

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
05 November 2020 (05.11.2020)



(10) International Publication Number
WO 2020/220569 A1

(51) International Patent Classification:
G01N 23/203 (2006.01) *H01J 37/145* (2006.01)

(21) International Application Number:
PCT/CN2019/107106

(22) International Filing Date:
20 September 2019 (20.09.2019)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
201910507143.4 12 June 2019 (12.06.2019) CN

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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, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, 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,

(54) Title: SCANNING ELECTRON MICROSCOPE WITH COMPOSITE DETECTION SYSTEM AND SPECIMEN DETECTION METHOD

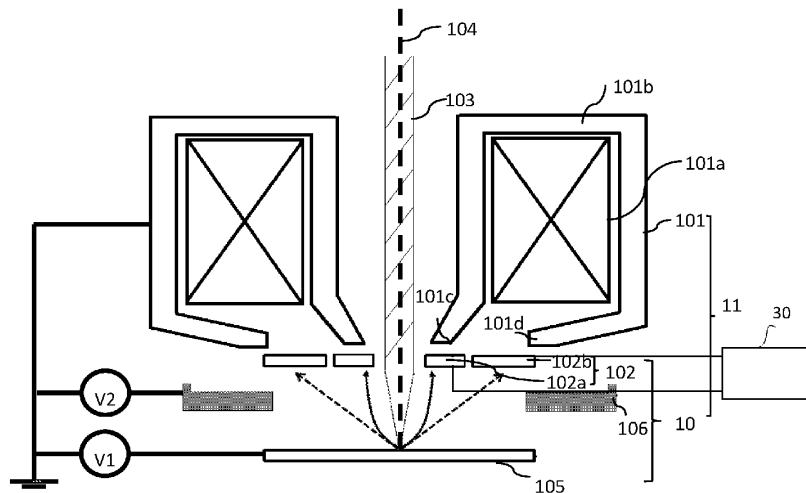


FIG. 1

(57) Abstract: A scanning electron microscope with a composite detection system and a specimen detection method. The scanning electron microscope includes a composite objective lens system including an immersion magnetic lens and an electro lens, configured to focus an initial electron beam to a specimen to form a convergent beam spot; a composite detection system located in the composite objective lens system; and a detection signal amplification and analysis system. A magnetic field of the immersion magnetic lens is immersed in the specimen; the electro lens is configured to decelerate the initial electron beam and focus the initial electron beam onto the specimen, and separate BSEs from a transmission path of an X-ray; the composite detection system is located below an inner pole piece of the immersion magnetic lens, is located above the control electrode, and includes an annular BSE detector and an annular X-ray detector that have a same axis center.

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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, ST, 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).

Published:

- with international search report (Art. 21(3))
- upon request of the applicant, before the expiration of the time limit referred to in Article 21(2)(a)