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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
16 January 2003 (16.01.2003)

PCT

(10) International Publication Number
WO 03/005430 A2

(51) International Patent Classification[7]: H01L 21/288

(21) International Application Number: PCT/US02/18857

(22) International Filing Date: 12 June 2002 (12.06.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/897,626 2 July 2001 (02.07.2001) US

(71) Applicant *(for all designated States except US)*: **ADVANCED MICRO DEVICES, INC.** [US/US]; One AMD Place, Mail Stop 68, P.O. Box 3453, Sunnyvale, CA 94088-3453 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **PASADYN, Alexander, J.** [US/US]; 8717 Dandelion Trail, Austin, TX 78745 (US). **SONDERMAN, Thomas, J.** [US/US]; 16010 Braesgate Drive, Austin, TX 78717 (US).

(74) Agent: **DRAKE, Paul, S.**; Advanced Micro Devices, Inc., 5204 East Ben While Boulevard, Mail Stop 562, Austin, TX 78741 (US).

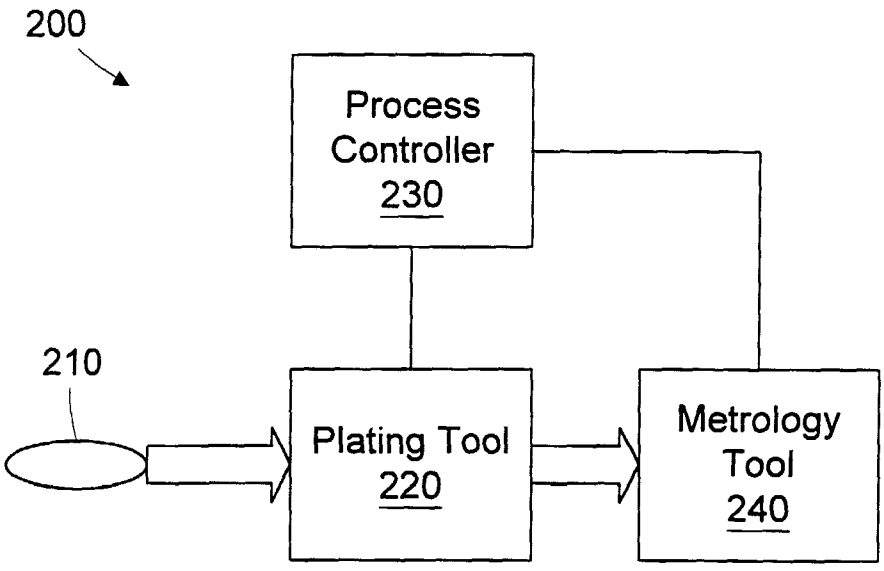
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *without international search report and to be republished upon receipt of that report*

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR CONTROLLING A PLATING PROCESS



(57) Abstract: A method for a controlling a plating process layer (160) on a wafer in accordance with a recipe; measuring a thickness of the process layer (160); and determining at least one plating parameter of the recipe for subsequently formed process layers (160) based on the measured thickness. A processing line (200) includes a plating tool (220), a metrology tool (240), and a process controller (230). The plating tool (220) is adapted to form a process layer (160) on a wafer in accordance with a repice. The metrology tool (240) is adapted to measure a thickness of the process layer (160). The process controller (230) is adapted to determine at least one plating parameter of the recipe for subsequently formed process layers (160) based on the measured thickness.

WO 03/005430 A2

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.