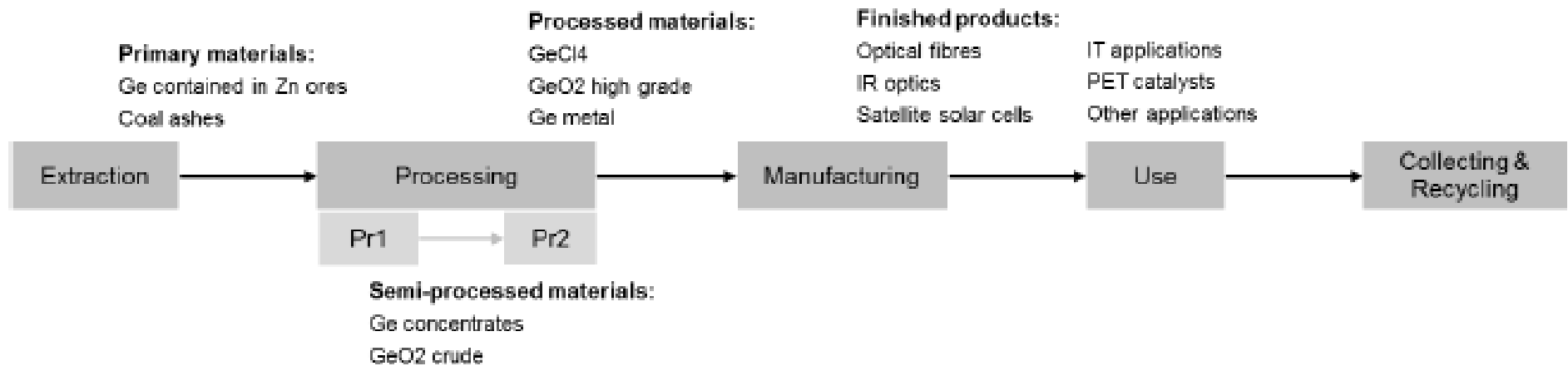


Germanium

Germanium is contained in zinc ores and coal ashes. This primary material is processed into germanium concentrates and then crude germanium dioxide (GeO₂). Crude GeO₂ is then converted into germanium tetrachloride (GeCl₄) and high grade GeO₂. GeCl₄ is also partly used to produce high grade GeO₂. A fraction of high grade GeO₂ is then transformed into Ge metal. Those processed materials are used to manufacture various finished products: GeCl₄ is mainly used to manufacture optical fibers, high grade GeO₂ is transformed into PET catalyst and Ge metal serves in several applications such as IR optics, wafers for satellites solar cells, IT applications, etc. The figure below presents the value chain of germanium with the main uses.



โซ่คุณค่าของ Germanium