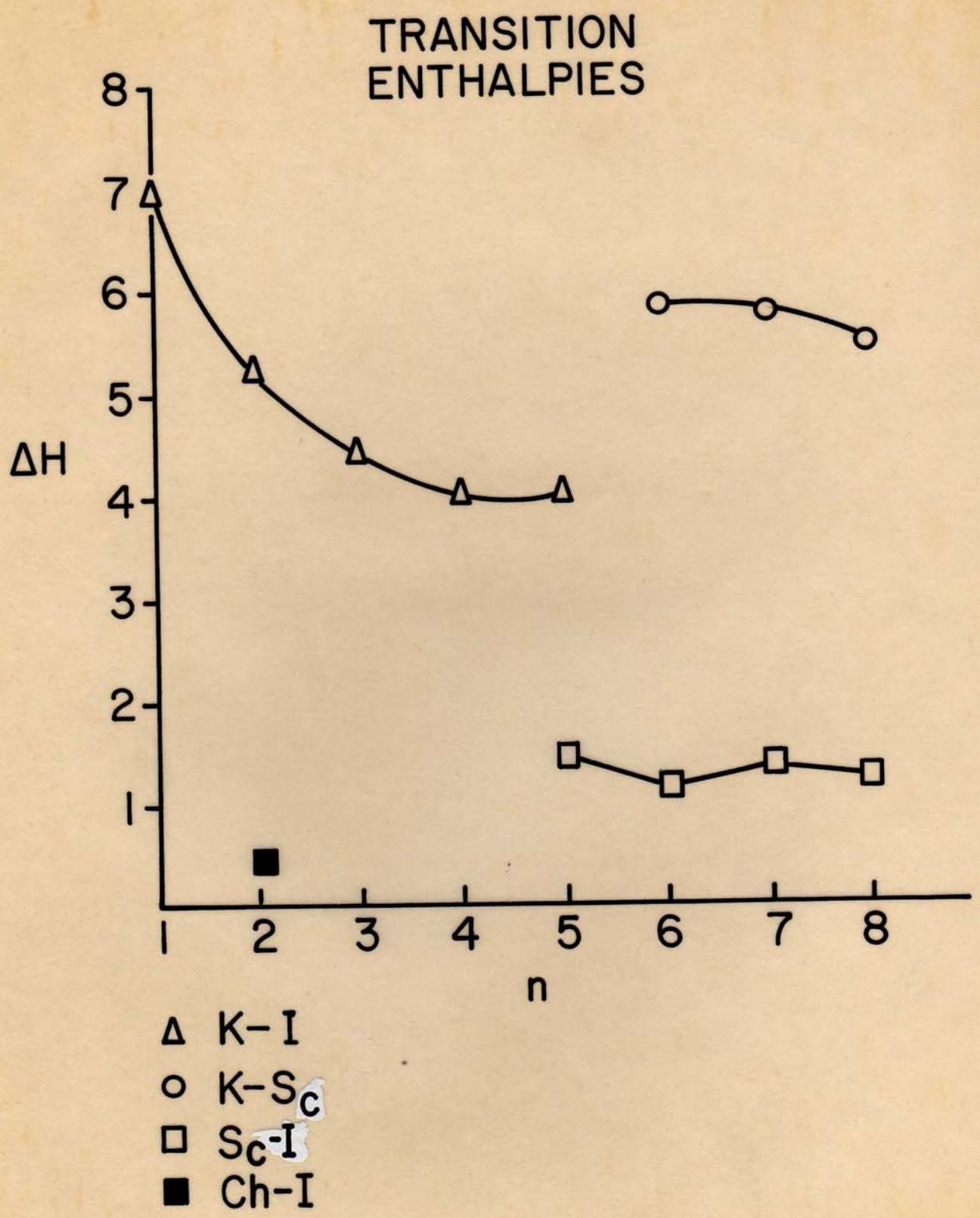
n=5—8

(1) POLYGONAL TEXTURES

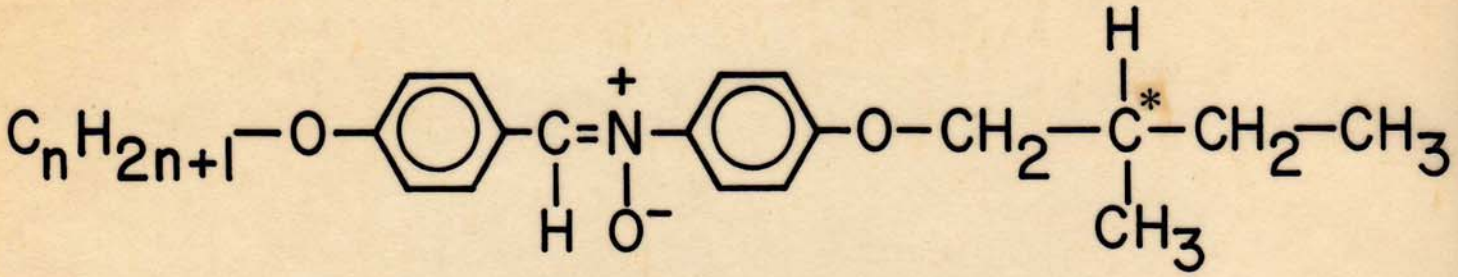
(2) HIGH VISCOSITIES

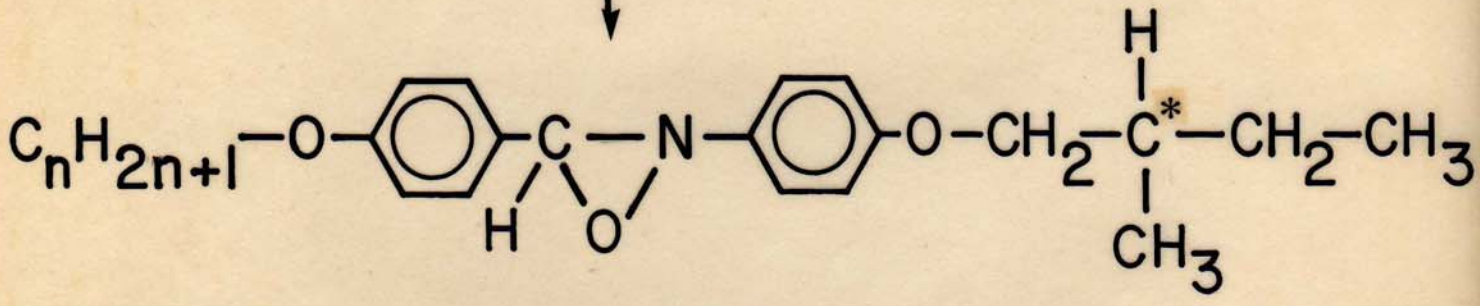
(3) HIGH MESOPHASE—ISOTROPIC TRANSITION ENTHALPIES


TRANSITION
TEMPERATURES
120
110
100
T
1
2
3
4
5
6
7
8
n
Δ ISOTROPIC POINT
□ K–Sc
■ Ch–I (MONOTROPIC)
⬚ Sc–I (MONOTROPIC)

