



## Infrared studies of the $\alpha,\alpha$ -dicyclohexyl-cyclohexane-methanol single crystal $[(C_6H_{11})_3COH]$ .

### Autorzy

Zofia Mielke

Zbigniew Malarski

Roman Szostak

H. R. Zelsmann

### Rok wydania

1999

### Czasopismo

Journal of Molecular  
Structure

### Numer woluminu

476

### Strony

9-20

### DOI

10.1016/S0022-  
2860(98)00535-3

### Kolekcja

Naukowa

### Język

Angielski

### Typ publikacji

Artykuł

### Streszczenie

The powder spectra of the  $\alpha,\alpha$ -dicyclohexyl-cyclohexane-methanol (TCHC) and its deuterated analogue (TCHC-d) and the polarized infrared spectra of TCHC crystal have been recorded in the high and low temperature phase. The spectra of the high temperature phase show evidence for the dynamic conversion of two  $(TCHC)_2$  dimers of slightly different geometry. Two bands of different polarization are observed for the  $\nu_c(OH)$  vibration of bonded OH group and two bands are observed for the  $\tau(OH)$  vibration of free OH group proving existence of two different  $(TCHC)_2$  dimers. The most characteristic for the high temperature phase is a broad absorption extending in the  $600\text{--}140\text{ cm}^{-1}$  region.

### Słowa kluczowe

Infrared spectra, TCHC crystal, Hydrogen bond, Alcohols,  
Crystal dynamics

### Adres publiczny

[https://doi.org/10.1016/S0022-2860\(98\)00535-3](https://doi.org/10.1016/S0022-2860(98)00535-3)

### Strona internetowa wydawcy

<http://www.elsevier.com>