



- (51) International Patent Classification:
G11B 5/127 (2006.01)
- (21) International Application Number:
PCT/US2012/069510
- (22) International Filing Date:
13 December 2012 (13.12.2012)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/576,655 16 December 2011 (16.12.2011) US
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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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(54) Title: DEMAGNETIZATION OF MAGNETIC MEDIA BY C DOPING FOR HDD PATTERNED MEDIA APPLICATION

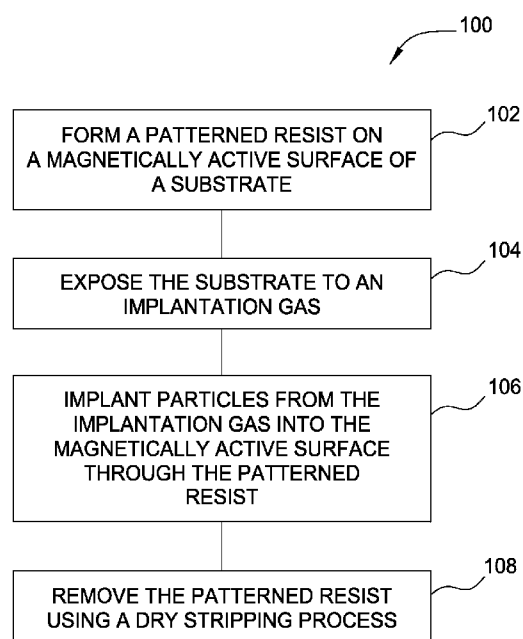


FIG. 1

(57) Abstract: Embodiments described herein provide methods and apparatus for treating a magnetic substrate having an imprinted, oxygen-reactive mask formed thereon by implanting ions into a magnetically active surface of the magnetic substrate through the imprinted oxygen-reactive mask, wherein the ions do not reduce the oxygen reactivity of the mask, and removing the mask by exposing the substrate to an oxygen-containing plasma. The mask may be amorphous carbon, through which carbon-containing ions are implanted into the magnetically active surface. The carbon-containing ions, which may also contain hydrogen, may be formed by activating a mixture of hydrocarbon gas and hydrogen. A ratio of the hydrogen and the hydrocarbon gas may be selected or adjusted to control the ion implantation.

WO 2013/090574 A1



Published:

— *with international search report (Art. 21(3))*