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[54] **METHOD FOR PRODUCING DEVICES COMPRISING HIGH DENSITY AMORPHOUS SILICON OR GERMANIUM LAYERS BY LOW PRESSURE CVD TECHNIQUE**

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[58] **Field of Search** 427/85, 86, 88, 84, 427/95, 99, 74, 35, 53.1, 248.1; 430/135, 136; 148/1.5

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[57] **ABSTRACT**

Layers of controllably dopable amorphous silicon and germanium can be produced by means of low pressure chemical vapor deposition, at a reaction temperature between about 450° C. and about 630° C., for Si, and between about 350° C. and about 400° C. for Ge, in an atmosphere comprising a Si-yielding or Ge-yielding precursor such as SiH_4 or GeI_4, at a pressure between about 0.05 Torr and about 0.7 Torr, preferably between about 0.2 and 0.4 Torr. For undoped Si and P-doped Si, the preferred temperature range is from about 550° C. to about 630° C., for B-doped Si, it is from about 480° C. to