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(71) Applicant: **PRAXAIR TECHNOLOGY, INC.** [US/US]; 39 Old Ridgebury Road, Danbury, CT 06810 (US).

(72) Inventors: **SINHA, Ashwini, K.**; 72 Plantation Court, East Amherst, NY 14051 (US). **BROWN, Lloyd, A.**; 63 Echowood Drive, East Amherst, NY 14051 (US).

(74) Agents: **DALAL, Nilay, S.** et al.; Praxair, Inc., 39 Old Ridgebury Road, Danbury, CT 06810 (US).

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Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

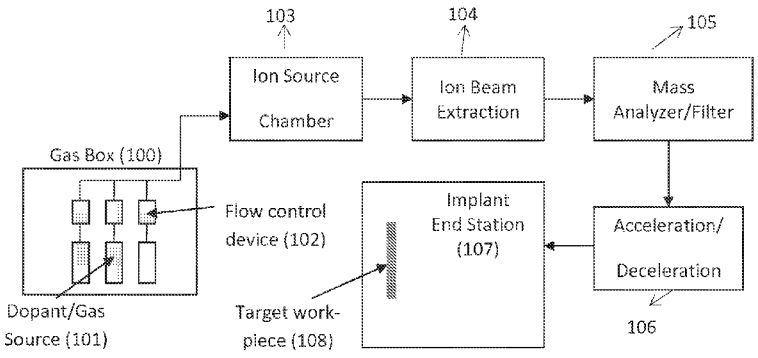
— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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(54) Title: ALUMINIUM DOPANT COMPOSITIONS, SUB-ATMOSPHERIC STORAGE AND DELIVERY PACKAGE CONTAINING SUCH COMPOSITIONS, AND METHOD OF STORING AND DELIVERING SUCH COMPOSITIONS

(57) Abstract: A method and system for using aluminum dopant compositions is provided. A composition of the aluminum dopant compositions is selected, represented by the formula AlxRyLz, where R is a methyl group, L is CI, F, I or Br, and x is either 1 or 2, whereby if x = 1, then Y = 1 or 2, and if x = 2 then y = 2x - 4, and z = 3x-y for x =1 or 2. The composition has sufficient vapor pressure and minimal carbon content, thereby enabling ease of delivery to an ion implant process and substantial reduction of carbon deposition during Al ion implantation. The source material is preferably stored and delivered from a sub-atmospheric storage and delivery device to enhance safety and reliability during the Al ion implantation process.



Schematic of beamline ion implant system

FIG. 1

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