7th African Conference on Non Destructive Testing ACNDT 2016 & the 5th International Conference on NDT and Materials Industry and Alloys (IC-WNDT-MI)

2016

Vegard's Law in the Si1-yCyalloys

RAHMANI MOHAMED, YAKOUBI ABDELKADER

Abstract : In this work, we presented a calculated ofstructural properties of the Si1-yCbinary alloys, the atomicstructure of this alloys is important for understanding itsproperties. We used theories of bond-length of Vegardsapproach based of the method of linear augmented plane wave(FP-LAPW) based on the theory of density functional (DFT). Wealso studied the structural properties of this alloys with the LDAapproximation for the potential for exchange and correlation.Our study affirms that the lattice constant is approximately equalto the composition-weighted average of the lattice constants ofthe pure materials.

Keywords : Vegarslaw, Structural properties, SiC