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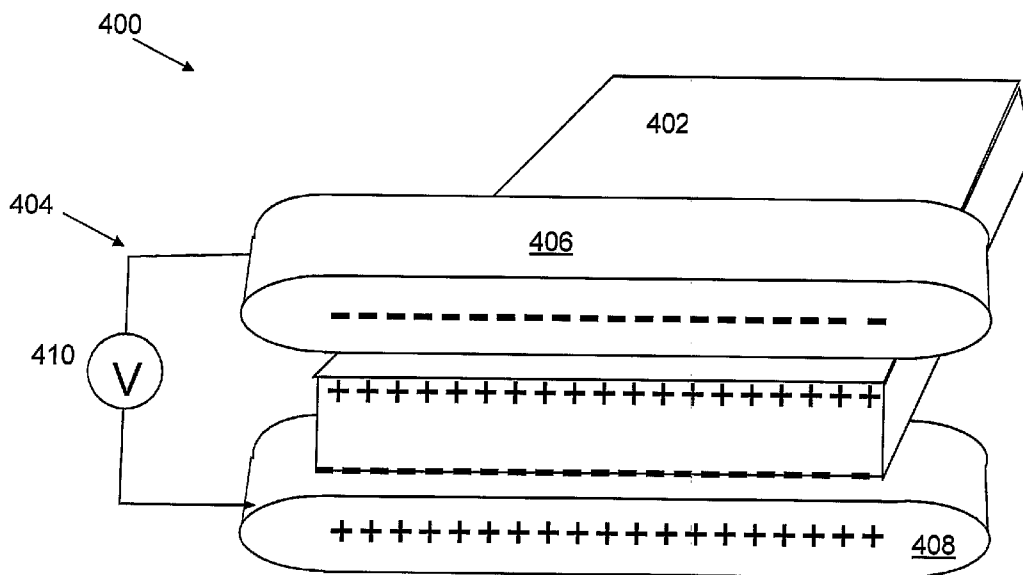
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(54) Title: SI RIBBON, SIO₂ RIBBON AND ULTRA PURE RIBBONS OF OTHER SUBSTANCES



(57) Abstract: A method of purifying substances is described herein, particularly suitable for purifying silica and forming it into silicon oxide sheets or ribbons, or silicon sheets or ribbons. The method includes ion sweeping a sheet of a substance containing ionic impurities by providing an ionic driving force and a thermal driving force. Ions are swept to a collectable region of the sheet. A system is also provided for purifying substances including an ion sweeping sub-system for providing an ionic driving force to a sheet or ribbon, and a heating sub-system positioned and configured for heating the sheet or ribbon. Impurities swept to an edge, surface or both are then mechanically or chemically removed.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 06/30872

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - H01L 21/322 (2008.04)

USPC - 438/471; 438/476

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8) : H01L 21/322 (2008.04)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

IPC(8) : H01L 21/322 (2008.04)

USPC : 438/471; 438/476 (text search)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PubWEST (USPT,PGPB,EPAB,JPAB); Google Scholar, Google

Search terms used: purify, ions, magnetic field, electric, metal alloy, carbide, nitride, sulfide, etch, temperature and substrate

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4,462,806 A (Mahoney et al.) 31 July 1984 (31.07.1984), Abstract; col 2 ln 22-26, 33, 35-40, 45-47, 58-68; col 3 ln 22, 60-63; col 4 ln 24-25, 42-43; col 5 ln 25-26; col 6 ln 1-3, 5-6.	1-12, 15, 21, 22, 26, 27, 30, 32-39, 41-47, 51-53
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Y		13, 14, 16-20, 23-25, 28-29, 31, 40, 48-50
Y	US 4,471,003 A (Cann) 11 September 1984 (11.09.1984), Abstract; col 4 ln 8-12	13, 19
Y	US 5,961,944 A (Aratani et al.) 05 October 1999 (05.10.1999), Abstract; col 2 ln 42; col 7 ln 57	20,25, 31, 50
Y	US 2005/0161427 A1 (Okawa et al.) 28 July 2005 (28.07.2005), para [0013]	28, 38, 39
Y	US 2005/0029470 A1 (Muehlig et al.) 10 February 2005 (10.02.2005), para [0019]-[0020]	23, 48
Y	US 6,063,894 A (Phipps et al.) 16 May 2000 (16.05.2000), Abstract; col 6 ln 44-45	24, 29, 49
Y	US 6,024,306 A (Koppl et al.) 15 February 2000 (15.02.2000), col 3 ln 15-16; col 3, ln 57-58	14, 16-18, 40

 Further documents are listed in the continuation of Box C.

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