



US 20120061564A1

(19) **United States**

(12) **Patent Application Publication**

Tona et al.

(10) **Pub. No.: US 2012/0061564 A1**

(43) **Pub. Date: Mar. 15, 2012**

(54) **SURFACE ANALYZER OF OBJECT TO BE MEASURED AND ANALYZING METHOD**

(30) **Foreign Application Priority Data**

Apr. 9, 2008 (JP) 2008-101984

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Publication Classification

(51) **Int. Cl.**
H01J 37/26 (2006.01)
B01J 19/08 (2006.01)

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(52) **U.S. Cl.** 250/307; 250/492.3; 250/309

(57) **ABSTRACT**

A surface analyzer 1 includes: a sample stage 6 for placing a sample 5; a source for generating multicharged ions 3 for irradiating a beam 4 of multicharged ions having a valence of 15 or higher to the sample 5 placed on the sample stage 6; a mass analyzer 8 for detecting secondary ions 7 generated as a result of irradiating the beam of multicharged ions 4 to the sample 5; a secondary electron detector 10 for detecting secondary electrons 9 generated as a result of irradiating the beam of multicharged ions 4 to the sample 5; and a controller of mass analyzer 12 for generating analysis start signals in response to the secondary electron signals received, and transmitting the start signals to the mass analyzer. The surface analyzer 1 enables high-quality analysis of the surface of the sample in short time by using the multicharged ions.

