ABSTRACT

A MAGNETIC RECORDING DISK FOR CONTACT RECORDING

A magnetic recording disk has both an extremely smooth top surface and high coercivity, and is incorporated in a contact recording disk file which requires an extremely smooth head-disk interface and a disk with high coercivity. A superfinished untextured NiP coating on a disk substrate is oxidized to form a NiO film. The NiO film permits the subsequently sputter deposited magnetic layer to have much higher coercivity, which enables the disk to be used in contact recording applications. The NiO film and the later deposited layers making up the disk, including the top protective overcoat, conform to the smooth surface of the polished NiP, thus preserving the extremely smooth surface of the top layer of the disk, which is required for the head-disk interface in contact recording disk files. In the preferred process for forming the NiO film on the substrate, the substrate is annealed in air at a temperature below that which would cause the NiP film to crystallize.

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