

## **Single crystals**

In order for donated holes or electrons to affect the conductivity of Si the Si must be in the form of a perfect, or nearly perfect crystal. Most metals or crystalline materials consist of a large number of micro-crystals. These are of the order of micrometers in size and the material is called polycrystalline. Si used for semiconductor device manufacturing is in a highly purified single-crystal form: The Si is melted and re-grown into a single large crystal.