(21) **Appl. No.:** 12/937,253

(22) **PCT Filed:** Apr. 7, 2009

(86) **PCT No.:** PCT/JP2009/057121

§ 371 (c)(1),
(2), (4) **Date:** Dec. 27, 2010

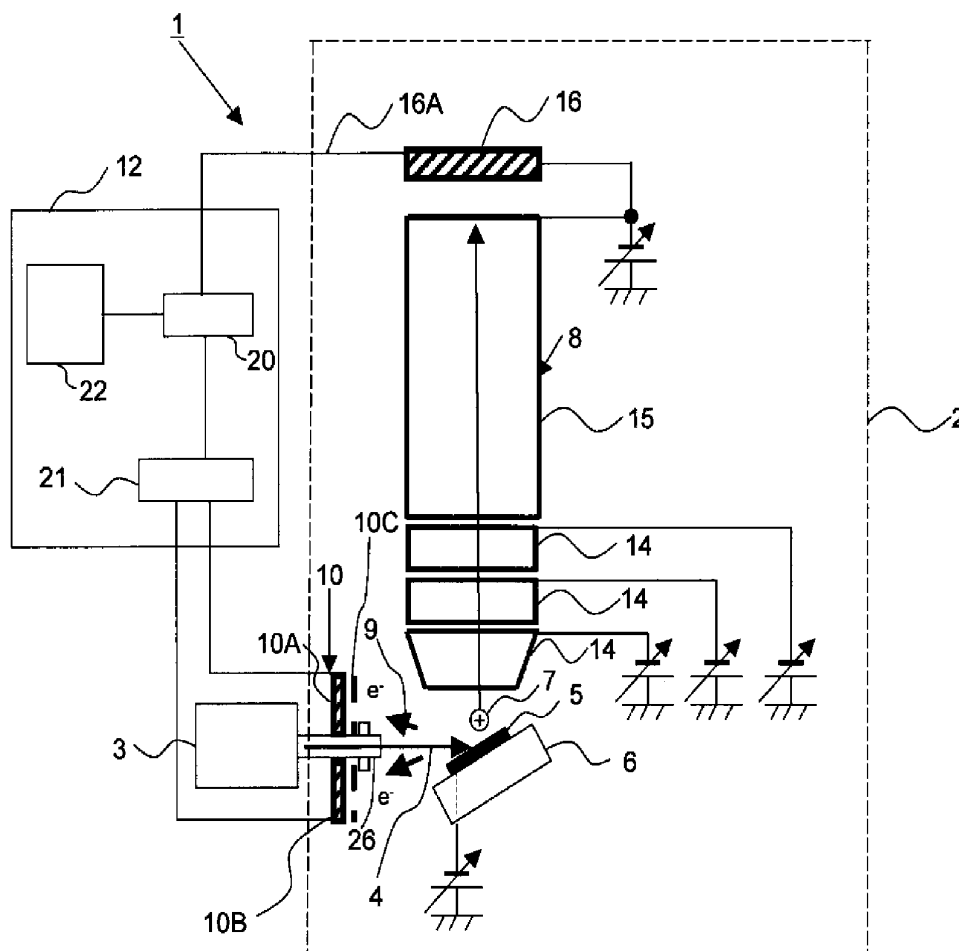


FIG. 1

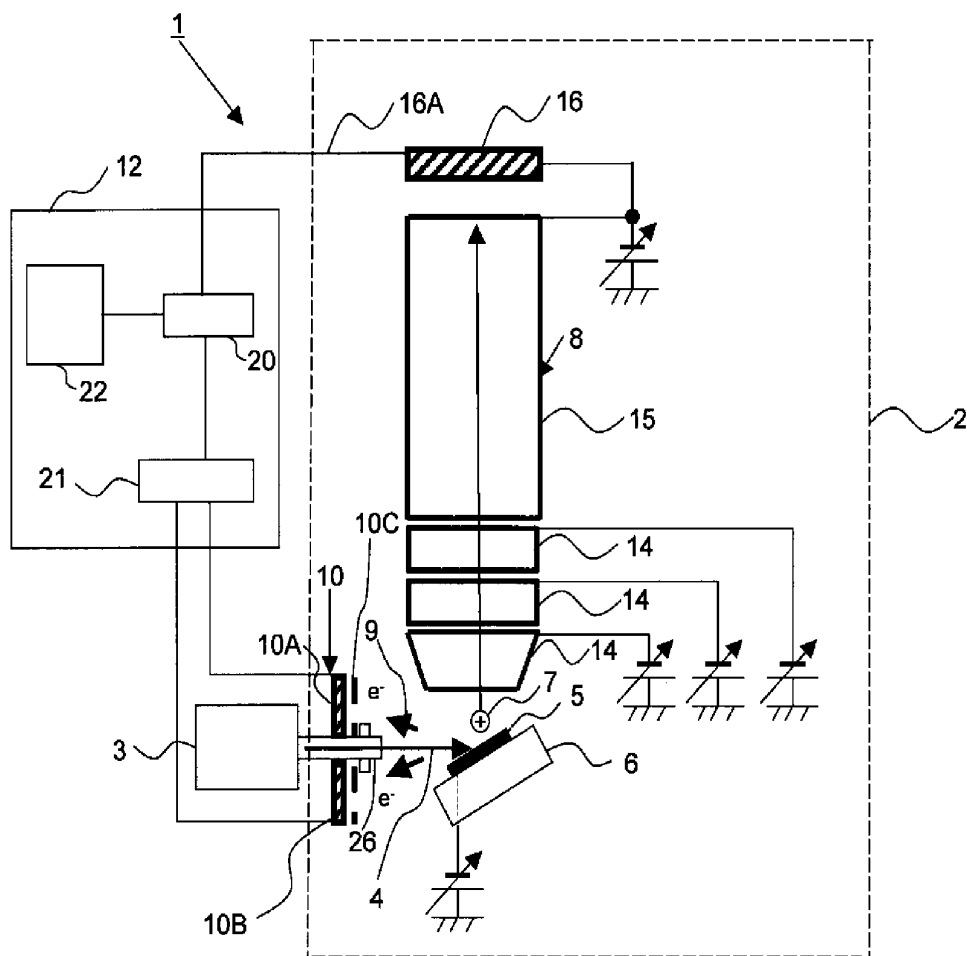


FIG.3

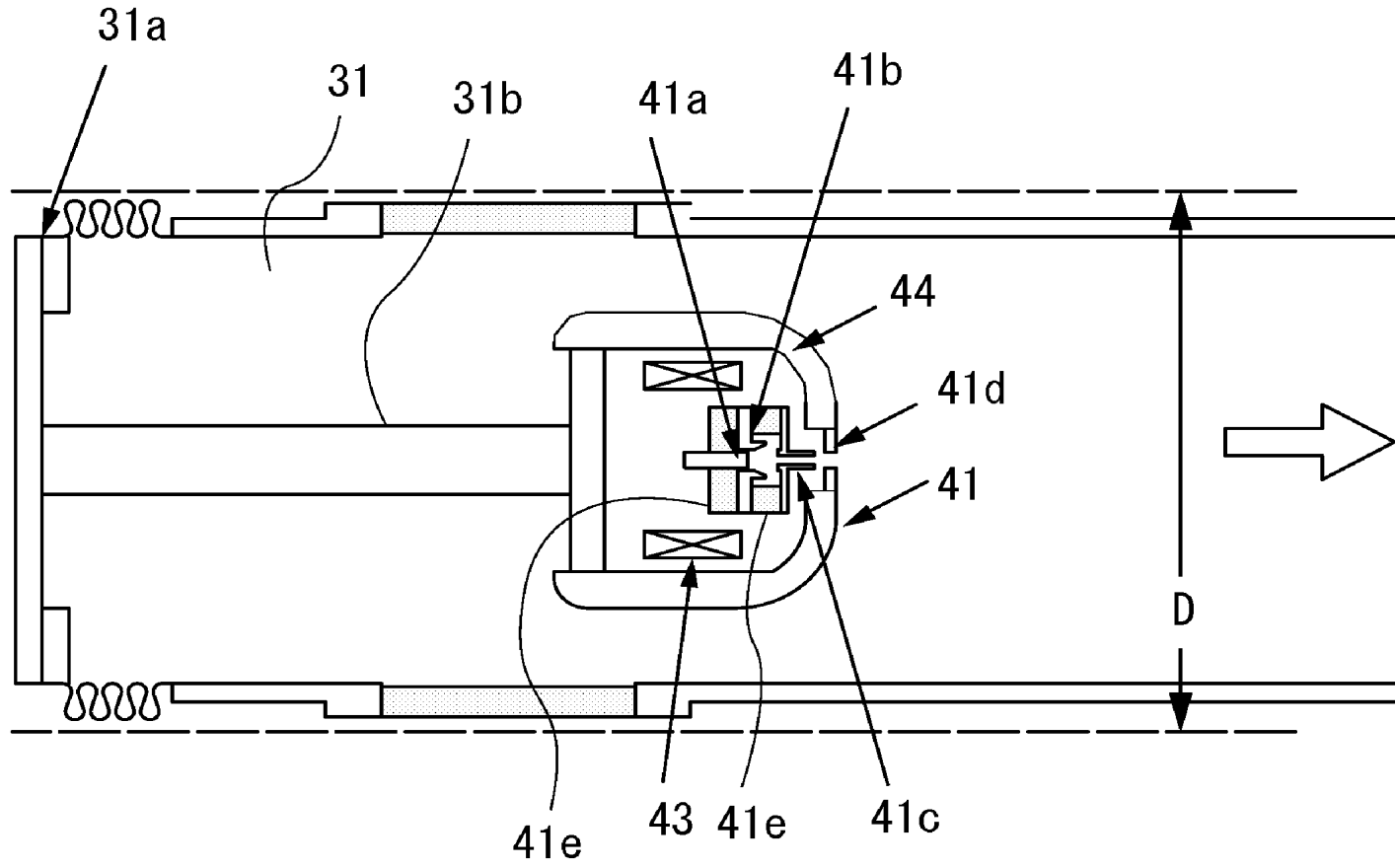


