KAAV INTERNATIONAL JOURNAL OF SCIENCE, ENGINEERING & TECHNOLOGY
A REFEREED BLIND PEER REVIEW QUARTERLY JOURNAL
KIJSET/JAN-MAR (2018)/VOL-5/ISS-1/A5 PAGE NO.22-25
ISSN: 2348-5477 IMPACT FACTOR (2018) – 7.0231
WWW.KAAVPUBLICATIONS.ORG

STATIC AND THERMO-ELASTIC PROPERTIES OF ALKALI CYANIDE CRYSTALS

[1]Dr. (Smt.) RASHMI JINDAL (AGARWAL)
[1]Assistant Professor, Department of Chemistry
C. L. Jain College, Firozabad

[2]Dr. PRADEEP JAIN
[2]Department of Chemistry; C. L. Jain College, Firozabad (U.P)

ABSTRACT
In the present paper authors have made an attempt to analyse the thermo-elastic properties of alkali cyanide crystals by estimating the values of their cohesive energy, Bulk-modulus and their pressure derivatives, Debye-temperature and Gruneisen parameter. A modified form of the three-body force shell model has been employed to calculate these values. The model used in the present study consists of long-range Coulomb and three-body interactions, short-range overlap repulsion of HZ-type, and van der Waals interactions. The van der Waals interaction coefficients are determined using the Kirkwood-Muller theory. Results obtained are compared with the available experimental data. A good agreement is found.