

ABSTRACT

PERPENDICULAR MAGNETIC RECORDING MEDIUM AND A METHOD OF MANUFACTURING THE SAME

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A perpendicular magnetic recording medium of the invention comprises a nonmagnetic substrate, a nonmagnetic underlayer, and a magnetic layer disposed directly on the nonmagnetic underlayer. The magnetic layer comprises ferromagnetic crystal grains having a
10 hexagonal close-packed structure and nonmagnetic grain boundaries surrounding each of the ferromagnetic crystal grains and substantially composed of oxide or nitride. The surface energy of the nonmagnetic underlayer is made to be at least 70 mN/m. The nonmagnetic underlayer is preferably composed of a metal selected
15 from rhenium, ruthenium, and osmium, or an alloy containing at least an element selected from rhenium, ruthenium, and osmium, and has a thickness of at most 30 nm.

Selected Drawing: Fig. 1.

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