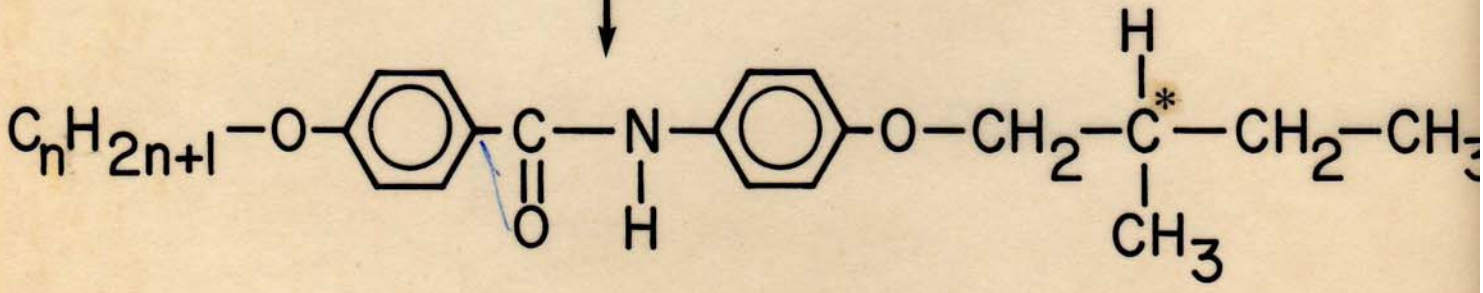

TRANSITION
ENTHALPIES
ΔH
8
7
6
5
4
3
2
1
1
2
3
4
5
6
7
8
n
Δ K-I
o K-Sc
□ Sc-I
■ Ch-I

PHOTOCHEMISTRY OF CHIRAL NITRONES



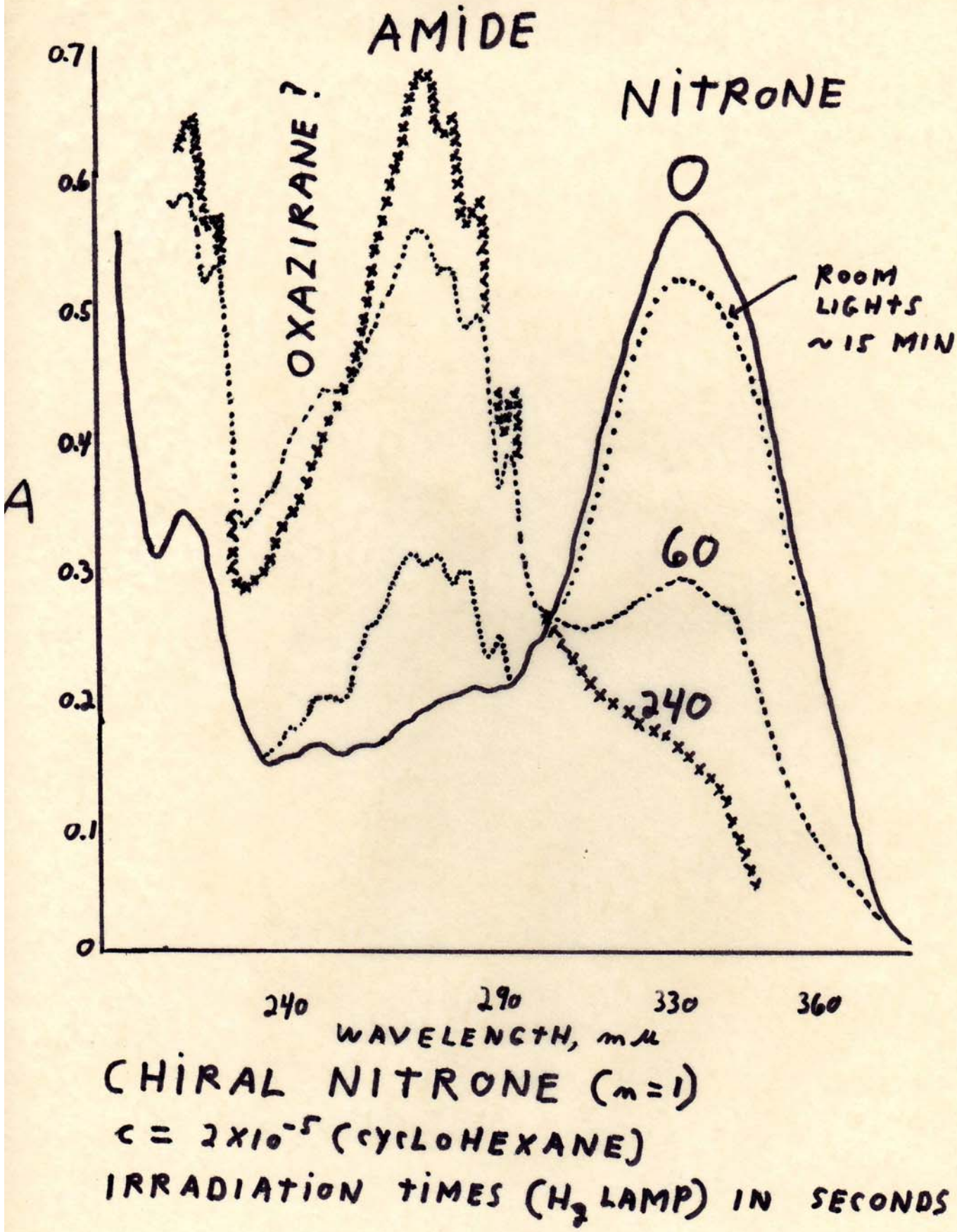


UNSTABLE



n = 1–8

NON–MESOMORPHIC



CHIRAL NITRONE ($n=1$)

$c = 2 \times 10^{-5}$ (CYCLOHEXANE)

IRRADIATION TIMES (H_2 LAMP) IN SECONDS