ABSTRACT

Phase-change type optical disks and processes for preparing the same

The present invention relates to a phase-change type optical disk comprising a transparent substrate; a recording layer arranged on the transparent substrate wherein a phase-change occurs between crystalline state and amorphous state according to laser power irradiation; and protective layers arranged on and directly under the recording layer; the composition of the recording layer being represented by the general formula $(Sb_aTe_bGe_c)_{100-d}Sd$, wherein $5 \leq a \leq 60$, $35 \leq b \leq 65$, $5 \leq c \leq 65$, $a+b+c=100$ and $0 < d \leq 40$, and/or one or both of the protective layers comprising a mixture of $Zn_{(1-x)}Sx$ wherein $0.50 < x$ and one or more oxides, nitrides, fluorides, carbides and sulfides of metals or semimetals (proviso provided that sulfides are excluded when the metal is Zinc). The optical disk of the present invention is improved in a cyclability, i.e., number of overwrite cycles and error correctable cycles, and reduces deterioration of recording marks due to long term reading. Figure 1 of the drawing should accompany the abstract when published.