

# Structural study and electrical properties of a new arsenate compound $\text{KNb}_4\text{MoAs}_3\text{O}_{18}$

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**Abstract :** A new compound the formula  $\text{KNb}_4\text{MoAs}_3\text{O}_{18}$  has prepared by solid state reaction technique. This compound crystallizes in the space group  $\text{Pbam}$  with  $a=15.448\text{\AA}$ ,  $b=10.328\text{\AA}$ ,  $c=10.545\text{\AA}$  and  $z=4$ . The structure consists of  $\text{MO}_6$  octahedra ( $M=\text{Mo}, \text{Nb}$ ) and  $\text{AsO}_4$  tetrahedra sharing vertices, forming infinite chains ( $\text{MO}_6\text{-AsO}_4$ ) the potassium atom is located in tunnels parallel to the  $b$  axis.

**Keywords :** Arsenate, Mixed valence oxide, physical properties