

ABSTRACT OF THE DISCLOSURE

Magnetic Recording Medium and a Method of Manufacturing the Same

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An object of the present invention is to provide a magnetic recording medium having magnetic dots achieving high density recording. Another object of the present invention is to provide a simple manufacturing method thereof.

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A magnetic recording medium comprises at least an underlayer 3, a magnetic recording layer 4, and a protective layer 5 sequentially laminated on a nonmagnetic substrate 1. The underlayer 3 is composed of ruthenium or an alloy of mainly ruthenium and has an undulating structure formed with ridge lines in a predetermined pitch on the surface of the underlayer. The magnetic recording layer 4 contains at least ferromagnetic crystal grains and a nonmagnetic component. Magnetic dots 4-1 composed of the crystal grains with a grain size not smaller than 4 nm in the magnetic recording layer are aligned on a surface of the underlayer along the ridge line, and each of the magnetic dots 4-1 is separated by the nonmagnetic component 4-2 from each other.

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20 Selected drawing is Fig. 1.