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

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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 opticallyactive alkane, (-)-(3S:5S)-2,2,3,5-tetramethylheptane. 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.

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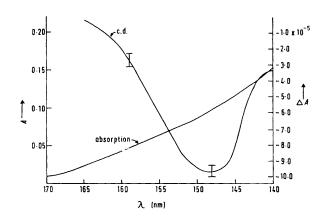


Figure. The absorption and c.d. spectra of (-)(3S;5S)-2,2,3,5-tetramethylheptane. Spectral resolution for absorption spectrum: 0.08 nm; spectral resolution for c.d. spectrum: 1.6 nm.

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- 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.
 - O. Schnepp, S. D. Allen, and E. F. Pearson, Rev. Sci. Instr., 1970, 41, 1136.
 S. D. Allen and O. Schnepp, J. Chem. Phys., 1973, 59, 4547.
 J. W. Raymonda and W. T. Simpson, J. Chem. Phys., 1959, 30, 648.