Abstract of the Disclosure

A thin film cobalt alloy magnetic recording disk has a metal nitride layer located between the disk substrate and the top surface of the disk to provide texturing of the disk at the head-disk interface. The texturing layer is made up of generally contiguous clusters of aluminum nitride (AlN) with rounded upper surfaces that are formed on top of the substrate and under the conventional Cr underlayer. The AlN texturing layer is formed by sputtering an Al target in the presence of N_2 gas. The subsequently sputter-deposited Cr underlayer, cobalt alloy magnetic layer and protective amorphous carbon overcoat replicate the upper surface of the contiguous AlN clusters, resulting in a textured surface at the head-disk interface. The AlN texturing layer may also be sputter deposited above the magnetic layer in the middle of the protective carbon overcoat. The density and size of the AlN clusters in the texturing layer, and thus the texture of the completed disk at the head-disk interface, are controlled by the amount of N_2, the sputtering power and pressure, and the substrate temperature.

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