

PERPENDICULAR MAGNETIC RECORDING DISK AND MANUFACTURING METHOD THEREOF

ABSTRACT

To provide a perpendicular magnetic recording disk that can contribute to increasing the recording density by improving the S/N ratio in high density recording without causing an increase in DC noise, degradation in thermal stability, and degradation in recording capability, and a method of manufacturing such a disk.

A magnetic disk 10 for use in perpendicular magnetic recording has at least a magnetic recording layer on a substrate 1. The magnetic recording layer is composed of a ferromagnetic layer 5 of a granular structure containing silicon (Si) or an oxide of silicon (Si) between crystal grains containing cobalt (Co), a stacked layer 7 having a first layer containing cobalt (Co) or a Co alloy and a second layer containing palladium (Pd) or platinum (Pt), and a spacer layer 6 interposed between the ferromagnetic layer 5 and the stacked layer 7. After forming the ferromagnetic layer 5 on the substrate 1 by sputtering in an argon gas atmosphere, the stacked layer 7 is formed by sputtering in the argon gas atmosphere at a gas pressure lower than that used when forming the ferromagnetic layer 5.

Fig. 1