COLLECTIVE VIBRATIONS IN THE RAMAN SPECTRUM OF LIQUID BENZENE

VASILIY A. KLIMENKO, VITALIY I. TARASEVYCH and SERGEY I. STEPANENKO, *Kiev State Technical University of Construction and Architecture, department of physics, Ukraine*.

In liquid bensol, the wing of exciting line (length wave = 488 nm ) was measured in the areal of 52000 1/cm in Stokes and anti-Stokes regions. To simulate the obtained intensity of scattering in terms of the fluctuation dissipative theorem, functions of response of relaxating excitations and quasi-harmonic oscillators are used. It has been found that the I(f) dependence can be represented as two contributions. These are the wing produced by relaxations I=B*exp(-kf) and a wide band which corresponds to super-damping cooperative vibrations of quasi- crystalline collective clusters (f=75 1/cm , G =75 1/cm).