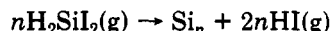
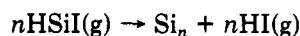


is consistent with removal of HI, especially in the case of the diiodosilane. Furthermore, it was observed that  $\text{H}_2\text{SiI}_2$  decomposes below 550 °C but  $\text{HSiI}_3$  does not. Thus



More than one molecule is presumed to be involved because the reaction seems to occur more easily for higher fluxes of molecules. This mechanism is also consistent with the fact that little evidence of  $\text{I}_2$  formation is observed during decomposition of the diiodosilane.

For triiodosilane, iodine formation is observed, and the higher temperature required for decomposition may be indicative of another mechanism. One possibility is



Another reaction known to occur is



and decomposition of the diiodosilane would lead to amorphous silicon.

The presence of a small amount of iodine in the film is consistent with the need for more than one molecule in the decomposition reaction. Thus, trapping of a partially dehydrohalogenated silane would account for the incorporation of the iodine.

### Summary

Another possible way of depositing a-Si from iodosilanes by thermal decomposition is demonstrated by using the experimental setup shown in Figure 2. Due to the absence of vapor nucleation of chemical intermediates produced from decomposed iodosilanes and due to the nonexplosive nature, iodosilane precursors emerge as new sources for the deposition of a-Si.

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**Registry No.** a-Si, 7440-21-3;  $\text{H}_2\text{SiI}_2$ , 13760-02-6;  $\text{HSiI}_3$ , 13465-72-0.

## Additions and Corrections

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1990, Volume 2

**Walter Torres and Marye Anne Fox\*:** Rectifying Bilayer Electrodes: Layered Conducting Polymers on Platinum.

Page 310. The captions for Figures 5 and 6 should be reversed.