## Electronic and Magnetic Properties of Zincblende Al\_{1-x}V\_xP Alloys

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## Abstract:

The structural, electronic and magnetic properties of zincblende of  $Al_{1-x}V_xP$  alloys with concentrations x (0,0.25,0.5,0.75 and 1) have been studied using full-potential linearized augmented plane method (FP-LAPW) with local spin density and generalized gradient approximations (LSDA and GGA) for the energy and the exchange correlation potential, we calculate the lattice parameters, bulk modulus, pressure derivative, band gap and the total magnetic moment for zincblende of  $Al_{1-x}V_xP$  and we got good results in comparison with experimental and theoretical results.