

Circular Dichroism Spectrum of a Saturated Hydrocarbon, $(-)(3S:5S)$ -2,2,3,5-Tetramethylheptane

By SUSAN D. ALLEN and OTTO SCHNEPP*

(Department of Chemistry, University of Southern California, Los Angeles, California 90007)

Summary The c.d. spectrum of $(-)(3S:5S)$ -2,2,3,5-tetramethylheptane is presented.

We describe here the c.d. spectrum of a saturated optically-active alkane, $(-)(3S:5S)$ -2,2,3,5-tetramethylheptane.¹ In the Figure we present both the c.d. and absorption spectra² of the vapour phase in the spectral region 170–140 nm.

The c.d. spectrum was measured on a vacuum u.v. c.d. instrument which has been described^{3,4} previously. As seen in the Figure, the absorption has no discrete structure in this region. On the other hand, the c.d. spectrum consists of a broad negative band, centred at 148 nm of half-intensity width 11 nm.

The spectra of saturated hydrocarbons have been discussed by Raymonda and Simpson.⁵ However, no clear assignment of the c.d. band observed here was possible.

This work was supported by a grant of the Petroleum Research Fund of the American Chemical Society.

¹ S. Pucci, M. Aglietto, and P. L. Luisi, *Gazzetta*, 1970, **100**, 59. We are grateful to Professor S. Pucci for providing the sample. The rotation of the neat sample was $[\alpha]_D^{25} = -55.97^\circ$.

² The absorption spectrum was measured on a McPherson Model 225 double beam system. We are grateful to Professor Reuben Braunstein for the use of the instrument.

³ O. Schnepf, S. D. Allen, and E. F. Pearson, *Rev. Sci. Instr.*, 1970, **41**, 1136.

⁴ S. D. Allen and O. Schnepf, *J. Chem. Phys.*, 1973, **59**, 4547.

⁵ J. W. Raymonda and W. T. Simpson, *J. Chem. Phys.*, 1959, **30**, 648.

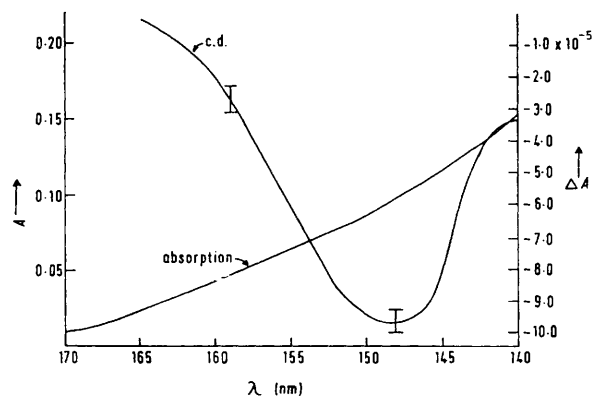


FIGURE. The absorption and c.d. spectra of $(-)(3S:5S)$ -2,2,3,5-tetramethylheptane. Spectral resolution for absorption spectrum: 0.08 nm; spectral resolution for c.d. spectrum: 1.6 nm.

(Received, 1st August 1974; Com. 979.)