



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : G01R 33/09	A1	(11) International Publication Number: WO 00/63714 (43) International Publication Date: 26 October 2000 (26.10.00)
(21) International Application Number: PCT/US99/19278 (22) International Filing Date: 25 August 1999 (25.08.99) (30) Priority Data: 60/130,204 20 April 1999 (20.04.99) US (71) Applicant (for all designated States except US): SEAGATE TECHNOLOGY LLC [US/US]; 920 Disc Drive, Scotts Valley, CA 95067-0360 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): GAO, Zheng [CN/US]; 5200 West 102nd Street, Bloomington, MN 55437 (US). MAO, Sining [CN/US]; 13927 Aquila Avenue, Savage, MN 55378 (US). XUE, Song, S. [CN/US]; 10382 Mooer Lane, Eden Prairie, MN 55347 (US). (74) Agent: FAIRBAIRN, David, R.; Kinney & Lange, P.A., Kinney & Lange Building, 312 South Third Street, Minneapolis, MN 55415-1002 (US).		(81) Designated States: DE, GB, JP, KR, SG, US. Published <i>With international search report.</i>
(54) Title: GIANT MAGNETORESISTIVE SENSOR WITH A CrMnPt PINNING LAYER AND A NiFeCr SEED LAYER Diagram of a giant magnetoresistive stack (10) showing layers: PINNING LAYER (CrMnPt) (20), PINNED LAYER (CoFe) (18), SPACER LAYER (Cu) (16), (CoFe) (24), (NiFe) (22), and SEED LAYER (NiFeCr) (12). The (CoFe) and (NiFe) layers are grouped as FREE LAYER 14. (57) Abstract A giant magnetoresistive stack (10) for use in a magnetic read head includes a NiFeCr seed layer (12), a ferromagnetic free layer (14), a nonmagnetic spacer layer (16), a ferromagnetic pinned layer (18), and a CrMnPt pinning layer (20). The ferromagnetic free layer (14) has a rotatable magnetic moment and is positioned adjacent to the NiFeCr seed layer (12). The ferromagnetic pinned layer (18) has a fixed magnetic moment and is positioned adjacent to the CrMnPt pinning layer (20). The nonmagnetic spacer layer (16) is positioned between the free layer (14) and the pinned layer (18).		