



Dielectric relaxation in liquid trimethylsilane carbonitrile.

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Streszczenie

Measurements of the complex electric permittivity and viscosity of liquid trimethylsilane carbonitrile (TMSiCN) in the range from 500 MHz to 36 GHz are reported at three temperatures (293 K, 303 K and 313 K). The dipole moment at 293 K was also determined, in neat liquid and in benzene solutions. The relaxation times and activation parameters were determined and interpreted in terms of the molecular reorientation of TMSiCN molecules. The reorientational correlation function was determined from dielectric data. Combining this function with IR data the vibrational correlation functions and vibrational correlation times for two fully-symmetrical, parallel type vibrations of liquid TMSiCN i.e. the ν_s (CN) and $\text{sym-}\nu_s[\text{Si}(\text{CH}_3)_3]$ stretching vibrations were determined and compared with Raman data.

Adres publiczny

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