

ABSTRACT

A magnetic recording medium comprises, on a substrate, a soft magnetic layer, a first seed layer, a second seed layer, and a recording layer having an artificial lattice structure. The first seed layer contains oxide of Fe. The second seed layer contains one of Pd and Pt, Si, and N. The magnetic exchange coupling force in the in-plane direction of the recording layer is weakened by the first seed layer and the second seed layer. Accordingly, minute recording magnetic domains can be formed in the recording layer, and the magnetization transition area is distinct as well. Even when information is recorded at a high density, the information can be reproduced with low noise. A magnetic storage apparatus, which is provided with such a magnetic recording medium, makes it possible to achieve an areal recording density of 150 gigabits/square inch.



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