



(51) International Patent Classification:

C23C 16/27 (2006.01) H01J 37/32 (2006.01)
C30B 25/10 (2006.01)

(21) International Application Number:

PCT/SG2013/000377

(22) International Filing Date:

29 August 2013 (29.08.2013)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

US 61/695,052 30 August 2012 (30.08.2012) 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, 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, SA,
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,
KM, ML, MR, NE, SN, TD, TG).

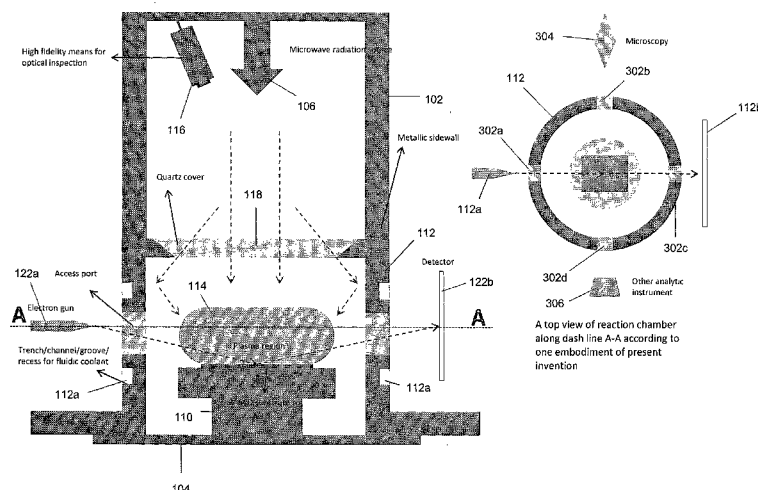
Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

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

(54) Title: APPARATUS AND METHOD OF PRODUCING DIAMOND



(57) Abstract: An apparatus for producing diamond and performing real time in situ analysis, comprising: a housing, a reaction chamber, the reaction chamber being structurally connected to the housing, the reaction chamber comprising of an enclosed area adapted to house the growing of diamonds, a radiating means, the radiating means being mounted above the reaction chamber within the housing, the radiating means adapted to emit microwave into the reaction chamber to effect the growth of diamonds within the reaction chamber, a dielectric cover being provided at the top of the reaction chamber and adapted to allow the radiation wave from the radiating means to enter the reaction chamber, a recording means mounted within the annual housing and above the reaction chamber, a measuring mechanism arranged at the periphery of the reaction chamber, a microscope adjacently arranged on the outside of the reaction chamber.