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(71) Applicant *(for all designated States except US)*: SEAGATE TECHNOLOGY [US/US]; 920 Disc Drive, P.O. Box 66360, Scotts Valley, CA 95067–0360 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: CHEN, Qixu [CN/US]; 1630 Tahoe Drive, Milpitas, CA 95035 (US). CHANG, Jyh–Kau [–/US]; 824 Lippert Avenue, Fremont, CA 94539 (US). LEU, Charles [US/US]; 45296 S. Grimmer Boulevard, Fremont, CA 94539 (US). CHEN, Ga–Lane [US/US]; 150 Estrella Road, Fremont, CA 94539 (US).

(74) Agents: STEINER, Arthur, J. et al.; Lowe, Price, Leblanc & Becker, Suite 300, 99 Canal Center Plaza, Alexandria, VA 22314 (US).

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(54) Title: MAGNETIC RECORDING MEDIUM COMPRISING A NICKEL ALUMINUM OR IRON ALUMINUM UNDERLAYER

(57) Abstract

A magnetic recording medium is formed by depositing a Cr–containing sub–underlayer (52A) on a surface oxidized seed layer, such as NiP (51A) with direct current (DC) magnetron sputtering, depositing an NiAl or FeAl underlayer (53A) on the sub–underlayer, and depositing a Cr–containing intermediate layer (54A) on the NiAl or FeAl underlayer. The medium features high coercivity, low noise, and (200)–dominant underlayer crystallographic orientation, even with sub–underlayer deposition at temperatures as low as about 25 °C. The medium is suitable for high density longitudinal magnetic recording.

