CALCULATION OF THE RAMAN FREQUENCIES OF AMMONIA NEAR THE MELTING POINT

H. YURTSEVEN, *Department of Physics, Istanbul Technical University, Maslak, Istanbul, Turkey*.

We have studied here the volume dependence of the Raman frequencies in ammonia solid I. By means of the values of the Grüneisen parameter obtained in the range between 195K and 172.8K, we used the volume data from the literature to calculate the Raman frequencies for two translational modes and for a librational mode in ammonia solid I. Similarly, the Raman frequencies of those modes can also be calculated using the volume data in ammonia solid II. This then enables us to predict the Raman frequencies near the melting point in ammonia.