

STORAGE AND DELIVERY OF ANTIMONY-CONTAINING MATERIALS TO AN ION IMPLANTER

Abstract

A novel method, composition and storage and delivery container for using antimony-containing dopant materials are provided. The composition is selected with sufficient vapor pressure to flow at a steady, sufficient and sustained flow rate into an arc chamber as part of an ion implant process. The antimony-containing material is represented by a non-carbon containing chemical formula, thereby reducing or eliminating the introduction of carbon-based deposits into the ion chamber. The composition is stored in a storage and delivery vessel under stable conditions, which includes a moisture-free environment that does not contain trace amounts of moisture. The storage and delivery container is specifically designed to allow delivery of high purity, vapor phase antimony-containing dopant material at a steady, sufficient and sustained flow rate.

[Figure 1]