ABSTRACT OF THE DISCLOSURE

A METHOD TO LOCATE PARTICLES OF A PREDETERMINED SPECIES WITHIN A SOLID AND RESULTING STRUCTURES

The present invention relates to a method to locate particles of a predetermined species within a solid, more specifically to form an oxy-nitride dielectric for VLSI applications. A layer (18) of a substance (YZ) is formed upon a solid (10) and a chemical reaction is performed between the substance (YZ) and a gas (X), thereby releasing particles (Z) of a predetermined species which incorporate into the solid (10). This method is used, for example, to form an oxy-nitride dielectric by incorporating nitrogen within a silicon oxide layer (28').

FIG. 1A accompanies this abstract.