FIG.4

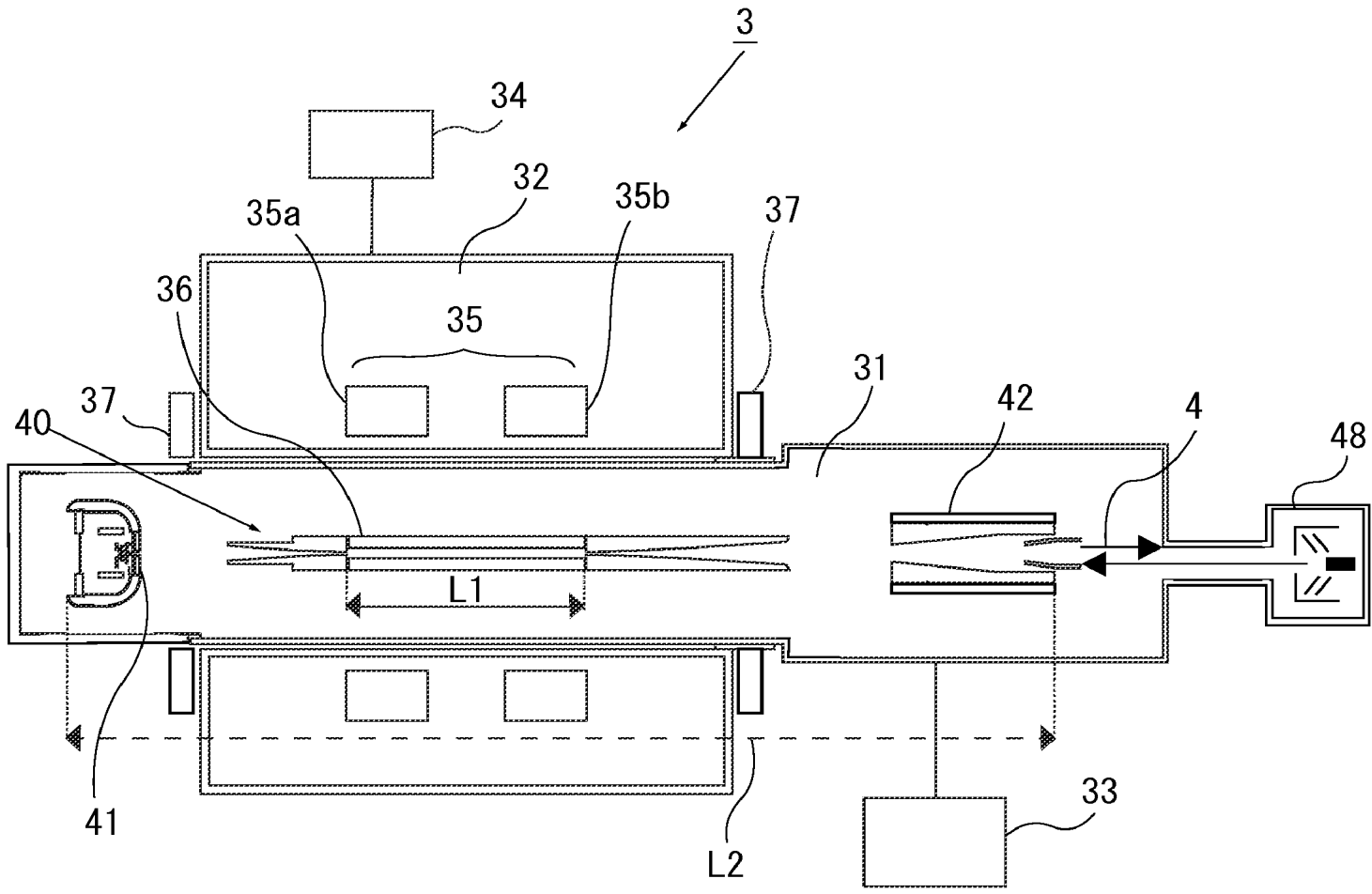


FIG 5

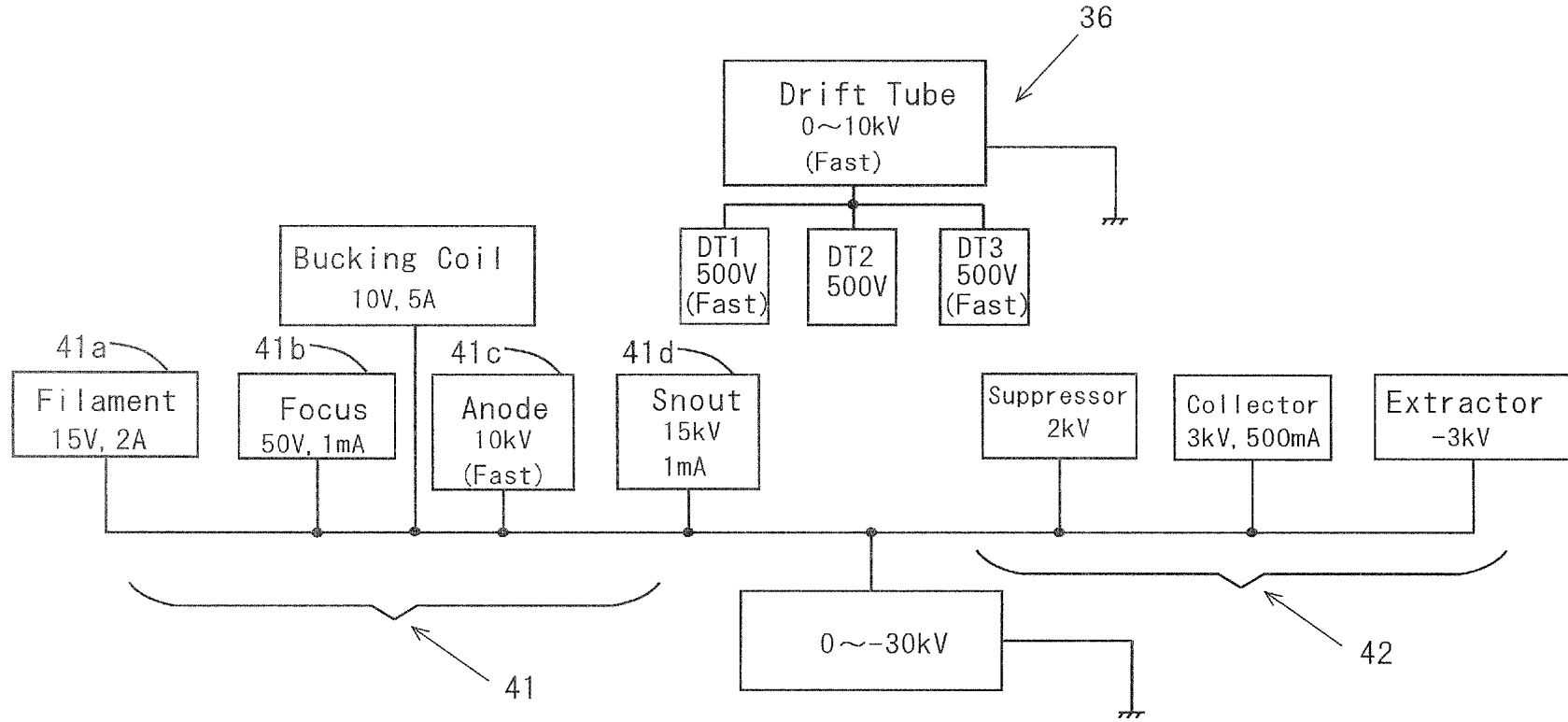
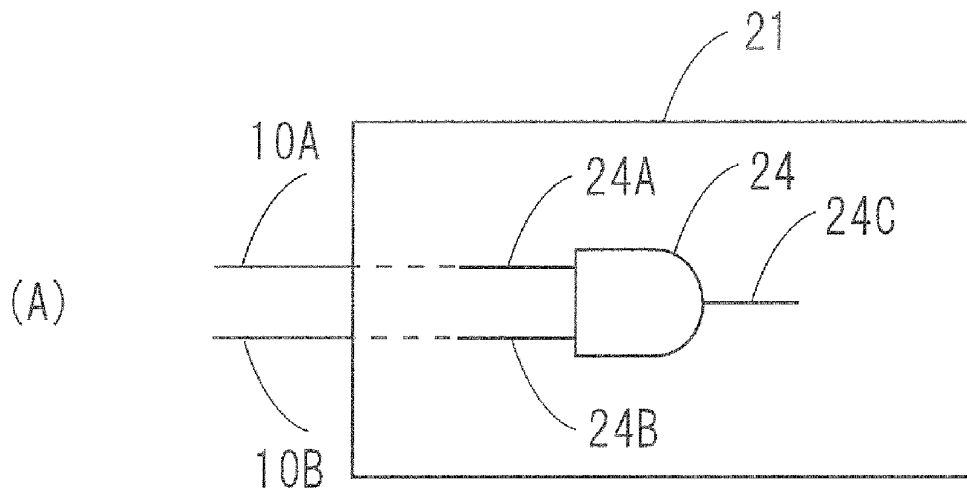


FIG. 6



(B)

| AND INPUT | | AND OUTPUT |
|-----------|-----|------------|
| 24A | 24B | 24C |
| 1 | 1 | 1 |
| 1 | 0 | 0 |
| 0 | 1 | 0 |
| 0 | 0 | 0 |