

9801213-1

IPDS



PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : B23K 26/06, G11B 5/82		A1	(11) International Publication Number: WO 97/43079 ✓ (43) International Publication Date: 20 November 1997 (20.11.97)
(21) International Application Number: PCT/US97/08328 ✓ (22) International Filing Date: 13 May 1997 (13.05.97) ✓ (30) Priority Data: ① 60/017,267 ✓ 13 May 1996 (13.05.96) ✓ US ✓ ② 60/042,341 ✓ 17 March 1997 (17.03.97) ✓ US ✓ (71) Applicant (for all designated States except US): SEAGATE TECHNOLOGY, INC. [US/US]; 920 Disc Drive, Scotts Valley, CA 95067 (US). (see PF 24 of IS/11 p.000) (72) Inventors; and (75) Inventors/Applicants (for US only): WEI, Bo [CN/US]; 35 Poncetta Drive, No. 129, Daly City, CA 94105 (US). ✓ ② MEYER, Dallas, W. [US/US]; 13308 Oliver Avenue So., Burnsville, MN 55337 (US); PAN, Zhongda [CN/US]; 261 Cannikin Drive, San Jose, CA 95116 (US). XUAN, Jialuo, J. [CN/US]; 160 Meadowland Drive, Milpitas, CA 95035 (US). SHIH, Chung, Y. [US/US]; 10069 Oakleaf Place, Cupertino, CA 95014 (US). ✓ (74) Agents: NIEBUHR, Frederick, W. et al.; Suite 820, 900 Second Avenue So., Minneapolis, MN 55402 (US).		(81) Designated States: DE, GB, JP, KR, SG, US. ✓ Published With international search report. ✓ 2 PDS 1 app/n. 5 Invs. 4 DAS IPC: B23K 26/06, G11B 5/82	
(54) Title: SHAPED-BEAM LASER TEXTURING OF MAGNETIC MEDIA ✓			
(57) Abstract Magnetic data storage disks (38), particularly along dedicated transducing head contact regions, are laser textured according to a process in which beam shaping optical components impart an elliptical or elongated cross-section to the laser beam. Consequently, individual texturing features such as rims (88) and nodules are elliptical or elongate, with more gradual height gradients in directions parallel to their major axes. The texturing features are oriented with respect to the direction of transducing head acceleration and deceleration. Texturing features are formed in a variety of patterns, including patterns with adjacent features contacting one another. Features may be formed with substantially different slopes on opposite sides of a maximum height region (90).			