

ABSTRACT

The invention provides an oxide semiconductor layer that has less cracks and is excellent in electrical property and stability, as well as a semiconductor element and an electronic device each including the oxide semiconductor layer. The invention provides an exemplary method of producing an oxide semiconductor layer, and the method includes the precursor layer forming step of forming, on or above a substrate, a layered oxide semiconductor precursor including a compound of metal to be oxidized into an oxide semiconductor dispersed in a solution including a binder made of aliphatic polycarbonate, and the annealing step of heating the precursor layer at a first temperature achieving decomposition of 90wt% or more of the binder, and then annealing the precursor layer at a temperature equal to or higher than a second temperature (denoted by X) that is higher than the first temperature, achieves bonding between the metal and oxygen, and has an exothermic peak value in differential thermal analysis (DTA).