

## **TIN-CONTAINING DOPANT COMPOSITIONS, SYSTEMS AND METHODS FOR USE IN ION IMPLANTATION SYSTEMS**

### *Abstract*

A novel method and system for using certain tin compounds as dopant sources for ion implantation are provided. A suitable tin-containing dopant source material is selected based on one or more certain attributes. Some of these attributes include stability at room temperature; sufficient vapor pressure to be delivered from its source supply to an ion chamber and, the ability to produce a suitable beam current for ion implantation to achieve the required implant Sn dosage. The dopant source is preferably delivered from a source supply that actuates under sub atmospheric conditions to enhance the safety and reliability during operation.

FIG. 4a, FIG. 4b, FIG. 4c