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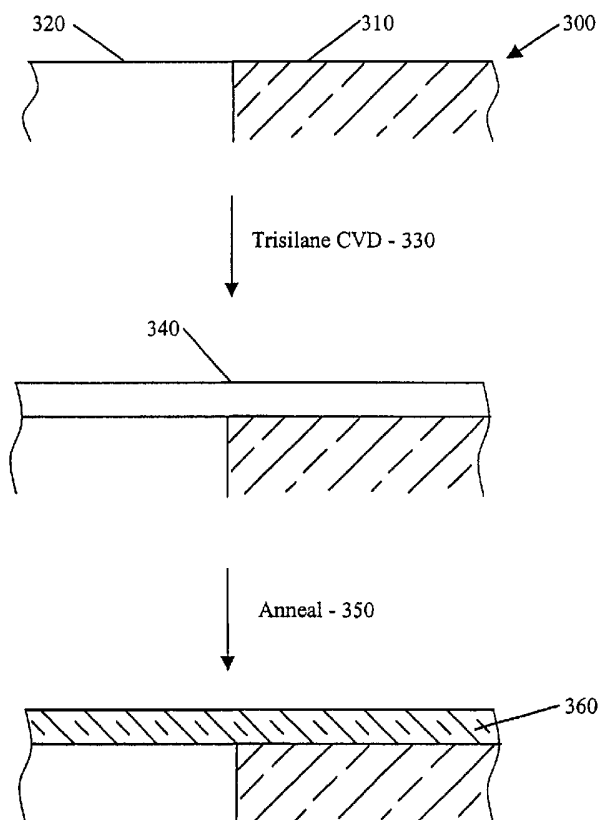
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(54) Title: DEPOSITION OF AMORPHOUS SILICON-CONTAINING FILMS



(57) Abstract: Chemical vapor deposition (330) methods are used to deposit amorphous silicon-containing films (340) over various substrates (310, 320). Such methods are useful in semiconductor manufacturing to provide a variety of advantages, including uniform deposition over heterogeneous surfaces (320, 310), high deposition rates, and higher manufacturing productivity. Preferably, the deposited amorphous silicon-containing film (340) is annealed to produce crystalline regions (360) over all or part of an underlying substrate (310, 320).

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**INTERNATIONAL SEARCH REPORT**

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PCT/US03/22976

| <b>A. CLASSIFICATION OF SUBJECT MATTER</b>   |   |  |
|--|---|--|
| IPC(7) : H01L 21/20, 21/36   |   |  |
| US CL : 438/481, 482, 486, 488, 489, 969   |   |  |
| According to International Patent Classification (IPC) or to both national classification and IPC  |   |  |
| <b>B. FIELDS SEARCHED</b>  |   |  |
| Minimum documentation searched (classification system followed by classification symbols)<br>U.S. : 438/481, 482, 486, 488, 489, 969   |   |  |
| Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched<br>NONE  |   |  |
| Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)<br>BRS search terms: trisiliane, cvd, amorphous, anneal |   |  |
| <b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>  |   |  |
| Category *   | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No.  |
| X  | US 6,121,081 A (Thakur et al) 19 September 2000 (19.09.2000), column 2, lines 44-56, column 3, lines 17-39.   | 23, 25-29, 31  |
| X  | US 6,013,922 A (Ueda et al) 11 January 2000 (11.01.2000), column 7, line 61 through column 8, line 30.  | 23, 25-29, 31  |
| X  | US 5,654,237 A (Suguro et al) 05 August 1997 (05.08.1997), column 8, lines 29-46 and column 10, line 36.  | 23, 24, 27, 31   |
| <input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.  |   |  |
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| "P"  | document published prior to the international filing date but later than the priority date claimed  |  |
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