

## Abstract

The present application refers to an indium phosphide crystal containing incorporation element, a single crystal wafer and a preparation method therefor. Specifically, the present application refers to an indium phosphide crystal containing an incorporation element, wherein the incorporation element is incorporated in a growth melt of indium phosphide crystal or incorporated during the synthesis of an indium phosphide polycrystal, wherein the indium phosphide crystal is an S-doped or Sn-doped N-type indium phosphide single crystal or a Zn-doped P-type indium phosphide single crystal; and wherein the incorporation element is one or more elements having a segregation coefficient in indium phosphide of not greater than 0.05; the incorporation element in the indium phosphide crystal is present in an amount of 30 ppb to 30 ppm. The present application further refers to a preparation method of an indium phosphide crystal containing an incorporation element, a preparation method of a single crystal wafer and a device prepared from such indium phosphide crystal. The indium phosphide single crystal obtained thereby has a high yield rate.

FIG. 1