(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
31 January 2008 (31.01.2008)

PCT

(10) International Publication Number
WO 2008/013377 A1

(51) International Patent Classification:
B24D 3/00 (2006.01)

(21) International Application Number:
PCT/KR2007/003513

(22) International Filing Date: 20 July 2007 (20.07.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10-2006-0069164 24 July 2006 (24.07.2006) KR

(71) Applicant *(for all designated States except US)*: **SKC CO., LTD.** [KR/KR]; 633 Jeongja1-dong, Jangan-gu, Suwon, Gyeonggi 440-745 (KR).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **JUN, Sung-Min** [KR/KR]; 102-107 Doosan-Baekro Apt. Gaesin-dong, Heungduk-gu, Cheongjoo, Choongcheongbook-do 361-240 (KR). **LIM, Jong-Soo** [KR/KR]; 599-12 Gooam-dong Yuseong-gu, Daejeon 305-801 (KR). **BAE, Seung-Hun** [KR/KR]; 22-506 Hangang Mansion Ichon1-dong, Yongsan-gu, Seoul 140-724 (KR). **LEE, Ju-Yeol** [KR/KR]; 102-1703 Ssangyong-Adenarex 202, Geumgok-dong Bundang-gu, Sungnam, Gyeonggi-do 463-805 (KR). **PARK, In-Ha** [KR/KR]; 103-1105 Dongdeok-Hyundai Apt. Ok-dong, Nam-gu, Ulsan 680-779 (KR).

(74) Agent: **C & S LOGOS PATENT AND LAW OFFICE**; 13th Floor, Seocho-Pyunghwa Building, 1451-34 Seocho-dong, Seocho-gu, Seoul 137-070 (KR).

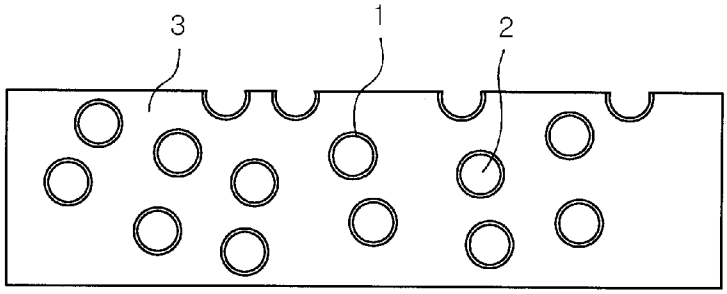
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*
— *with amended claims and statement*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) **Title:** CHEMICAL MECHANICAL POLISHING PADS COMPRISING LIQUID ORGANIC MATERIAL CORE ENCAPSULATED IN POLYMER SHELL AND METHODS FOR PRODUCING THE SAME



(57) **Abstract:** There is provided a chemical mechanical polishing (CMP) pad including a core of a polymer shell encapsulating a liquid organic material having one of a boiling point and a decomposition point of 130 0C or more in a polymer matrix, the CMP pad having open pores formed by the core on a polishing surface thereof, and a method of producing the CMP pad. The CMP pad having a high hardness and a high density improves polishing efficiency and flatness of a wafer and maintains a uniform size of the core, thereby producing pads having high polishing efficiency and stable polishing performance.

WO 2008/013377 A1